

(from) the repertoire: an architectural *theory of operations*.  
Oral and embodied knowledge in architectural and spatial practices.

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par

**Julien LAFONTAINE CARBONI**

Acceptée sur proposition du jury

Prof. J. Baudry, président du jury  
Prof. D. Dietz, L.-N. Garcia de Jalon Oyarzun, directeurs de thèse  
Prof. S. Henni, rapporteuse  
Prof. A. Iyer Siddiqi, rapporteuse  
Prof. Ph. Ursprung, rapporteur













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# **(from) the repertoire: an architectural theory of operations**

## **Oral and embodied knowledge in architectural and spatial practices**

Julien Lafontaine Carboni, ALICE lab, École Polytechnique Fédérale de Lausanne (EPFL)

Under the direction of prof. Dieter Dietz, Director of ALICE lab at EPFL and the supervision of dr. Lucía Jalón Oyarzun

How can one construct spatial histories and architectural theories from gestures, words and voices, bodies and minor threads?

This research delves into **oral and embodied architectural and spatial knowledge** as modes of producing buildings, spaces and spatialities. This knowledge is transmitted body-to-body through the temporalities of performance, its *acts of remaining* and *means of reappearance*, and relies on the **repertoire** as an infrastructure of transmission and conservation, an organic counterpart to the **archives**.

While **hylomorphism**—dividing matter/form, thinking/making, architects/crafts. wo.men—has been a dominant paradigm threading **the architectural discipline and its history**, oral and embodied knowledge, practices and histories have remained neglected. Gilbert Simondon's **theory of operations** helps one understand how hylomorphism came from **social and labor stratification**, perpetuated by the separation of the crafts. wo.man and her operatory knowledge and theories from abstract thought, decision-making and infrastructures of *institutionalized* knowledge production. In architecture, his critique reveals how the dominant discourse has remained blind to myriad spatial practices and especially to organic knowledge.

*(from) the repertoire* introduces an **architectural theory of operations**, opening up the potentialities of oral and embodied modes of architectural production. Epistemological thresholds enable to make contact with the repertoire's forms of imagination and invention, transmission and migration, historical regimes and potential histories, remainders and agencies. **Architectural historiography** and image—**figurations**—are renegotiated in order to consider the ontology of **operations, gestures and words**. The research engages with operatory dimensions of architectural instruments by looking at how they *operate*. The **versant opératoire** of forms leads us to the concept of **protofigurations**—embodied techniques of spatial design.

The core of this thesis revolves around discussions with older generations of the **Sahrawi** people, in the **refugee camps near Tindouf**, South Algeria, within an oral memory preservation program. This manuscript explores how their architectural histories, knowledge and theories, while entirely **undrawn** and **unwritten**, are crafted, preserved and transmitted. A discussion with Gorba M.L., a Sahrawi woman who participated in the construction of the camps and the Sahrawi State in exile, unfolds the **architectural agency of gestures** on plural temporalities and materialities. By sharing her repertoire, she introduces a spatial **practice of repair**, giving agency to **preempted futurities** as present corporeality.

The immobilization of the Sahrawi people, a product of colonial violence, short-circuits the repertoire. In this context, the ethics and paradoxes of preserving and archiving the repertoire are examined, and, at the same time, strategic relationships are proposed that escape the toxicity of historical discourses by supporting the **re-enactment of knowledge**. Furthermore, this research investigates practices that momentarily stabilize the ontology of operations and enable the repertoire to circulate. Coined as **architectural reenactments**, and together with a **theory of operations**, these practices open a field, a **zone of peaceful reconciliation** with knowledge from the repertoire, granting access to its scales and temporalities from within the discipline and in view of integrating it in curricula and research.



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Comment faire de l'histoire spatiale et de la théorie architecturale à partir de gestes, de mots et de voix, de corps et de traces mineures ?

Cette recherche explore les espaces produits par des **savoirs corporels et oraux, architecturaux et spatiaux**. Ces savoirs migrent en corps-à-corps, dans les temporalités de la performance, étant ses *actes de subsistance* et ses *moyens de réapparition*. Ils résident dans le **répertoire**, infrastructure de transmission et de conservation, pendant organique des **archives**.

Alors que l'**hylémorphisme**—division matière/forme, penser/faire, architectes/artisanexs—a été un paradigme structurant la **discipline et son Histoire**, les savoirs, pratiques et histoires corporelles et orales sont restées hors-champ. La théorie des opérations de Gilbert Simondon nous aide à comprendre comment l'hylémorphisme est issu d'une **stratification sociale et du travail**, perpétuée par l'isolement de l'artisanexs et de ses théories et savoirs opératoires, de la pensée abstraite, du pouvoir et des infrastructures *institutionnalisées* de production de savoir. En théorie de l'architecture, sa critique révèle l'aveuglement des discours dominants à de nombreuses pratiques spatiales et aux savoirs organiques.

*(from) the repertoire* introduit une **théorie architecturale des opérations** ouvrant les potentiels des modes architecturaux corporels et oraux de production. Des seuils épistémologiques permettent d'entrer en contact avec les formes d'imagination et d'invention, de transmission et de migration, de traces et d'*agency*, les régimes historiques et histoires potentielles du répertoire. L'historiographie et les images—**figurations**—architecturales sont renégociées en considérant l'ontologie des opérations, des gestes et des mots. Cette recherche engage les dimensions opératoires des instruments architecturaux en portant attention à comment ils *opèrent*. Ce **versant opératoire** des formes nous mène aux **protofigurations**—techniques corporelles de design spatial.

Le cœur de cette thèse s'articule autour de discussions avec des anciennes générations **Sahraouies** dans le cadre d'un projet de préservation de la mémoire orale dans les camps de **réfugiéexs proche de Tindouf**, sud de l'Algérie. Le manuscrit explore comment leurs histoires, savoirs et théories architecturales, **non-dessinées** et **non-écrites**, sont produites, préservées et transmises. Une discussion avec Gorba M.L., une Sahraouie qui a participé dans la construction des camps et de l'état en exil, montre l'**agency architecturale des gestes** sur les temporalités et matérialités plurielles. En partageant son répertoire, elle introduit une **pratique spatiale de réparation**, en donnant de l'*agency* aux **temporalités préemptées** en tant que corporéauté.

L'immobilisation des Sahraouis, produit de la violence coloniale, court-circuite les répertoires. Dans ce contexte, les éthiques et paradoxes de préserver et d'archiver le répertoire sont examinés pour proposer des stratégies pour échapper à la toxicité du discours historique par le **re-enactment des savoirs**. Pour aller plus loin, cette recherche explore des pratiques qui stabilisent momentanément les opérations dans la circulation du répertoire. Nommées **reenactments architecturaux**, ces pratiques et la théorie des opérations ouvrent un champ, une **zone de réconciliation** avec le répertoire, donnant accès à ces échelles et ces temporalités depuis la discipline et en vue de l'intégrer dans le curriculum et la recherche.





## Foreword. Where are you now. Building a position.

“Where are you now, what have you found  
Where is your heart when I’m not around  
And tell me where are you now, you’ve gotta let me know  
Oh baby, so I can let you go.”<sup>1</sup>

In this manuscript, I will unravel an articulation of harsh elements of architectural history. Does this mean that what I will coin as “architectural hylomorphism”, issued from social stratification and class contempt in the formation of western architectural discipline, has come to an end? It is important to note that I will expose here only the dominant architectural history discourse. Minor voices and practices exist and always did, as antiracist, anti-colonial and feminist voices exist throughout history. And despite the noise produced by the dominant discourse, it is my duty and objective not to reproduce this noise and the concealment it is aimed at creating.<sup>2</sup> The discipline of architecture did perpetuate silencing practices and epistemic violence. It is then of critical importance to be conscious about where we are standing, researching, and writing from, to unearth the nexus of relations we are entangled in and how it conditions the knowledge we are able to produce—and the manuscript I was able to produce.

I am a white architect in a Swiss Federal Institute of Technology, born male in 1994, which means that I am 27 when typing these lines, and I consider myself non-binary (they/them or *iel*). I was born in France in a middle-class family and moved several times as a child and teenager as my father was working in the Army. I was the first person in my extended family to obtain a master’s degree—or second? I was raised in a family escaping lower-class conditions, as my grandparents all worked in coal or asbestos factories and mines or cared for their families. They were all immigrants—if we consider Corsica as a foreign territory. From their cultures—Italian, Czech, German Bavarian, Corsican—I explicitly inherited from some cooking recipes. As it has been the case for many children of immigrants in France, my parents barely learned the tongue of their parents—as it was forbidden to improve the success rate of the *integration* process—and adopted a strongly normative French familial, social, and political model. The army constituted for several members of my family a way to *integrate*.

In attempting to escape their conditions of origins, my parents had to erase as much as possible the language, signs, habits, and other traces of the class they were born in. My mother’s sweatsuit hanging around in the industrial suburb of Marseille is quite

1 Britney Spears. ‘Where are you now?’. *Oops!... I did it again*. Jive Records, 2000.

2 On a critique of the perspective of the alternative historical practices opening new perspectives on repair, see Scott, David. *Conscripts of Modernity: The Tragedy of Colonial Enlightenment*. Durham: Duke University Press, 2004:112-19.

far from the delicate silk blouse she now wears. To access the single-family house close to Clermont-Ferrand, their Volkswagen, and the social status and economic situations they do have now, I profoundly think that my parents had to dig a hole at the center of themselves. And I inherited it.

I entered architecture *by accident*, as a friend just told me about the existence of architecture one week before the registration for the entrance exam. I presented my drawings of glittered dresses, since I was dreaming more about fancy fabric than rammed earth at this time. I passed my Bachelor's in the architecture school of Clermont-Ferrand, a school in which a majority of my teachers openly despised theory and history of architecture. I often heard the banal polemical statements—from teachers and students—that “Only practice matters, books never changed and will never change anything”; “Critique without a practice is nonsense, do it before saying something”; “There is no more theory in architecture”; “theory is useless”; “theory is a point of view.” With all the weight of my contrariness I decided to orient myself toward a theoretical formation and changed architecture school for the master's degree. I went to Paris-Malaquais where, inversely, I met several teachers openly despising construction and valuing theory over practice.

I had close to no training in critical theories and a somewhat obsolete series of courses in history and theory of architecture. The unity of the dominant architectural discourse I will present seems not to be an actuality in France, even if generally completely entangled with a post-68 capitalist *alternative* subculture standpoint, somewhat postmodern. However, during my studies, and along these four years of Ph.D., I also encountered several wonderful teachers, colleagues, architects and students, that I hope will read these lines. Some of them taught me how we could care through architectural practices and that other forms of spatial and architectural knowledge exist. *I still believe* them, and this manuscript is an attempt to outline some of these minor practices and existences. The architectural discipline is not built upon a unitary vision and discourse and is reproduced by a myriad of people with diverse positions and motives, rendering a dogmatic position toward the relations between architectural hylomorphism and architects impossible. My stance is then directed toward the discipline as a historical and social construction in Europe and more widely in the western world.

This background, I believe, conditioned my position and what I felt urgent to research in two significant ways. Firstly, it brings about the necessity to investigate how class relations shape individual and collective historical narratives as much as familial and interpersonal relations. Classes and the dynamics to go from one to other profoundly shape knowledge transmission and what is considered worthy of being shared, both at an individual and disciplinary level. In the field of architecture, dynamics of social reproduction are strong. Despite the work achieved by many members of the architectural community, the socio-professional category ‘architect’ still remains homogeneous, alongside with curricula lacking diversity and reproducing matrixes of domination and hierarchies of knowledge.

This led me to another dimension of this research partly brought about by experiences of structural effects. Where are the lives, knowledge and voices of crafts.women in architectural theory and history? And the ones of inhabitants, clients, or builders/designers in contexts without architects? Do they have a right to the history of city and architecture? Which architectural and spatial cultural knowledge are transmitted and inherited below and beyond the thresholds of the discipline? I believe there are textures of architectural and spatial knowledge inherited and transmitted that are under-scrutinized by the discipline. The oral, the gestural and the embodied escape the frames and the infrastructures of *official* knowledge production. From where to start a dialogue with knowledge repressed in the own terms of my discipline?

These questions are for long discussed in the laboratory ALICE. The concepts, approaches, topics developed in this research are elaborated in dialogue with this collective urge to reclaim new ways of engaging in society through architecture. My Ph.D. is inscribed in a series about proto-, as you will read in chapter D. The first of the sequence is Darío Negueruela del Castillo, who developed in his thesis *The city of extended emotions*\* an understanding of urban spaces as (cognitive) scaffolds for collective practices and in return, how emotions and affects scaffold our collective practices of urban spaces—and the agency of their remaining. After Agathe Mignon in her Ph.D. *Protostructure, archéologie et hypothèse d'une architecture-support*\* investigated radical housing projects interrogating the temporalities of architectural projects and the role (and knowledge) of inhabitants in the processes. Inscribing in this genealogy, my research began with the term *protofigurations* which was, to say it rapidly, a way to expand the research of Agathe Mignon to the urban and territorial scales. I then started by investigating collective practices of inscription in reinterrogating the tools at our disposal to address collective embodied knowledge at territorial scales.

The following years, with the arrival of dr. Lucía Jalón Oyarzun and the beginning of Aurélie Dupuis' doctoral research, the body, and embodied and tacit knowledge became more and more central to our collective endeavor. This research then, has to be understood as emerging from hours of discussions and thousands of emails exchange with references and comments, disagreements and celebrations.

The necessity to engage with architecture from the outside/inside, to get in contact with minor practices and knowledge enacted the choice of *case study*. Dieter Dietz introduced me to the work of Manuel Herz in the Sahrawi refugee camps at the beginning of the Ph.D. At that time, I was already alert to the conflict between the Front Polisario and Morocco and its colonial dimension. Then, to engage with this under-discussed conflict through the lens of the oral and embodied with regard to the textures of Sahrawi knowledge was organic. A large part of this Ph.D. is dedicated to a series of discussions in the Sahrawi refugee camps in Tindouf, Algeria, in February/May 2020. Accordingly, it is even more important to be reflexive of my own position. I am entirely conscious that my access to the camp and the knowledge the people shared me with is a privilege. Thus, I have to be grateful for the generosity and hospitality of the people I met and use these privileges for their causes.

To prepare for my research stay in the camps, I made an exchange in the unit of the professor Juan Carlos Gimeno Martín, at the Universidad Autónoma de Madrid, in the department of Social Anthropology, Postcolonial Studies: Western Sahara. He introduced me to his network of Sahrawis diaspora in Madrid, notably to the poet Bahia Mahmud Awah. I cannot be thankful enough to him for the help he gave me and the knowledge he shared. Accordingly, when leaving for the camps, I was hosted by their contacts, Mohamed Ali Laman, director of the conservation program of Oral Memories for the Sahrawi Ministry of Culture, and Lahsen Selki Sidi Buna, who assists Mohamed Ali Laman and regularly supports foreign researchers. Half of the discussions I had were made within the program of Oral memories conservation. The others were close relatives from Lahsen.<sup>3</sup> The sample is quite restricted (8 formal discussions and more informal ones) as I was rapidly expelled from the refugee camps due to COVID 19 measures.

However, I think the scarcity in number constitutes a great quality of the sample. It cultivated my attention to all the wealth of details that these persons, primarily women over 60 years old, shared with me.<sup>4</sup> I am convinced that it enabled a much deeper understanding of the Sahrawi spatial practices, histories, and knowledge circulation than if I had the materials to produce a linear chronological urban or architectural history.<sup>5</sup>

\* See Negueruela Del Castillo, Darío. "The City of Extended Emotions." Thesis, Ecole Polytechnique Fédérale de Lausanne, 2017. <https://infoscience.epfl.ch/record/231145>, and Mignon, Agathe Claire Estelle. "Protostructure, Archéologie et Hypothèse d'une Architecture-Support." EPFL, 2019. <https://doi.org/10.5075/epfl-thesis-9460>.

3 See in chapter C' for more details.

4 For an analysis of the relations between the access to the repertoire of knowledge of these persons compared to the access to an archive, with a perspective on my own position, see Chapter C' Archival Pharmakology.

5 As did Manuel Herz, see Herz, Manuel, ed. *From Camp to City: Refugee Camps of the Western Sahara*. Zürich: Lars Müller, 2013. For a critique, see chapter D.

As you will read after, the material is embraced by the manuscript with a close look and an affective engagement, necessary for the construction of the research. Since then, I regularly exchanged with Lahsen about this research and the discussions we had.<sup>6</sup>

For most of the people I met in the refugee camps, the fact that I was an architect was a mystery. They didn't understand what a French/Swiss architect could learn from their architectural culture and spatial practices. This is not much of a surprise when considering the entrenchment of architectural hylomorphism into the popular image of the discipline. It seems entrenched in the collective unconscious that architecture addresses western intellectual and high classes. Furthermore, the colonality of the modern architectural episteme—justifying a racial or cultural superiority and enacting imperialism—definitely left traces in the relations people can build with the discipline. Yet, the asymmetry is not remediated or repaired, and must be taken into consideration. This movement of knowledge extractivism from the *southern* worlds to the western worlds is an old perduring imperial pattern that is still structuring the western scientific paradigm. It then requires a demanding process of unlearning<sup>7</sup> that I tried to begin with this research.

In order not to impose my own cultural and academic schemes onto the knowledge shared with me during the discussions, I decided to depart from elements or fragments of discussions presented in their contexts—as you will read in chapters C and C'. However, what I use as materials is not the transcript of the discussions; I am using the report I made after each discussion that I reviewed with Lahsen, which traces my own understanding and relation with the knowledge and memories shared. This process, I believe, renders impossible to detach the material from its contexts and enable its situated and relational qualities. Thanks to these entangled elements, I attempted to unfold as hypothesis my understanding, constituted as a dialogue and in trying to be constantly reflexive. Moreover, in this manuscript I will never quote what people said in our discussions—only Lahsen will be quoted once, being a collaborator of this research. In regards to the possible hazards threatening oral and embodied knowledge when excorporated and entering the regime of the archives,<sup>8</sup> it is of great importance not to write down directly and “word for word” the content of the discussions. Instead, I need you to trust in some information that I will not share in order to keep the relations of this knowledge with worlds and temporalities, and consequently their futurities and political agencies.

The architectural discipline and research still have a lot to unlearn to reclaim its agencies and potentialities. I believe architecture has the ability of creating close contacts and be a source of much-needed dialogues with other futurities. I equally believe that it could play an important role in the dismantling of dominations' systems and toxic capitalism. However, architectural hylomorphism is still profoundly structuring the discipline, its knowledge, and its relation with worlds. I have been trained immersed in the idiosyncrasy of the architectural discipline, with its own peoples, power games, class relations, and hierarchies of knowledge. In this research, I don't aim at erasing them. I aim to understand how they formed and form the discipline and how it perpetuated architectural hylomorphism until our present. Simultaneously, I will try to unravel the discipline's relationships to oral and embodied spatial and architectural knowledge not as a historian, maybe as a wannabe theoretician, indeed as an architect, as an attempt to repair and remediate the despise I was mentioning. In giving space and time to these forms of knowledge, I hope to create and reenact minor common grounds, to care for their futurities, from within the discipline, to the extent that is possible.

6 The interviews were mostly in Hassaniya Arabic, sometimes in Spanish. When we were with Mohamed Ali Laman, he led the discussions. When we were just the both of us, Lahsen led the discussions. He translated part of the discussion in Spanish in real-time. The day following the discussion, we listened the recording together, and he translated them with more details. I saw some of the women two times, I wished to do so with all of them, to ask more precise questions in the second round. Unfortunately, it has been postponed for some years. I came to the camps socialized as a Swiss white research of French nationality, which enacted a particular set of relationships with the discutants that are introduced in chapter C'.

7 Azoulay, Ariella. *Potential History. Unlearning Imperialism*. Verso Books, 2019.

8 See chapter C', 'Archival Pharmacology.'

9 Lorde, Audre. *The Master's Tools Will Never Dismantle the Master's House*. Penguin UK, 2018.

This research remains haunted by the very definition of the borders of the architectural discipline as much as the construction of legitimacy in the discourse. I have tried to balance throughout my whole work and this final text my desire to address the topics with the coherence and seriousness demanded by scientific research while not containing certain narrative or essayistic tones. I hope it can break certain epistemic barriers within the discipline and beyond. It produces, I think, a peculiar manuscript navigating between architectural theory and epistemology, cultural studies, colonial and postcolonial studies dusted with Roman history—chapter D. I will let you judge the consistency of this endeavor.

The formation of the architectural discipline and professions is also a history of violence and class relations that we have to unearth and acknowledge not to perpetuate and reproduce it. My position could be one that reproduces it; however, I will try to thwart it against itself. *The master's tools might never dismantle the master's house*,<sup>9</sup> but they might participate in dismantling the master's narrative, and subvert his position.



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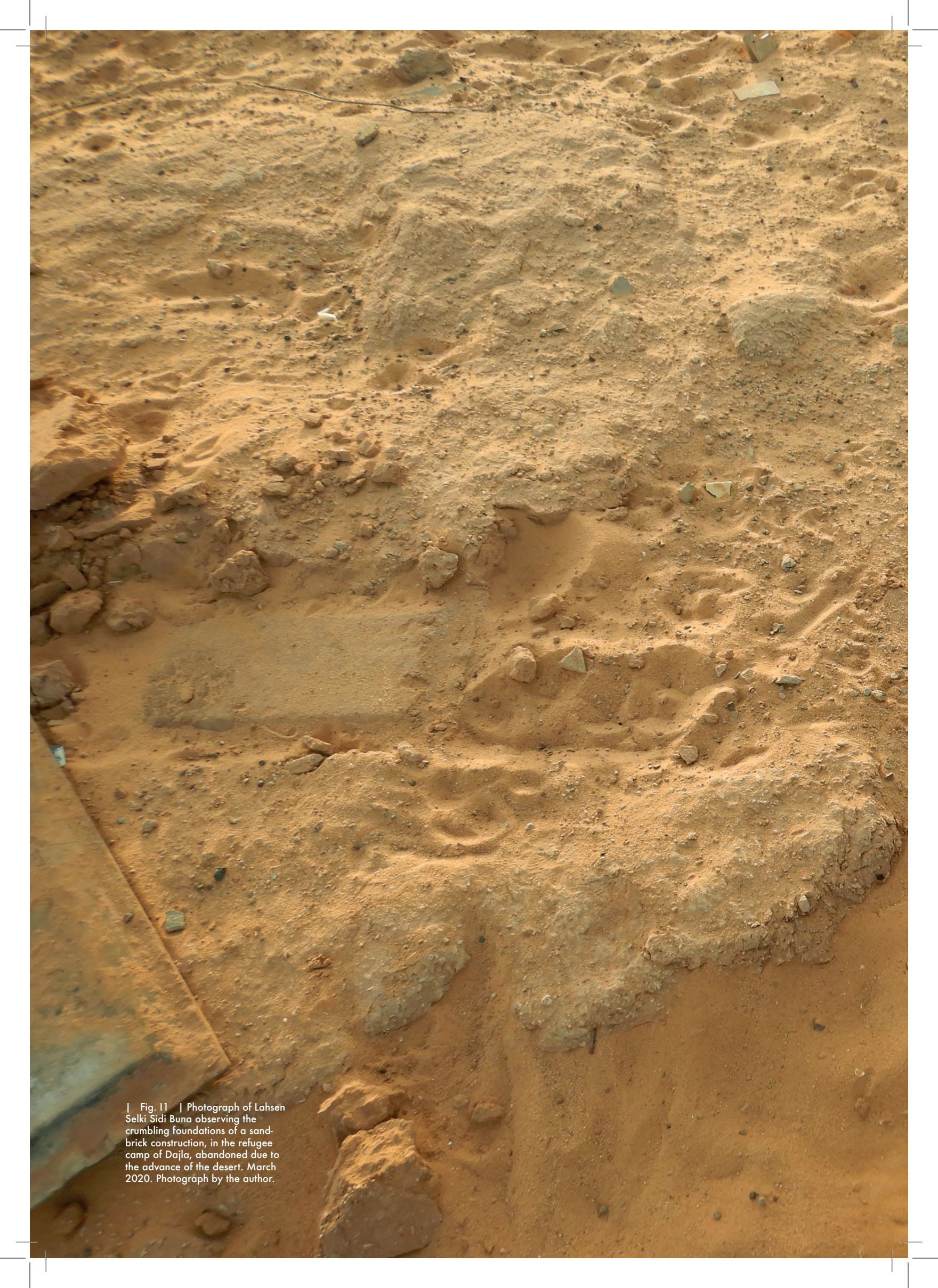
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- 336 Magnitudes of Sahrawi nomadism throughout colonialism and refugeehood.  
Undrawn Spatialities. The architectural archives in the light of the history of the Sahrawi Refugee Camps.
- 357 Reinvidicar un derecho al campamento ¿Se han convertido Smara, El Aaiun, Ausserd, Dajla, Bojador en ciudades de refugiados?
- 370 Protofiguration, opérations d'installation.
- 375
- 384 Curriculum Vitae.





| Fig. 11 | Photograph of Lahsen Selki Sidi Buna observing the crumbling foundations of a sand-brick construction, in the refugee camp of Dajla, abandoned due to the advance of the desert. March 2020. Photograph by the author.





# Introduction





## In the depth of a gesture.

A bottomless “library of knowledge never migrates from its organic form (memory, bodily praxis) to a standard text form (books, audio, or video recording).”<sup>1</sup> There are infinite ways of navigating and building worlds that travel from body-to-body and leave unfathomable traces. This knowledge possesses an unfamiliar and fragile texture. Its repository is called *the repertoire*.<sup>2</sup> Alongside the archival and written systems of memory conservation, repertoires are organic infrastructures preserving collective memories and knowledge. It exists in literate, semi-literate and digital societies however its function(ing)s are difficult to grasp from within the frame of western thought.

The repertoire manifests its existence in the unfolding of a gesture or word. Embodied performances are the means of presence and momentums of migration of knowledge. Performances re-member, drawing from mnemonic reserves what bodies embody. Bodies performing the repertoire bring within reach and place at hand the migration of social and cultural knowledge, from bodies to others. Dance, rituals, social practices, cuisine, sports, oral poetry and music are embodied forms of knowing and practices of transmitting the repertoire. Myriad histories are not written or drawn, which does not mean they are “lost for history”<sup>3</sup> nor invalid forms of knowledge.

Yet, what remains? How should one work with and on knowledge and memories that don’t sustain their presence through the stability of documents or buildings? Should we even try to preserve them? And, if so, how might that be done? How can one make contact with knowledge from the repertoire without breaching its relations with bodies and worlds, and thus, of its social, cultural and political agency? What kinds of architectural and spatial knowledge and histories are *housed* in living bodies? Is there a fundamental impossibility of contact between Institutions/universities and knowledge from the repertoire due to the tendency of one to conceal the other?

Numerous buildings are thought, produced, and designed while *undrawn* or unmediated by lasting documents. They are designed and built *from the repertoire*, enacted by oral and embodied knowledge. Myriad spaces are produced and spatialities performed by bodies and gestures while remaining *undrawn*. Yet the repertoire’s spatial knowledge is rarely recognized as architectural. Its buildings, spaces and spatialities have been categorized in different way by the western architectural discipline according to the epoch and context: informal, vernacular, traditional, spontaneous, indigenous, popular, ephemeral. Nevertheless, most are characterized by their dialectics with the discipline: *undrawn* and *without architects*.

1 Povinelli, E. A. “The Woman on the Other Side of the Wall: Archiving the Otherwise in Postcolonial Digital Archives.” *Differences* 22, no. 1 (January 1, 2011): 152. <https://doi.org/10.1215/10407391-1218274>.

2 Taylor, Diana. *The Archive and the Repertoire: Performing Cultural Memory in the Americas*. Durham: Duke University Press, 2003.

3 Benjamin, Walter, Hannah Arendt, et Harry Zohn. *Illuminations*. New York: Schocken Books, 1986:254.

Organic—embodied/bodily— modes of production of architectures, designed *from the repertoire*, have been and are subjects of a double-edged process: while being a subjugated form of knowledge<sup>4</sup> excluded from the discipline over centuries, they are also romanticized as being more direct, natural or close to people. It is undoubtedly true that most undrawn architectural practices are more direct and enact close contact with human and non-human bodies. Design from the repertoire requires presence and body-to-body transmission, while drawing allows one to act at a distance. Undrawn practices induce a relationship to the non-human—matter—and to human bodies—inhabitants, crafts.women, social context, etc.—that drawing, and the distance it enables, might conceal. The reduction of distance brings within reach scales, temporalities and forms of imagination barely graspable through traditional architectural instruments. Nevertheless, close contacts do not exempt undrawn practices from the influence of power relations, alienations, and subjugations.

This research delves into architectures—buildings, spaces and spatialities—from the repertoire, produced and transmitted body-to-body by oral and embodied knowledge. In order to carry out such an investigation and avoid reproducing *epistemic violence*,<sup>5</sup> it takes into consideration dialectics and oppositions that reify the divides of the architectural discipline. We will use the term *operation*<sup>6</sup> to open a gap into this epistemological impossibility of contact from within the discipline with knowledge from the repertoire. The concept provides a common ground between architectures, buildings, spaces and spatialities, produced with or without drawings or lasting documents and with or without architects. Architectural operations and architectures of operations go beyond former categories and consider the architectural potential of oral and embodied knowledge—in and outside of the discipline—while revealing the embodied and oral dimensions of existing architectural instruments and tools.

*State of the art.* Oral methodologies give access to histories and voices unheard or concealed by the historical discourse. They have been central in counter-historical, indigenous or feminist historical methodologies since the 1960s. Such methodologies go hand in hand with the reappraisal of historiography and of what constitutes authoritative documents or testimonies to construct a historical narrative.<sup>7</sup> In architecture, oral methodologies grant access to two temporalities of buildings which are hardly perceivable through the documents of architects: the construction site and the life of a building after completion. *Pessac de le Corbusier*<sup>8</sup> is one example of research that valorizes the voices of inhabitants as resource for an architectural history, looking beyond merely the intentions of the architect. (Hi)stories of what happened in buildings and the knowledge mobilized in acts of appropriation and diversion were previously considered materials for anthropology, sociology or geography. Through the research into oral methodologies, they have entered in architectural historiography.

In the 1990s, initiatives flourished that sought to reconsider modern architectural histor(iograph)y and narratives, emphasizing instead everyday life and spatialities.<sup>9</sup> Simultaneously, the role of clients in architectural production emerged as hinge points to reconstitute space and agency to women in modern histor(iograph)y.<sup>10</sup> A significant contribution to the topic is the book *Speaking of buildings*,<sup>11</sup> edited by Janina Gosseye, Naomi Stead and Deborah Van der Plaat, which “presents various ways in which the

4 See in Foucault, Michel. *Il faut Défendre La Société: Cours Au Collège de France, 1975-1976*. Hautes Études. Paris: Gallimard/Seuil, 1997.

5 Spivak, Gayatri Chakravorty, Nelson Cary, and Grossberg Lawrence. “Can the Subaltern Speak?” *Marxism and the Interpretation of Culture* 271 (1988): 271–313. On the current ongoing dynamics of epistemic violence in relation to refugees, and in the field of architectural historiography, see Siddiqi, Anooradha Iyer. “In Favor of Seeing Specific Histories.” Edited by Daniel Bertrand Monk, Andrew Herscher, Miriam Ticktin, Lucia Allais, M. Ijlal Muzaffar, Mark Jarzombek, and Swati Chattopadhyay. *Grey Room* 61 (October 2015): 87–91. [https://doi.org/10.1162/GREY\\_a\\_00186](https://doi.org/10.1162/GREY_a_00186).

6 Simondon, Gilbert. *L'individuation à la lumière des notions de forme et d'information*. 2005.

7 See Arnold, Dana, and Elvan Altan Ergut, eds. *Rethinking Architectural Historiography*. 1. publ. London: Routledge, 2006, and Gosseye, Janina, Naomi Stead, and Deborah Van der Plaat, eds. *Speaking of Buildings: Oral History in Architectural Research*. First edition. New York: Princeton Architectural Press, 2019.

8 Boudon, Philippe, and L. Bony. *Pessac de Le Corbusier, 1927-1967: Étude Socio-Architecturale ; Suivi de Pessac II, Le Corbusier, 1969-1985*. Nouv. éd. Aspects de l'urbanisme. Paris: Dunod, 1985.

9 See Chase, John, Margaret Crawford, and John Kaliski, eds. *Everyday Urbanism*. Expanded ed. New York: Monacelli Press, 2008 (1998), and Harris, Steven, and Deborah Berke, eds. *Architecture of the Everyday*. New York,

N.Y: Princeton Architectural Press, 1997, and Lees, Loretta. “Towards a Critical Geography of Architecture: The Case of an Ersatz Colosseum.” *Ecumene* 8, no. 1 (2001): 51–86.

10 Friedman, Alice. “Not a Muse: The Client’s Role at the Rietveld Schröder House.” In *The Sex of Architecture*, edited by Diana Agrest, Patricia Conway, and Leslie Weisman, 217–32. New York: Harry N. Abrams, 1996.

11 Gosseye, Janina, Naomi Stead, and Deborah Van der Plaat, eds. *Speaking of Buildings: Oral History in Architectural Research*. First edition. New York: Princeton Architectural Press, 2019.

12 Introduction by Janina Gosseye of Gosseye, Janina, Naomi Stead, and Deborah Van der Plaats, eds. *Speaking of Buildings: Oral History in Architectural Research*. First edition. New York: Princeton Architectural Press, 2019:20.

13 Rykwert, Joseph. "On the Oral Transmission of Architectural Theory." *Res: Anthropology and Aesthetics* 3 (March 1982): 68–81. <https://doi.org/10.1086/RESv3n1ms41625300>.

14 See amongst other, the very telling articles Morrison, Tessa. "Architectural Planning in the Early Medieval Era." *Journal of the Australian Early Medieval Association*, 2009, and Shelby, L. R. "The Role of the Master Mason in Mediaeval English Building." *Speculum* 39, no. 3 (July 1964): 387–403. <https://doi.org/10.2307/2852495>.

15 See amongst others the work of Juhani Pallasmaa: Pallasmaa, Juhani. *The Embodied Image: Imagination and Imagery in Architecture*. AD Primers. Chichester: John Wiley & Sons Inc, 2011, and *The Eyes of the Skin: Architecture and the Senses*. 3. ed. Chichester: Wiley, 2012. Phenomenology is central to postmodern theories of architecture, and, especially in the work of Daniel Libeskind, Peter Zumthor and Steven Holl (amongst others). See equally the anthropological approach of phenomenology and architecture in Norberg-Schulz, Christian. *Genius Loci: Towards a Phenomenology of Architecture*. London: Academy Editions, 1980. The main critique addressed to the perspective offered by the strand of phenomenology in architecture is that they are working on and with a body as undifferentiated and not socialized, with an archetypal body which is in fact a really specific body: the philosopher's leisured body, able to sense the opening up of an experience.

Other perspectives on bodies and architecture have been brought to the fore, notably by feminist architectural theoreticians in the eighties and nineties. We will inscribe in this genealogy. See for example, Agrest, Diana. "Diane Agrest: Architecture from Without: Body, Logic and Sex." In *Gender Space Architecture*, 374–86. Routledge, 2002, and, Dodds, George, Robert Tavernor, and Joseph Rykwert, eds. *Body and Building: Essays on the Changing Relation of Body and Architecture*. Cambridge, Mass: MIT Press, 2002.

method might be used in the discipline of architectural historiography and offers candid insights into the trials and triumphs of those who have done so."<sup>12</sup> In the contributions and the editors' research, new perspectives on oral methodologies in architecture emerged, as many ways to nuance, counter and enrich the discourse of architectural history.

However, orality as a performative means of spatial production, imagination and theory, and knowledge transmission from the repertoire, is rarely considered in the architectural discipline. One article by Joseph Rykwert entitled "On the Oral Transmission of Architectural Theory"<sup>13</sup> discusses the medieval oral circulation of architectural and building knowledge in corporation in opposition to the written dissemination of Vitruvius' treatise amongst European monks. As almost no architectural drawings or writings were produced during this period, medieval architectural history is the main territory in which architectures are considered as produced by gestures and words.<sup>14</sup>

On the other hand, research relating to embodied knowledge in architecture is mainly limited to phenomenological approaches based on Merleau-Ponty and Bachelard.<sup>15</sup> Such interests in the embodied experience and imaginaries of space only marginally help one to reconsider architectural historiography and the production of architectures through embodied means. Performance and dance studies are much more advanced in this domain. Amongst numerous contributions, Diana Taylor's *The Archive and the Repertoire: Performing Cultural Memory in the Americas*<sup>16</sup> was an important reference for this research.<sup>17</sup> In this book, she sharply analyzes the repertoire's social, cultural and historical dynamics, where performance is the means of circulation of knowledge that remains ungraspable by the archives. She provides rich arguments on the repertoire as allowing histories beyond narrations through embodiment. Alongside, she explains the historical and colonial relations between the archives and the repertoire, as not opposed but intermingled infrastructures of memory conservation. Gestures and words in performance are "vital acts of transfer, transmitting social knowledge, memory, and a sense of identity."<sup>18</sup>

In André Lepecki's *Singularities: dance in the age of performance*<sup>19</sup>, and especially in the chapter "The Body as Archive: Will to Re-enact and the Afterlives of Dances"<sup>20</sup>, many elements are set out to propose the body as a medium for histor(iograph)y. On one occasion, he describes practices of reenactments as methodologies to access and reinvent embodied knowledge and memories. Rebecca Schneider also discusses performance "as both the act of remaining and a means of reappearance"<sup>21</sup> of embodied and oral knowledge. She argues that to consider the vanishing and ephemeral temporalities of performance as lost for history is to misunderstand the temporalities and textures of oral and embodied knowledge. Thus, what is left of performance has to be problematized from within the bodies performing and the traces that might remain inside them, and indeed beyond the mere production of documents. Performance and the repertoire, as mechanisms and infrastructures of conservation and transmission of oral and embodied knowledge, must be reframed within their temporalities and modes of imagination in

16 Taylor, Diana. *The Archive and the Repertoire: Performing Cultural Memory in the Americas*. Durham: Duke University Press, 2003.

17 I am profoundly grateful to Carrie Noland for advising me this reading some years ago, and for the wonderful advice she gave me through our few mail exchanges.

18 Taylor, Diana. *The Archive and the Repertoire: Performing Cultural Memory in the Americas*. Durham: Duke University Press, 2003.

19 Lepecki, André. *Singularities: Dance in the Age of Performance*. New York, NY: Routledge, 2016.

20 Also published as a separate article, Lepecki, André. "The Body as Archive: Will to Re-Enact and the Afterlives of Dances." *Dance Research Journal* 42, no. 2 (2010): 28–48. <https://doi.org/10.1017/S0149767700001029>.

21 Schneider, Rebecca. "Performance Remains." *Performance Research* 6, no. 2 (January 2001): 103.



order to avoid erasing their textures. However, the spatial and architectural dimensions of these performances and the repertoire remain to be unfolded, as well as the specific way they relate to dance and performance studies.

The concept of performativity takes into account bodies and their social, cultural and material contexts. In doing so, it is able to grasp the unfolding of knowledge from the repertoire in space. Coming from J.L. Austin's speech acts theory,<sup>22</sup> rearticulated with gender performativity by Judith Butler,<sup>23</sup> performativity is an asset of performance in which a sociocultural norm is reiterated in the proper context and in the correct way for the norm to reach its agency. Gender, understood as a reiterated performance, is performative because it is constituted of norms performed by bodies which, in turn, become *gendered* through the performance. The extension of performativity to spatial analysis—how material conditions support and reproduce social norms—is difficult to achieve without essentializing space. Performativity of non-human bodies is situated at the intersection of techniques of the body<sup>24</sup>—the unfolding of embodied knowledge from the repertoire—in dialogue with non-human bodies, at the temporal and corporeal scale of the performance. One cannot claim that this space is feminist or patriarchal, as it depends on the situated performing body and the non-human bodies supporting her techniques of the body.

This entanglement of situated non-human bodies, human bodies, techniques of the body and social norms in space and time introduces the term *spatialities*, and indeed *performative spatialities*. The article "Taking Butler Elsewhere: Performativities, Spatialities, and Subjectivities"<sup>25</sup> by geographers Nicky Gregson and Gillian Rose inaugurated this concept in writing:

"performances do not take place in already existing locations: the city, the bank, the franchise restaurant, the straight street. These 'stages' do not pre-exist their performances, waiting in some sense to be mapped out by performances; rather, specific performances bring these spaces into being. And, since these performances are themselves articulations of power, of particular subject positions, then we maintain that we need to think of spaces too as performative of power relations."<sup>26</sup>

The performative production of social space, situated in between positioned and knowing bodies and performative non-human bodies, has become a branch of critical human geography.<sup>27</sup> In architecture, the approach is gaining interest notably thanks to a new wave of feminist epistemologies within academia. The KTH Stockholm Ph.D. of Brady Burroughs *Architectural Flirtations: A Love Storey*<sup>28</sup> and Katarina Bonnevier *Behind straight curtains: towards a queer feminist theory of architecture*<sup>29</sup>, embody this perspective. Brady Burroughs develops methodologies to subvert architectural critique into flirtations, deconstructing the discipline's seriousness and lack of humor and reflexivity. In doing so, she insists on how performances of multiple subjectivities allow one to disentangle and analyze the performative production of social space in architecture—and its norms. Katarina Bonnevier speculatively reenacts scenes in queer and feminist spatialities—E.1027 of Eileen Gray, the literary salon of Natalie Barney and Selma Lagerlöf's home, Mårbacka. Through these scenes, she describes spatialities—entanglements of self-aware human bodies and non-human bodies—that can be designed and inhabited in non-heteronormative and non-straight ways, and the architectural devices supporting these practices.

While these approaches are not directly questioning architectures designed from the repertoire, their spatialities are nevertheless performative social spaces enacted by oral and embodied knowledge. Simultaneously, they introduce the relations between social

22 Austin, John Langshaw, and James Opie Urmson. *How to Do Things with Words. The William James Lectures Delivered at Harvard University in 1955.* [Edited by James O. Urmson.]. Clarendon Press, 1962.

23 Butler, Judith. *Gender Trouble: Feminism and the Subversion of Identity*. New York: Routledge, 1990.

24 See Mauss, Marcel, and Nathan Schlanger. *Techniques, Technology and Civilisation*. New York: Durkheim Press/Berghahn Books, 2006. For an account on the relations between social norms and techniques of the body, see Karsenti, Bruno. "Techniques Du Corps et Normes Sociales : De Mauss à Leroi-Gourhan." *Intellectica. Revue de l'Association Pour La Recherche Cognitive* 26, no. 1 (1998): 227–39. <https://doi.org/10.3406/intel.1998.1578>.

25 Gregson, Nicky, and Gillian Rose. "Taking Butler Elsewhere: Performativities, Spatialities and Subjectivities." *Environment and Planning D: Society and Space* 18, no. 4 (August 2000): 433–52. <https://doi.org/10.1068/d232>.

26 Gregson, Nicky, and Gillian Rose. "Taking Butler Elsewhere: Performativities, Spatialities and Subjectivities." (2000): 431.

27 See the collection of articles edited by Glass, Michael R., and Reuben Rose-Redwood, eds. *Performativity, Politics, and the Production of Social Space*. Routledge Studies in Human Geography 51. New York: Routledge, Taylor & Francis Group, 2014.

28 Burroughs, Brady. "Architectural Flirtations : A Love Storey." *TRITA-ARK. Akademisk Avhandling*. Doctoral thesis, monograph, Arkitektur- och designcentrum, 2016. DiVA. <http://urn.kb.se/resolve?urn=urn:nbn:se:kth:diva-194216>.

29 Bonnevier, Katarina. *Behind Straight Curtains: Towards a Queer Feminist Theory of Architecture*. Trita-ARK, 2007,1. Stockholm: Axl Books [u.a.], 2007.

norms and spatial/architectural design, raising another line of research: *design of the repertoire*. While architectures cannot design the performance, they can nevertheless prevent from certain ones occurring, and in return, enact a series of others.<sup>30</sup> Performative approaches constitute the main perspective yet to be explored in academia to outline how embodied knowledge from the repertoire shapes spatialities, but also spaces and architectures. Suppose social norms are taken positively<sup>31</sup> as the knowledge that allows individuals to insert themselves in oriented and meaningful worlds. In that case, they are embodied resources for the use of an individual, to situate oneself, and designers and planners, to produce material conditions supporting techniques of the body.

In order to surpass the epistemological impossibility of contact with knowledge from the repertoire from within the architectural discipline, this research traces the disciplinarization of knowledge from its origins in the early Renaissance. This process enclosed<sup>32</sup> (the possibility of) knowledge within the walls of universities, *subjugating* other forms of knowledge. *Subjugated knowledge* is “what official knowledge represses within its own terms, institutions, and archives. And on the other hand, it also refers to ‘disqualified’, marginalized, fugitive knowledge from below and outside the institutions of official knowledge production.”<sup>33</sup> Since the 1960s, various disciplines started to become reflexive about the processes of subjugation on which they were built. While, as introduced, oral methodologies were one way to rethink historiography and knowledge production, postcolonial studies emerged<sup>34</sup> enacting a critical gaze on western institutions as infrastructures of power, relegation and subjugation, especially in colonial contexts. Alongside universities and epistemologies, archives were also subjects of specific attention.<sup>35</sup> This was due to their role as infrastructures used to construct colonial subjects, concealing lives and histories, enacting dominant historical narratives at the expense of other forms of history and knowledge—e.g., the repertoire.

The disciplinarization of architecture equally subjugated forms of knowledge to legitimate its domain and gain power over architectural subjects. In this motion, oral and embodied knowledge find themselves despised by Renaissance theoreticians as belonging to “third-class persons [...] the master masons, stone cutters, and workmen whom the architect must always control.”<sup>36</sup> Literature on the historical sociology of the profession and discipline<sup>37</sup> and the rethinking of architectural historiography<sup>38</sup> are still in their early stages. Proper architectural research remains young and does not provide a comprehensive account of the topics. The concept of architectural hylomorphism is developed in this research to cut through this history and grasp the historical relationship between the discipline and oral and embodied knowledge. Hylomorphism is a metaphysical and philosophical notion used to explain processes of individuation by means of the relationship between matter and form, the world of matter and the world of ideas. Grounded in Greek philosophy and especially in Aristotle, hylomorphism traversed Roman and Medieval periods thanks to religious philosophy and extended to the scientific realm in the Renaissance and the Enlightenment.<sup>39</sup>

30 See the analysis of the choreographies enacted by the Flisvos Sculptured Quay of Nolla Golanda in Athens in Ursprung, Philip. “Presence: The Light Touch of Architecture.” In *Sensing Spaces: Architecture Re-Imagined*, 38–53. Royal Academy of Arts, 2014.

31 Marcel Mauss analyzes social norms and techniques of the body in this perspective. The positive perspective doesn’t mean that there is no criticality. It mainly addresses norms as a collective knowledge.

32 Hall, Budd L., and Rajesh Tandon. “Decolonization of Knowledge, Epistemicide, Participatory Research and Higher Education.” *Research for All*, January 1, 2017:8. <https://doi.org/10.18546/RFA.01.1.02>.

33 Gordon, Avery. *Ghostly Matters: Haunting and the Sociological Imagination*. New University of Minnesota Press ed. Minneapolis: University of Minnesota Press, 2008:xix.

34 Amongst many important other references, Said, Edward W. *Orientalism*. 1st Vintage Books ed. New York: Vintage Books, 1979, and Bhabha, Homi K., ed. *Nation and Narration*. London ; New York: Routledge, 1990.

35 See, amongst many other, Hartman, Saidiya. “Venus in Two Acts.” *Small Axe* 12, no. 2 (2008): 1–14.

36 Philibert Delorme quoted in Wilkinson, Catherine. “The New Professionalism in the Renaissance.” In *The Architect: Chapters in the History of the Profession*, Spiro Kostof., 60. New York: Oxford University Press, 1977:130-1.

37 See the collection of articles in Kostof, Spiro, ed. *The Architect: Chapters in the History of the Profession*. New York: Oxford University Press, 1986.

38 See Arnold, Dana, and Elvan Altan Ergut, eds. *Rethinking Architectural Historiography*. 1. publ. London: Routledge, 2006 and the historiographies unfolded by analysis of spatial violence in the field of architecture in Herscher, Andrew, and Anooradha Iyer Siddiqi. “Spatial Violence.” *Architectural Theory Review* 19, no. 3 (September 2, 2014): 269–77. <https://doi.org/10.1080/13264826.2014.1037538>.

39 For a detailed account, see Protevi, John. *Political Physics: Deleuze, Derrida and the Body Politic*. Transversals: New Directions in Philosophy Series. London: Athlone Press, 2001.

Architectural hylomorphism covers a paradigm in architectural theory and history in which matter is submitted to forms. This paradigm is entrenched in the disciplinarization and professionalization of the discipline. It informs their relations with crafts.women, and thus, to oral and embodied forms of knowledge. Tim Ingold boldly denounced hylomorphism in architecture, anthropology, archaeology and arts.<sup>40</sup> He states:

“In the history of the Western world, however, the tactile and sensuous knowledge of line and surface that had guided practitioners through their varied and heterogeneous materials, like wayfarers through the terrain, gave way to an eye for geometrical form, conceived in the abstract in advance of its realisation in a now homogenised material medium. What we could call the textility of making has been progressively devalued, while the hylomorphic model has gained in strength. The architectural writings of Leon Battista Alberti, in the mid-fifteenth century, mark a turning point in this development.”<sup>41</sup>

Many pieces of research, notably through materialist perspectives, sought to revitalize matter and restituted its agencies. Amongst others, *Material matters: architecture and material practice*<sup>42</sup>, edited by Katie Lloyd Thomas, gathers contributions that shift pedagogical, operational and historical epistemologies in architecture, explicitly addressing the hylomorphic basis and methodologies to subvert it.<sup>43</sup> However, what I want to emphasize with architectural hylomorphism, is that the submission of matter to form is the outcome of a social stratification. As an intellectual and scientific paradigm, architectural hylomorphism was an infrastructure of subjugation of embodied and oral knowledge, justifying the subjection of crafts.women to the will of architects.

A restrained body of research exists in architectural archives, the evolution of the ontology of architectural documents—what is considered evidence of architectural events—and how they could have supported processes of subjugation. The recent book, *Crafting history: archiving and the quest for architectural legacy*<sup>44</sup> by Albena Yaneva, provides a comprehensive account of the current debates between architecture and archival studies/sciences in the light of the Centre Canadien d'Architecture's archives. Moreover, “Archiving/Architecture” presents the epistemological paradoxes lying in the activity of archiving documents about architecture and the conflicts arising between the lives of buildings and the documents stored relating to their production. However, the move from archives-as-sources to archives-as-subjects<sup>45</sup> is largely yet to be accomplished in the architectural field.

While architectural and spatial knowledge is transmitted through performance and from the repertoire in many societies, its epistemologies, scales and temporalities remain largely unexplored within western architectural institutions. The references articulated cut through the topic, weaving differing perspectives, and constitute a picture of the current state of affairs. I am fully aware of the range of heterogeneous research I have brought together. This is a deliberate attempt to outline an imaginary zone for peaceful reconciliation<sup>46</sup> with knowledge and lives formerly repressed by the discipline in which I have been trained, slowly assembling pieces to be able to make contact with what has been concealed, silenced or buried. Hopefully, this zone will enable the chance to repair, at least from within the discipline.

40 See Ingold, Tim. “The Textility of Making.” *Cambridge Journal of Economics* 34, no. 1 (January 1, 2010): 91–102. <https://doi.org/10.1093/cje/bep042>, and Ingold, Tim. *Making: Anthropology, Archaeology, Art and Architecture*. London ; New York: Routledge, 2013.

41 Ingold, Tim. “The Textility of Making.” *Cambridge Journal of Economics* 34, no. 1 (January 1, 2010): 92–3.

42 Lloyd Thomas, Katie, ed. *Material Matters: Architecture and Material Practice*. London ; New York: Routledge, 2007.

43 See the article Benjamin, AE. “Plans to Matter: Towards a History of Material Possibility.” In *Material Matters: Architecture and Material Practice*, Routledge., 13–28. London: Routledge, 2006.

Another approach that is not within the scope of this research, but which restitutes agency to matter and provides methodologies to listen to its material speech-acts, is forensics in architecture. See notably Schuppli, Susan. *Material Witness: Media, Forensics, Evidence*. Leonardo. Cambridge, MA: The MIT Press, 2020.

44 Yaneva, Albena. *Crafting History: Archiving and the Quest for Architectural Legacy*. Expertise: Cultures and Technologies of Knowledge. Ithaca [New York]: Cornell University Press, 2020.

45 Stoler, Ann Laura. *Along the Archival Grain: Epistemic Anxieties and Colonial Common Sense*. Princeton, NJ: Princeton University Press, 2009.

46 Gordon, Avery. *Ghostly Matters: Haunting and the Sociological Imagination*. New University of Minnesota Press ed. Minneapolis: University of Minnesota Press, 2008.

## Struggles, subjugation and the repertoire.

A large part of this research has been spent in contact with people and a context in which the repertoire's recognition, conservation and transmission are a matter of life and death. From late 1975 and spring and summer 1976, the Sahrawi population from Western Sahara (WS) was forced to leave their territory when they came under attack from the Moroccan army. Some months before the *misdecolonisation* of Spain (Official declaration to the United Nations 26th February 1976) and the declaration of independence of the Sahrawi Arab Democratic Republic (27th February 1976), the large deposit of phosphate found under the territory of WS led to a civilian occupation (Green March ordered by Hassan II). This was followed by a military campaign from Mauritania—defeated by the Polisario—and Morocco, which still occupies most WS. The Moroccan and Mauritanian claims of sovereignty over WS were based on the Madrid Accords, secretly signed between the Spanish dictator Franco—six days before his death—Hassan II and President Moktar Ould Daddah (president of Mauritania from 1960 to 1978). Both were equally basing their claim on historical “Great Morocco” and “Great Mauritania”, which remains to be credited by any other protagonists. Thus, an open war had been started between Morocco and Mauritania against the Sahrawi separatists, united under the banner of the Polisario Front.

Until 1963, the UN recognized WS as a non-self-governing territory. In 1974, the UN legally recognized the Sahrawi's right to self-determination. A resolution for a referendum in Western Sahara was voted on to stop the open war in 1991. The United Nations Mission for the Referendum in Western Sahara (MINURSO) was launched, along with a ceasefire between the Moroccan Army and the Polisario Front. At this point, the Moroccan regime accepted the resolution as they were losing terrain in the armed struggle. Until this day, the UN decision has failed to be applied. A consensus was never found on who should have the right to vote, as the Kingdom of Morocco systematically refused the proposition of the MINURSO. More recently, the regime proposed granting the status of autonomous territory of the Kingdom, which was rejected by SADR and the Polisario, who demand international rights to be applied. And since 1975, a large part of the Sahrawis have lived in exile in the refugee camps close to Tindouf in Algeria, their only demand being the implementation of the international right to vote in a referendum for self-determination.



On Friday 13<sup>th</sup> November 2020, the Moroccan Army violated the ceasefire in shooting civilians protesting in the UN peacekeeper's buffer zone in Guerguerat, to the South of WS. On 10<sup>th</sup> December 2020, then President of the United States of America, Donald Trump, signed an agreement to recognize Moroccan sovereignty over WS as part of a deal in which diplomatic relations between Israel and Morocco are normalized. This decision is in clear violation of the international right to self-determination and makes the USA the first country in the world to recognize Moroccan sovereignty of WS. Since then, the armed struggles have restated between the Polisario Front and the Moroccan Army, with almost no international coverage, as access to WS's occupied territories to journalists or international observers is prohibited, and journeys to the liberated territories are dangerous due to the Moroccan Army's military installations.

In the first phase (1975-8), around 50,000 people—mostly older people, women and children—settled in the middle of the Algerian desert in a refugee camp, today called Rabouni. After that, the settlement extended to six camps—Smara, El Aaiún, Dakhla, Awserd, 27<sup>th</sup> February (now Bojador), and Rabuni—near Tindouf. In early 2019, more than 150,000 Sahrawis lived on the WS border, in the middle of a dry and rocky sand desert.

Unlike most refugee camps around the world, where power relations between the host country, humanitarian organizations and the refugees themselves, usually put the latter at a disadvantage, the Sahrawi took over central powers, organized and managed the land and buildings, and founded the Sahrawi Arab Democratic Republic (SADR). Similarly, the camp's territory was not only or primarily conceived in order to fulfill a humanitarian need;<sup>47</sup> the Front Polisario, which already existed during the time of Spanish occupation, had previously outlined a socio-political project before the exodus. The independence and the structure of these settlements were intentionally rooted in the histories and traditions of Sahrawi society.<sup>48</sup> The creation of the camps is conceived as a *prefiguration* of the return of the Sahrawi Arab Democratic Republic and a remembrance of the land that had been lost. It was argued that the Sahrawi state is not dissimilar to the system of the Ayt Arba'in.<sup>49</sup> In this perspective, the election of the national parliament or council of elders suggests that “the visual image is different, but the idea remains the same.”<sup>50</sup> Adopting a western nation-state model is tied to an imported vocabulary, as the Sahrawi State model is based on an image of a *detribalized* nomadic ideal.

Sahrawi encampments are ambiguous, somewhere between refugee camps and nomadic encampments.<sup>51</sup> Several of their features suggest their status as “traditional” refugee camps, such as the constraints on movement due to conflict (an extension of the restrictions posed by colonial borders), political control over the populations, and the disappearance of the domestic mode of production characteristic of Sahrawi nomadic pastoralism. However, in the layout of the camps one can also interpret *firgan*—regular nomadic forms of encampment in lines—situated between the square forms of a *mahsar*—in response to the war situation—and the circular shape of the Anawal—camps enacting radical equality between members. This fusion of forms results in the grid-like layout of each daïra—neighborhood—while organizing them in a circle around

47 See Hodges, Tony. *Sahara occidental: origines et enjeux d'une guerre du désert*. Paris: L'Harmattan, 1983.

Corbet, Alice. “Les campements de réfugiés sahraouis en Algérie : de l'idéal au réel (From idealization to reality : the Sahrawi refugee camps in Algeria).” *Bulletin de l'Association de géographes français* 83, no. 1 (2006): 9–21. <https://doi.org/10.3406/bagf.2006.2489>.

Mundy, Jacob A. “Performing the Nation, Pre-Figuring the State: The Western Saharan Refugees, Thirty Years Later.” *The Journal of Modern African Studies* 45, no. 02 (June 2007): 275. <https://doi.org/10.1017/S0022278X07002546>.

Fiddian-Qasmiyeh, E. “‘Ideal’ Refugee Women and Gender Equality Mainstreaming in the Sahrawi Refugee Camps: ‘Good Practice’ for Whom?” *Refugee Survey Quarterly* 29, no. 2 (March 1, 2010): 64–84. <https://doi.org/10.1093/rsq/hdq023>.

Boukhars, Anouar. *Perspectives on Western Sahara : Myths, Nationalisms, and Geopolitics*. Lanham, MD: Rowman & Littlefield, 2014.

Barreñada, Isaías, and Raquel Ojeda García, eds. *Sahara Occidental, 40 años después*. Madrid: Catarata, 2016.

48 See Caratini, Sophie. *La république des sables: anthropologie d'une révolution*. Paris: L'Harmattan, 2003.

Farah, Randa. “Knowledge in the Service of the Cause: Education and the Sahrawi Struggle for Self-Determination” 27, no. 2 (2010): 12.

Dedenis, Julien. “Le Sahara occidental : un territoire revendiqué... des territoires imaginés ?” *L'Information géographique* 75, no. 3 (2011): 42. <https://doi.org/10.3917/lig.753.0042>.

Picón, Juan Ignacio Robles, Juan Carlos Gimeno Martín, Bahía Mahmud Awah, and Mohammed Ali Laman. “La poésie sahraouie dans la naissance de la conscience nationale.” *Les Cahiers d'EMAM*, no. 24–25 (January 1, 2015). <https://doi.org/10.4000/emam.781>.

Campos-Serrano, Alicia, and José Antonio Rodríguez-Esteban. “Imagined Territories and Histories in Conflict during the Struggles for Western Sahara, 1956–1979.” *Journal of Historical Geography* 55 (January 2017): 44–59. <https://doi.org/10.1016/j.jhg.2016.11.009>.

49 See Awah, Bahia Mahmud. *La entidad política Precolonial Saharawi*. Madrid: Bubok Publishing, 2017.

50 See Isidoros, Konstantina. *Nomads and Nation-Building in the Western Sahara: Gender, Politics and the Sahrawi*. London: I.B. Tauris, 2018.

51 See Wilson, Alice. “Ambiguities of Space and Control: When Refugee Camp and Nomadic Encampment Meet.” *Nomadic Peoples* 18, no. 1 (January 1, 2014): 38–60. <https://doi.org/10.3197/np.2014.180104>.

52 See Wilson, Alice. “Ambiguities of Space and Control: When Refugee Camp and Nomadic Encampment Meet.” *Nomadic Peoples* 18, no. 1 (January 1, 2014): 15–6. <https://doi.org/10.3197/np.2014.180104>.

53 Juan Carlos Gimeno Martín and myself argued about the necessity of not confounding the refugee camps with cities, which would deprive Sahrawis of their right to the political agency of exception. See Lafontaine Carboni, Julien, and Juan Carlos Gimeno. “Reinvindicar Un Derecho al Campamento.” *Sociedad Geográfica Española La Ciudad. Las Ciudades.*, no. 66 (Mayo-Agosto): 94–105.

54 See Isidoros, Konstantina. *Nomads and Nation-Building in the Western Sahara: Gender, Politics and the Sahrawi*. London: I.B. Tauris, 2018:235.

55 See Isidoros, Konstantina. *Nomads and Nation-Building in the Western Sahara: Gender, Politics and the Sahrawi*. London: I.B. Tauris, 2018:214.

56 Term that refers to a social and political structure prior to the war, which has been falsely translated by the word tribe.

57 Hassanya word for tent.

58 See the article on this topic, written by Juan Carlos Gimeno Martín and myself, Lafontaine Carboni, Julien. “Inmóviles, Pero No Quietos. La Sedentarización de Los Saharauis Como Estrategia de Adaptación y Respuesta a La Supervivencia. Sobre La Posibilidad de Un Nomadismo Inmóvil.” *Tabula Rasa*, 2021. <https://doi.org/10.25058/20112742.n37.02>.

administrative buildings. However, the refugee camps are not called *firgan* in the Sahrawi lexicon. Instead, they mostly use the Arabic word *al-mukhayam*,<sup>52</sup> which means “the tented place.” Nor can they be considered sedentary spaces, as, despite the protracted conflict, they continue to be spaces of exception that constitute a fundamental right of refugees, whereby exception is constantly re-enacted as a political means of struggle.<sup>53</sup>

Anthropologist Kontanastina Isidoros insists on a further persistent quality of nomadic encampments found in the refugee camps: the capacity of the tents to coalesce, a capacity of fusion and fission among a group of individuals, enacting a moving political constellation and forming a “tented-state.”<sup>54</sup> Conversely, she argues that the “public space” of the camp was created for international humanitarian programs and “echoes emptily”<sup>55</sup> when they leave in the summer. This constellation is based on the nomadic culture of the Sahrawis: one tent always moves toward another, and this motion is at the basis of the emergent quality of their political power.

The process of nation-building as tent-dwellers began before the exodus to the region of Tindouf—prior to the construction of the “public infrastructure”—when the Sahrawi began to claim their right to independence in the 1960s. This moving political space—a space provided by women’s tents and hospitality, blurring the traditional opposition between states and different *qabā’il*,<sup>56</sup> nomadism and sedentarism, citizens and refugees—characterizes the persistent presence of nomadism in the changing culture of the Sahrawi, suggesting an analogy between refugee camps and nomadic encampments.

Beyond the spatial analogy and the inscription of the refugee camps in a broader spatial history of Sahrawi culture, Sahrawi nomadism is an entire repertoire of gestures and motions, from tea-making to the ways in which tents are positioned in relation to each other. The material culture of the Sahrawi evolved in exodus, shaped by their economic and material reality; among other factors, the absence of herds of camels and goats rendered the maintenance of the traditional *jaïma*<sup>57</sup> impossible. To sustain their nomadic culture, numerous Sahrawis refused, for a time, to improve their quality of life as refugees. From their perspective, replacing the lightness of the *firgan* with individual blocks built of sand bricks—for kitchens, bathrooms and “living rooms”—jeopardized their right to claim to belong to a nomadic culture. For the same reason that the Sahrawi have refused (and continue to refuse) to call the refugee camps “cities,” they have resisted building infrastructure and undertaking material improvements to households. Just as their status as refugees and the acknowledgment of the camps as refugee camps is a right, the nomadic continuation of their culture is also a right, despite their protracted and immobilized status as refugees.<sup>58</sup> This persistence reflects their unyielding will for self-determination.

The repertoire, referring to knowledge and histories that enact cultural and economic practices, creates the basis for collective capacities to survive, exist freely, and for the political autonomy and agency of the Sahrawi. This repertoire is equally critical in the Sahrawi’s claim of cultural autonomy. Along with the armed and diplomatic war between the protagonists, a *soft*, cultural war is ongoing, through which the Moroccan regime attempts to rewrite cultural history. Numerous events are organized in the occupied territories to prove the association of the two cultures and confirm the *Great Morocco* narrative. This imperial rewriting of history implied and implies the use of imperial infrastructures—notably archives and historical discourses—concealing the repertoire as a site from which histories and knowledge can be legitimate and shared. This is the case on both sides at the expense of the Sahrawi people. The repertoire is vital for the political and democratic agencies of the Sahrawi, the possibility of return,

and the claim of cultural autonomy against epistemicide. Yet it is threatened. Protracted refugeehood and immobilization in the refugee camps are the main reasons that short-circuit the circulation of the repertoire. As such, its conservation, and the preservation of its temporalities and futurities, as a means to campaign and prepare for return, is a real concern in the Sahrawi society in exile.

*State of the art.* The state of academic research concerning Sahrawi people and Western Sahara, as well as the war and decolonization, can be broken down into a clear timeline and several fields of research. Since the beginning of the war in 1975, the topic has evolved from geopolitics and history to anthropology, ethnology and other disciplines related to postcolonial and refugee studies.

*Research led during the first phase of the conflict (1970-91).* In the seventies, Algeria was strongly associated with the Non-Aligned Movement and the Soviet Union. During attacks from Morocco against the Polisario Front, Algeria fully supported the Sahrawi's struggle for independence and hosted them, giving them the right to settle near Tindouf for an indeterminate period. At first, France and Spain supported the occupation by Morocco even though the UN legally voted for a referendum for self-determination. In that scope, the conflict became a major research topic for political sciences and studies of decolonization. In France, the book *Le conflit du Sahara Occidental*<sup>59</sup> constitutes an important reference; it goes through the reasons of the conflict and the role of each country involved, the formation of the Polisario Front and RASD, and the attitude of the UN, offering a synthesis of the situation.

In his work *Le Droit à l'autodétermination Du Sahara Occidental: Le Chemin Difficile Du Peuple Sahraoui: Documents de Base Avec Une Introduction*,<sup>60</sup> Manfred O. Hinz gathers all the original documents (first sources) necessary to understand the war in terms of geopolitics and organization of life in the camps. Several works indicate the structure of the camp at different times;<sup>61</sup> they are all, for the most part, descriptive and imprecise, and do not detail the spatial dimension in terms of use and the relationship with identity formation and politics. Some authors, with relatively precise methods, proposed an anthropological analysis of the birth of the Sahrawi Nation.<sup>62</sup> The end of *tribalism* and nomadism as a more general phenomenon in the west of the Sahara provoked research focusing on cultural modifications of social structures.<sup>63</sup>

*Recent research in Refugee and Postcolonial Studies.* Randa Farah has shown that the Sahrawi struggle for independence involves the population's education and empowerment.<sup>64</sup> With the help of the government, children are sent to foreign schools and universities. After receiving their diplomas, first-generation inhabitants come back to the camps to teach, often campaigning for the Sahrawi cause within International Institutions. The former organization of the population, whose territorial limits were imprecise, alongside its current diaspora, has led to the current dispersed quality of the Sahrawi social structure. This complex fabrication of collective identity and the central

65 Yara, Ali Omar. *Genèse politique de la société sahraouie*. Collection L'Ouest saharien Hors série 1. Paris: L'Harmattan, 2001. Corbet, Alice. "Les campements de réfugiés sahraouis en Algérie : de l'idéal au réel (From idealization to reality : the Sahrawi refugee camps in Algeria)." *Bulletin de l'Association de géographes français* 83, no. 1 (2006): 9–21. <https://doi.org/10.3406/bagf.2006.2489>, and, *Nés Dans Les Camps : Changements Identitaires de La Nouvelle Génération de Réfugiés Sahraouis et Transformation Des Camps*. Paris, EHESS, 2008. <http://www.theses.fr/2008EHESS0353>.

Caratini, Sophie. "La prison du temps. Les mutations sociales à l'œuvre dans les camps de réfugiés sahraouis, Abstract." *Afrique contemporaine*, no. 221 (June 1, 2007): 153–72. <https://doi.org/10.3917/afco.221.0153>. Dedenis, Julien. "Le Sahara occidental : un territoire revendiqué... des territoires imaginés ?" *L'Information géographique* 75, no. 3 (2011): 42. <https://doi.org/10.3917/lig.753.0042>.

Isidoros, Konstantina. "The Silencing of Unifying Tribes: The Colonial Construction of Tribe and Its 'Extraordinary Leap' to Nascent Nation-State Formation in Western Sahara." *Journal of the Anthropological Society of Oxford* 7, no. 2 (2015): 168–90. Gimeno Martín, Juan Carlos. "Transformaciones Socioculturales de Un Proyecto Revolucionario: La Lucha Del Pueblo Saharaui Por La Liberación." *Colección Monografías*, no. 43 (2007).

66 Vernet, Robert, ed. *Histoire et sociétés maures*. L'Ouest saharien : cahiers d'études pluridisciplinaires, 2. 1999. Paris: L'Harmattan, 2000. Bonte, Pierre. *Essai Sur Les Formations Tribales Du Sahara Occidental: Approches Comparatives Anthropologiques et Historiques*. Bruxelles: L. Pire, 2007. Martin, Juan Carlos Gimeno, and Juan Ignacio Robles Picón. "Vers une contre-histoire du Sahara occidental." *Les Cahiers d'EMAM. Études sur le Monde Arabe et la Méditerranée*, no. 24–25 (January 1, 2015). <https://doi.org/10.4000/emam.866>.

Boulay, Sébastien, and Francisco de Brito Freire. *Culture et politique dans l'Ouest saharien: arts, activisme et État dans un espace de conflits (Algérie, Mali, Maroc, Mauritanie, Sahara Occidental)*. Igé: Edde l'Etrave, 2017. Boulay, Sébastien, and Francesco Correale, eds. *Sahara occidental: conflit oublié, population en mouvement*, 2018.

59 Barbier, Maurice. *Le conflit du Sahara occidental*. Paris: L'Harmattan, 1982.

60 Hinz, Manfred O. *Le droit à l'autodétermination du Sahara Occidental: le chemin difficile du peuple sahraoui. Documents de base avec une introd.* Progress-Dritte-Welt-Verlag, 1978.

61 See Brickhill, Joan. "In Camp with Polisario." *Africa (Londres)*, October 1977, 20–27. Lippert, Anne. *The Saharawi Refugees:*

*Origins and Organization, 1975-1985*. SPSC Letter, 1985, and Cisteró, José M, and Teresa Freixes. *Sahara: una lección de historia: el nacimiento de una nación, la construcción de un estado*. Erscheinungsort nicht ermittelbar: Cistero, 1987.

62 Desjardins, Thierry. *Les Rebelles d'aujourd'hui*. Paris: Presses de la Cité, 1977, and Miské, Ahmed-Bâba. *Front Polisario: L'âme d'un Peuple. Suivi d'un Entretien Avec Jean Lacouture*.

Paris: Éditions Rupture, 1978.

63 Amongst other, Gaudio, Attilio. *Les Civilisations Du Sahara*. Vol. 141. Marabout Université, 1967, and *Sahara Espagnol, Fin d'un Mythe Colonial?* Edition Arrissala, 1975.

64 Farah, Randa. "'Knowledge in the Service of the Cause': Education and the Sahrawi Struggle for Self-Determination" 27, no. 2 (2010).



67 See all the work of E. Fiddian-Qasimiyeh, especially Fiddian-Qasimiyeh, Elena. "When the Self Becomes Other: Representations of Gender, Islam, and the Politics of Survival in the Sahrawi Refugee Camps." In *Dispossession and Displacement: Forced Migration in the Middle East and North Africa*, 2010. <http://discovery.ucl.ac.uk/1496630/>, and, *The Ideal Refugees: Gender, Islam, and the Sahrawi Politics of Survival*. First Edition. Gender, Culture, and Politics in the Middle East. Syracuse, New York: Syracuse University Press, 2014.

Solana Moreno, Vivian. "Cementing Nationalism: The Role of the Saharawi Munaðila in Her Struggle for Decolonization." *Politiques de La Culture et Cultures Du Politique Dans l'Ouest Saharien*, and "REGENERATING REVOLUTION: Gender and Generation in the Sahrawi Struggle for Decolonisation," 2017.

Boulay, Sébastien. "Organisation des opérations techniques féminines de fabrication de la tente dans la société maure (Mauritanie)." *Journal des africanistes* 73, no. 2 (2003): 107–20. <https://doi.org/10.3406/jafr.2003.1344>.

68 See Boukhars, Anouar. *Perspectives on Western Sahara : Myths, Nationalisms, and Geopolitics*. Lanham, MD: Rowman & Littlefield, 2014.

Mundy, Jacob. "Autonomy & Intifadah: New Horizons in Western Saharan Nationalism." *Review of African Political Economy* 33, no. 108 (June 1, 2006): 255–67. <https://doi.org/10.1080/03056240600842875>, and "Performing the Nation, Pre-Figuring the State: The Western Saharan Refugees, Thirty Years Later." *The Journal of Modern African Studies* 45, no. 02 (June 2007): 275. <https://doi.org/10.1017/S0022278X07002546>.

Martín, Pablo San. *Western Sahara: The Refugee Nation*. University of Wales Press, 2010.

69 Correale, Francesco. "La narration de l'histoire en situation de crise. Revendications et contradictions dans la construction mémorielle sahraouie." *Les Cahiers d'EMAM. Études sur le Monde Arabe et la Méditerranée*, no. 24–25 (January 1, 2015). <https://doi.org/10.4000/emam.838>, and "Le Sahara Espagnol : Histoire et Mémoire Du Rapport Colonial. Un Essai d'interprétation." In *La Question Du Pouvoir En Afrique Du Nord et de l'Ouest*.

dimension of remembering lost territory has led to numerous pieces of research and investigations.<sup>65</sup> Despite the tentative erasure of a *tribal* past during the revolution of the Front Polisario, research nevertheless emphasized the paradoxical survival of the *tribal* system through spatial organization and the social dynamics of gender.<sup>66</sup>

Women were the first to settle in the refugee camps near Tindouf; they laid the foundation stones and organized a means of survival in exile. The previous social structure of the Sahrawi was a matriarchal system, mainly due to a half-sedentary status. The Sahrawi Revolution Movement emphasized the necessity to achieve equality between women and men in the Republic. This aspect of the Sahrawi Society particularly interested researchers as the political presence of women, in space and time, is remarkable.<sup>67</sup> Elena Fiddian-Qasimiyeh elaborated on the use of this aspect of their culture to foster an image of *Ideal Refugees* for the western world. Konstantina Isidoros narrated the survival of the status of women in society, and its evolution. She hypothesized that, despite its appearance and the revolutionary project that tried to rewrite the past, it is precisely the nomadic culture that permitted the Sahrawi to survive and remain independent in a hostile environment, and mainly through the political agency of women.

The segmentation of power in the camps interested several researchers from the field of refugee studies, with regard to the non-conventional power relations between international organizations, the host country and refugees;<sup>68</sup> the comparison between the status of Palestinians and the Sahrawi has been made several times. Moreover, the camps are seen as an example of managing refugee populations. Their organization "prefigures" and anticipates the state and the potential to return.

To set out the influence of colonialism, the nomadic and *tribal* past, and the geographical and economic aspects on Sahrawi contemporary culture, transdisciplinary approaches have been elaborated. Even though the Oxford Refugee Centre remains a significant reference in this domain, only a minor part of their focus has been on the Sahrawi. A group of researchers from the Universidad Autonoma de Madrid, composed of ten researchers and four associate members, have for the last ten years been producing a series of publications, research actions and books about the influence of colonization on Sahrawi culture and, reciprocally, on Spanish culture, put in perspective with the revolution and immobilization.<sup>69</sup> In this context, the role of culture as an enactive device to unify a community and prepare for the return and resettling has been studied. The group of research focused primarily on poetry. They established a network of collaboration with Sahrawi poets to valorize their heritage and analyze the influence of colonization and war/revolution on traditional forms of enunciation. Since 2017, a

*Du Rapport Colonial Au Rapport de Développement*, edited by Sophie Caratini, 103–52. L'Ouest Saharien 9–1. L'Harmattan, 2009. <https://hal.archives-ouvertes.fr/hal-01086797>.

Martín, Juan Carlos Gimeno, and Luis Martín Pozuelo. "Memorias orales en el Sahara Occidental: La poesia en Hasania," 2011, 29.

Correale, Francesco, and Juan Carlos Gimeno Martín. "Sahara occidental : mémoires coloniales, regards postcoloniaux." *Les Cahiers d'EMAM. Études sur le Monde Arabe et la Méditerranée*, no. 24–25 (January 1, 2015). <https://doi.org/10.4000/emam.757>.

Picón, Juan Ignacio Robles, Juan Carlos Gimeno Martín,

Bahía Mahmud Awah, and Mohammed Ali Laman. "La poésie sahraouie dans la naissance de la conscience nationale." *Les Cahiers d'EMAM*, no. 24–25 (January 1, 2015). <https://doi.org/10.4000/emam.781>.

Castañeda, Claudia Barona. "Mémoires d'une résistance, l'autre histoire du Sahara occidental." *Les Cahiers d'EMAM. Études sur le Monde Arabe et la Méditerranée*, no. 24–25 (January 1, 2015). <https://doi.org/10.4000/emam.852>.

Barreñada, Isaías, and Raquel Ojeda García, eds. *Sáhara Occidental, 40 años después*. Madrid: Catarata, 2016.

Campos-Serrano, Alicia, and José Antonio Rodríguez-Esteban. "Imagined Territories and Histories in Conflict during the Struggles for Western Sahara, 1956–1979." *Journal of Historical Geography* 55 (January 2017): 44–59. <https://doi.org/10.1016/j.jhg.2016.11.009>.

Awah, Bahía Mahmud. "Génération de littérateurs : intellectuels et politique dans le Sahara occidental, 1850–1975." *Les Cahiers d'EMAM. Études sur le Monde Arabe et la Méditerranée*, no. 24–25 (January 1, 2015). <https://doi.org/10.4000/emam.761>.

Awah, Bahía Mahmud. *La entidad política Precolonial Sabarawi*. Madrid: Bubok Publishing, 2017.



European Research Council grant has been attributed to a group of researchers at the University of Lisbon, in collaboration with the SADR and Nouakchott University, led by Francisco Freire. This group is currently developing critical approaches to politics, social activism and Islamic militancy in the Western Sahara region.

Nonetheless, research into the spatial dimension of Sahrawi culture, and the conservation and transmission of the repertoire, has scarcely gone beyond the anecdotal status in terms of scientific assessment, despite cues in sources and literature from 1970 to 1991. The research of Studio Basel, led by Manuel Herz—funded by ETH Zürich in 2013—precisely depicts the current functioning of the camps. Resulting from this research, a book<sup>70</sup> restitutes the “urban metabolism” of the camps in terms of *Planning, Living, Administration, Moving and Communication, Commerce and Work, Health and Education, Recreation and Leisure*. However, the work led applied western categories of analysis to understand spatialities, spaces and systems that can only be partially understood within these frames, if at all.<sup>71</sup>

70 Herz, Manuel, ed. *From Camp to City: Refugee Camps of the Western Sahara*. Zürich: Lars Müller, 2013.

71 For a detailed critique, see chapter D.

This research is partially inscribed in the Oral Memory Archiving project of the Ministry of Culture of the SADR. Led by the director of the Ministry’s department of oral memory, Mohamed Ali Laman, the project consists of the organization of discussions with Sahrawi people that lived as pastoralists, through Spanish colonialism and the war, or that are important personalities of the resistance. The discussions are systematically recorded, and most of the time, shared on social media and transcribed for the Archives of the Ministry. The technical leader of the project, Lahsen Selki Sidi Buna, is also responsible for the audio-visual department of the Ministry. In this project, my role was to support the organization of discussions financially and actively participate in them. However, this project is not the main initiative in refugee camps that transmits oral and embodied knowledge and histories to new generations. The National Organization of Sahrawi Women has a strong presence in the camps, the occupied territories and the diaspora, as an infrastructure that organizes events and training to circulate knowledge and histories.

## Unfolding contacts.

*Gap*. This research does not propose an alternative history as “it cannot be new: it is always already known, and it is only its authors that had to unlearn its imperial version in order to utter it properly.”<sup>72</sup> I will not unearth a new or alternative narrative on architectural history, theory and epistemology. Instead, it sketches a threshold to an imaginary zone for peaceful reconciliation<sup>73</sup> with knowledge and lives repressed by the architectural discipline. It is then a record of an unlearning process and hopefully provides conceptual and operatory instruments to make contact with this knowledge and lives. The *gap* must be understood in its historical dimensions and constitutive processes that are products of cultural, political and social forces.

The historicity of this gap, which I will refer to as the *void/obscure zone in the hylomorphic architectural representation*, is the first area of investigation. The process of disciplinarization and professionalization remains largely under scrutinized with regard to its importance in the understanding the actual ontologies and epistemologies of architectural knowledge. The discipline’s relationship with oral and embodied knowledge throughout its history in the western world, along with infrastructures and politics of subjugation, are central perspectives.

While oral methodologies are gaining an audience and importance in the current architectural field, design, histories and knowledge from the repertoire linger as marginal. In 1986, Robin Evans already outlined architectural practices that end “up working on the thing itself,” “emphasizing the corporeal properties of things made.”<sup>74</sup> However, the circulation, forms of imagination, theories, and histories of designs and architectures from the repertoire have rarely been a topic of interest or a proper field of research.

Architectures of operations/from the repertoire engage temporalities and forms of agencies discussed in performance studies and, partially, within architecture from feminist and queer perspectives. However, the continuity and gradients between the performance of design, construction and spatialities remain to be studied. The architectural image, and textures of knowledge associated with such practices that will later be called *figurations*, constitute a gap, even while a great number of investigations are led into the architectural potential of everyday habits and tacit knowledge. In order to make contact with architectural histories grounded in gestures and words, while considering them as producers and transmissions of knowledge, this research provides the basis for a critical historiography. It envisages contacts with minor narratives and potential histories as lacking in this domain.

72 Azoulay, Ariella. *Potential History. Unlearning Imperialism*. Verso Books, 2019:198.

73 Gordon, Avery. *Ghostly Matters: Haunting and the Sociological Imagination*. New University of Minnesota Press ed. Minneapolis: University of Minnesota Press, 2008.

74 Robin Evans, “Translations from drawing to building,” *AA files* 12 (1986): 156, 160.

Similarly to his broader theory, the term *operations*, coming from the philosopher Gilbert Simondon, is not widespread in architecture. Certain philosophers carried out translation work in this field, mainly as an extension of the perspectives of Gilles Deleuze and Félix Guattari, such as Brian Massumi, Georges Teyssot or Tim Ingold.<sup>75</sup> Nevertheless, both the historical and operatory dimensions within architecture still deserve to be scrutinized.

In between and within the research fields of the Western Sahara and Sahrawi people, this work outlines an apparent lack of understanding of Sahrawi architectural and spatial knowledge. While the analogy between the refugee camps and nomadic encampments has been studied, the extent to which spatial and architectural knowledge was mobilized in the construction and transformation of the *ideal* camps, how this knowledge evolved through exile, and the transmission of this repertoire between generations of immobilized refugees, has remained peripheral for research. The scales and temporalities belonging to architectures from the repertoire have not been analyzed in the Sahrawi context,<sup>76</sup> and the camps remain to be understood and approached, not according to Western *urban* tools, but from the motions of tents moving toward each other, coalescing and splitting.

Within the Sahrawi struggle for self-determination and in western contexts, the conservation/preservation of knowledge from the repertoire raises highly political and complex questions, with myriad ethical and epistemological issues. In this research, I don't claim to answer them but provide some terms of the debate by bringing in perspectives from performance, dance and reenactment studies, alongside postcolonial, decolonial and critical theories.

*Performativity of the gap.* Through these gaps in the research, I hope this research can contribute to the current debates on pedagogies and practices of unlearning in architecture and architectural research. Many discussions arise with the help of the critical reworking of historiography.<sup>77</sup> The *unlearning* of sources, especially in architecture, constitutes, I believe, one of the most central but complex tasks the discipline has to achieve. This research attempts to break the process of subjugation often still occurring in the fabrication of the theoretical and historical architectural discourse. The power relations that performatively grant authority to particular architectural objects, documents and knowledge, as expertise and resonance for certain voices and discourses, remain in place in institutions and research. I don't believe this manuscript will overturn these relations of power. Nevertheless, I hope some tools and instruments will be provided given to think beyond, below and outside them, to reconstitute at least some space to formerly subjugated knowledge.

This research may contribute to debates on the conservation and transmission of architectural knowledge and histories in architectural historiography, theory, and epistemology. It widens the ontology of what are considered as *traces* of architectural events and explores the repertoire as a site of architectural and spatial knowledge production, conservation and transmission. As such, this research opens up paths toward

75 See Massumi, Brian. *A User's Guide to Capitalism and Schizophrenia: Deviations from Deleuze and Guattari*. A Swerve ed. Cambridge, Mass: MIT Press, 1992, and *Parables for the Virtual: Movement, Affect, Sensation*. Post-Contemporary Interventions. Durham, NC: Duke University Press, 2002.

Ingold, Tim. *Making: Anthropology, Archaeology, Art and Architecture*. London ; New York: Routledge, 2013, "The Temporality of the Landscape." *World Archaeology* 25, no. 2 (October 1993): 152–74. <https://doi.org/10.1080/00438243.1993.9980235>, and "The Textility of Making." *Cambridge Journal of Economics* 34, no. 1 (January 1, 2010): 91–102. <https://doi.org/10.1093/cje/bep042>.

Teyssot, Georges. *A Topology of Everyday Constellations*. Writing Architecture. Cambridge, Massachusetts: The MIT Press, 2013.

76 While it is not present in the literature on the Sahrawi refugee camps, some researchers questioned the temporalities through which refugee camps are analyzed. Among other, see the discussion of Anooradha Iyer Siddiqi in which she develops on the entanglements of multiple temporalities and materialities to be considered in the case of Dadaab refugee camp in Kenya. She states that "this camp as a city will never succeed if the impermanence of the political core is taken as a denial of the urban rather than constitutive." In Siddiqi, Anooradha. "Ephemerality." *Comparative Studies of South Asia, Africa and the Middle East* 40, no. 1 (May 1, 2020): 26. <https://doi.org/10.1215/1089201X-8186005>.

77 Among others, and in the field of architecture, see the workshop organized by Central New York Urban Humanities Workshop Group: <http://www.samiahenni.com/Unlearning.html>. Unlearning sources is inscribed in methodologies and epistemologies of potential history, developed by Ariella Azoulay in *Potential History. Unlearning Imperialism*. As discussed above, "If a certain

written story is an alternative to imperial premises, it cannot be new: it is always already known, and it is only its authors that had to unlearn their imperial version in order to utter it properly, that is, from the point of view of those who never accepted their imperial version as truth." (Azoulay, Ariella. *Potential History. Unlearning Imperialism*. 2019:198.) Listening to potential histories demands a

profound work of unlearning (the methodologies, the sources, etc.) of the imperial tools and versions of truth, not so much to forget them and throw them away, as *deconstruction* might imply, but to disentangle the power relations and subjugation processes in the fabrication of the historical discourse. Unlearning thus points at the need to understand the infrastructures of knowledge,

their borders, and how scholars are situated within them in relation to what type of history and sources they can work on. It is a fundamental task to achieve epistemic justice, to be able to follow potential histories and make contact with the human and non-human bodies that hold them.

78 See amongst other this publication issued from the work of Forensic Architecture: Weizman, Eyal. "Violence at the Threshold of Detectability." *E-Flux Journal* 64 (2015), and Weizman, Eyal and Forensic Architecture (Project). *Forensic Architecture: Violence at the Threshold of Detectability*, 2019. In the work of Forensic Architecture of creating legible proofs

79 See Panh, Rithy. *The Missing Picture*. Bophana Production, 2013, and, Panh, Rithy, and Christophe Bataille. *L'élimination*. Paris: Grasset, 2011.

new practices, archival gestures and institutional programs, while not providing ready-made solutions but, instead, operatory potentials. In continuation, it presents ways of listening that may offer the basis for reparative horizons, or at least for considering what has been broken, what is repairable, and what is beyond repair. Moreover, by imagining performance as *means of reappearance and acts of remembrance* of architectural and spatial knowledge, this research puts forward new modes of relating to events that have or might have happened, their traces, and offers hospitality to their temporalities and futurities. As such, this work might provide tools to further explore speculative, embodied and/or reparative architectural (and) historical pedagogies.

By outlining design from and of the repertoire, this research can impact spatial and built environment analysis. With the help of queer and feminist perspectives, operations and the repertoire grasp new scales and agencies. Such perspectives enable the development of critical approaches to spatialities and embodied knowledge, situating bodies as differentiated, entangled in power relations, and also enable the production of subjectivity. In return, the research reflects on embodied strategies of renegotiation of spatialities through the repertoire, and might help to develop embodied practices.

In relation to the struggle for self-determination of the Sahrawi, the first performative dimension of this research is to produce space and time. As the conflict has been frozen for several decades, international coverage—by media and academy—has diminished. The Moroccan violation of the ceasefire on the 13th November 2020 and Donald Trump's illegal recognition of Moroccan sovereignty have barely been discussed. Thus, occupying the field of research is already a fundamental dimension.

The proofs and legible documents of international justice belong to the archival regime.<sup>78</sup> The repertoire is not yet fully recognized as a trustworthy site of conservation and transmission of evidence. Anne Gilliland and Michelle Caswell have argued the necessity to acknowledge absent and imagined records within archives, in order to achieve justice in contexts where no documents have been produced as evidence—in their case, the Red Khmer regime in Cambodia. Rithy Panh described this paradox of International Justice whereby works of memory must be created to produce performative evidence, as developed in his film *The Missing Picture* and the essay *L'élimination*, written with Christophe Bataille.<sup>79</sup> The same question is raised concerning war crimes committed during the armed conflict between the Moroccan, Mauritanian and Sahrawi armies (1975–1991) and in occupied Western Sahara. Many political activists are harassed and tortured by authorities or even disappear while no international observer can access the territory. The aerial operations of the Moroccan military, including, among other examples, when they dropped napalm and phosphorus over the refugee camps of fleeing Sahrawi civilians in 1975-6, do not possess any form of documentation beyond the dead bodies left in place and the wounds of the survivors. This work does not provide any legible proof or pieces of evidence but can outline routes toward the production of legible documents that do not breach their relations with bodies, notably through reenactment techniques.

Concerning the cultural side of the war and the Moroccan imperial rewriting of history, this research equally offers a reflection on how to overturn this rewriting without destroying the relations of knowledge from the repertoire with their environment and the bodies that hold them. It does so in scrutinizing the ties between the archives and the repertoire and outlining some activation strategies which could offer an alternative to the traditional archival gestures that cannot but breach the performance from the repertoire.

**ROa: Zone of peaceful reconciliation/ History  
of architectural knowledge**

*RH10: Ethics and paradoxes of conserving  
oral and embodied knowledge*

**CHC'**

*RH9: Radical coexistence of pasts, futurities,  
past futurities and future pasts.*

**Interlude**

*RQII: Contacts from within*

**CHC**

**Pb: (from) the repertoire :**  
*an architectural theory of operations  
oral and embodied knowledge in  
architectural and spatial practices*

*RH6: Design of the repertoire*

*RQV: The archives and the repertoire  
Circulation and conservation of oral and  
embodied knowledge*

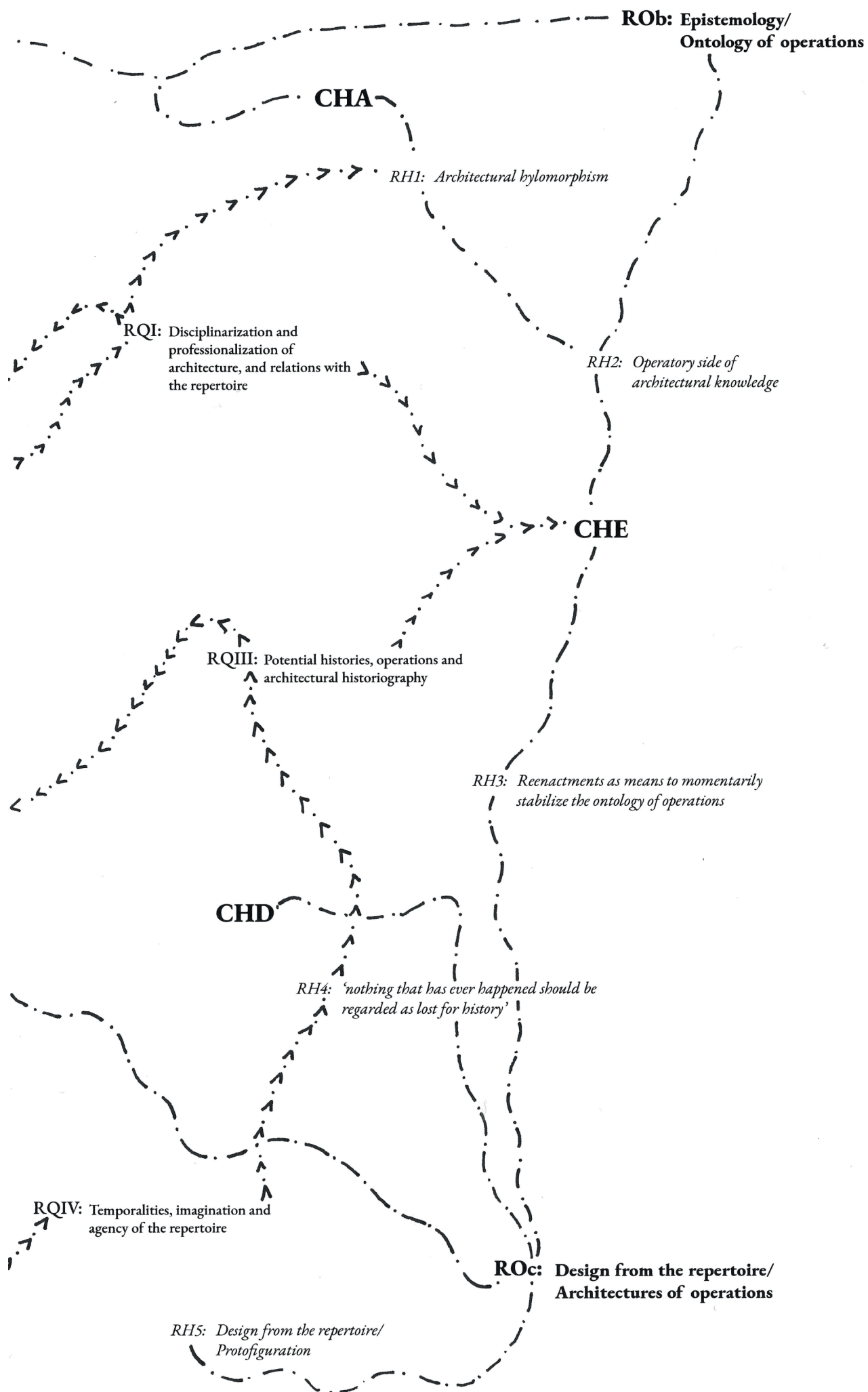
*RH8: performance 'as both the act of remaining and  
a means of reappearance' of the repertoire*

**CHB**

*RH7: Performative spatialities  
and figurations*

**ROd: Gestures/ Performativity of oral and  
embodied knowledge/ Figurations**





| Fig. 12. | Diagram of the research displaying the research objectives, problematic, questions, and hypothesis on a field similar to a map. This analogy allows us to think of the relations between the research objectives, problematic, questions, and hypotheses not as causal and direct, but instead as fields. Proximity brings about perspectives on other objects without being the only way to make contact with it. This condition also carries the possibility of deepening the field between elements, adding new questions, hypotheses, objectives that are latent in the present configuration. It also invites you, the reader, to annotate and add new dimensions to the current state while setting out ways to enter the manuscript non-linearly if you wish to do so. The positions presented are relative, meaning that other configurations could be further proposed. Abbreviations: Pb: problematic; RO: research objective; RQ: research question; RH; research hypothesis; CHx: Chapter.

## Map of research.

*Problematic. (from) the repertoire: an architectural theory of operations. Oral and embodied knowledge in architectural and spatial practices.*

*This research will try to define and make contact with spatial and architectural knowledge that resides in the repertoire. To better frame their ontologies, we will ask how these kinds of knowledge circulate, and what their relations are with the architectural discipline and its infrastructure. In order to bridge epistemological divides, we will discuss them as operations—the way in which they (co)operate. We will question the methodologies, epistemologies and ethics that are induced by such contacts while proposing routes to preserve their agencies and relations with worlds. What kind of potential histories can we understand when listening to oral and embodied architectural and spatial knowledge? What are the forms of invention and imagination that their temporalities and modes of operation induce?*

Research questions.

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- I. Disciplinarization and professionalization of architecture and relations with the repertoire. Through the process of disciplinarization of architecture and its professionalization in Europe, what is the relationship of architectural theory, history, and profession with oral and embodied knowledge? How have these relations evolved through centuries, and how do they appear now?
- II. Contacts from within. Due to this history and processes of subjugation, is it possible, or indeed desirable, to make contact with this knowledge from within the discipline of architecture? What ethical and epistemological challenges and paradoxes lie in these potential contacts?
- III. Potential histories, operations and architectural historiography. How can one renegotiate the boundaries of architectural historiography for operations—and oral and embodied knowledge—to be hosted or at least considered legible? How can one articulate this renegotiation with potential histories of knowledge and lives concealed by former historiographies?
- IV. Temporalities, imagination and agency of the repertoire. What are the temporalities involved in the unfolding of architectural and spatial knowledge from the repertoire? How do they rearrange previously linear chronologies, and what relations do they bring about between pasts, futurities, past futurities, and future pasts? What forms of imagination processes are enacted by the relations between human and non-human bodies through architectural operations/architecture of operations from the repertoire? What forms of agency lie in these relations?
- V. The archives and the repertoire. Circulation and conservation of oral and embodied knowledge. What are the modes of circulation of knowledge from the repertoire? What is the relationship between the archival mode of knowledge conservation and that of the repertoire? Is it possible to conserve knowledge from the repertoire without breaching its relations with worlds and temporalities? Which kinds of ethical and paradoxical questions does conservation pose? What strategies might foster the conservation and circulation of the repertoire, and what archival gestures emerge from these strategies?

1. *Architectural hylomorphism.* In order to explore the relations of architecture with oral and embodied knowledge, architectural hylomorphism, as a paradigmatic relationship between matter and form, thinkings and buildings, architects and crafts.women, is hypothesized to enact positions of the discipline and profession. In return, architectural hylomorphism produces a void in representation, concealing the operations and consequently the knowledge and lives of the crafts.women.
2. *Operatory side of architectural knowledge.* Accordingly, this research supposes the existence of an operatory side of architectural knowledge, formerly subjugated to legitimize the knowledge of architects. This operatory side analyzes knowledge and dynamics of the repertoire to ground itself as a genuine mode of architectural production and epistemology of architectural history, theory and operations.
3. *Reenactment as a means to momentarily stabilize the ontology of operations.* As performances re-producing pasts, reenactments are hypothesized as acts of remembrance and means of reappearance of knowledge from the repertoire. It is both a analytical category of knowledge circulation, and a strategic practice of negotiation from and circulation of the repertoire. Reenactments are imagined as momentarily stabilizing the fugitive and fragile ontology of operations, allowing them to be scrutinized without breaching their relations with the worlds.
4. “nothing that has ever happened should be regarded as lost for history.” In order to make contact with potential architectural histories from the repertoire, I assume, through the words of Walter Benjamin, that “nothing that has ever happened should be regarded as lost for history.” Therefore, temporal distance is considered an imperial premise and is instead replaced by the potential for contact. In this perspective, concealment and subjugation fail as long as there are ways and methodologies to listen.
5. *Design from the repertoire/Protofiguration.* This research postulates that design can be achieved from the repertoire. This implies that forms of architectural and spatial knowledge are embodied and oral, and that their unfolding, or performance, produces spatialities and architectures. These spatialities and architectures are thought of as possesses their own histories and historicities that might constitute an operatory side of architectural history. Protofigurations, as a specific engineering of the field of the possible from the repertoire, are explored as historical and operatory hypotheses.
6. *Design of the repertoire.* Not only are embodied and oral knowledge—figurations—shaping performative spatialities, but, in return, architectures and spaces are also believed to shape the repertoire performatively. Non-human bodies—spatial, architectural, artifactual, biological, geological, etc.—equally enter the play through material speech acts that performatively shape the repertoire and its possibilities. These co-operations of economies of human and non-human bodies are referred to as landscapes of affordances.
7. *Performative spatialities and figurations.* I hypothesize that through analysis of architecture and the repertoire, access is granted to their temporalities and architectural agency. Performative spatialities are understood alongside social norms as spatiotemporal and embodied entanglements of performance in space, unfolded by figurations as architectural and spatial knowledge from the repertoire.
8. *Performance “as both the act of remaining and a means of reappearance” of the repertoire.* The temporal, subjective and spatial scales of performance are considered to enable an understanding of agencies and futurities from the repertoire. Performances themselves, that what enacts them and their remaining traces, are thought of as being

*the material for making contact with the repertoire. The ontologies of performance and of operations are considered analogical or parallel. Moreover, performance is understood “as both the act of remaining and means of reappearance” of knowledge from the repertoire.*

9. *Radical coexistence of pasts, futurities, past futurities and future pasts. In this research, pasts, futurities, past futurities and future pasts are speculated not to be something distant to be once again brought back, but rather along to make contact with. To be touched by this latent texture of the actual demands a specific grip on gestures.*

10. *Ethics and paradoxes of conserving oral and embodied knowledge. The modes of conservation and circulation of knowledge, histories and memories from the repertoire are imagined as being radically different from the archival regimes. Conserving knowledge, histories and memories that remain and reappear through gestures or words raises paradoxes, as a traditional archival gesture would breach the relations between such knowledge and its worlds entirely, destroying it and its futurities. This research supposes that, in a context in which the circulation of the repertoire should be encouraged, numerous ethical questions are raised, which have so far failed to be asked through archival regimes of conservation. These questions constitute an opportunity to rethink the archive’s boundaries, their documents’ relations to the worlds, and sketch a horizon for repair.*

#### **Research objectives.**

**Zone of peaceful reconciliation/History of architectural knowledge.** This research aims at bringing about an imaginary zone of peaceful reconciliation hospitable to oral and embodied knowledge. This requires the creation of thresholds from within the discipline that allow one to make contact with knowledge and lives formerly subjugated by the discipline and profession. Indeed, it continues the objective of listening to potential histories of architectural knowledge as a means of understanding processes of subjugation and, in return, define horizons of repair.

**Epistemology/Ontology of operations.** This research works toward defining an architectural theory of operations. This approaches architectural operations and architectures of operations in the same motion, as a genuine epistemology that bridges the two formerly divided fields. Accordingly, I aim at introducing the theory of operations—allagmatic—of Gilbert Simondon into architectural theory, thus giving certain architectural potentials to knowledge from the repertoire and the archives.

**Gestures/Performativity of oral and embodied knowledge/Figurations.** In this scope, I intend to unravel methodologies of grasping the performativity of oral and embodied knowledge, within architectures of operations and performative spatialities, at the different scales and temporalities it makes contact with. Gestures, coined as figurations, are the acts of remaining and the means of reappearance of an architectural and spatial knowledge.

**Design from the repertoire/Architectures of operations.** I endeavor to propose design from the repertoire and architectures of operations as proper categories—modes of operations, imagination processes, relationships with human and non-human bodies—belonging to architectural theory, history and production. Simultaneously, this refers to the necessity of deconstructing and unlearning former categories and their subjugating and/or imperial dimensions, weaving a contact with other potential threads of histories.



**CHAPTER A** explores architectural hylomorphism as a paradigmatic representation of the relation between matter and form, thinking and building, architects and crafts. wo.men through the disciplinarization and professionalization of architecture in Europe. Architectural hylomorphism creates a void in the representation of non-human bodies, notably the brick, in which the knowledge and lives of brick molders are concealed. The chapter proposes a potential history of knowledge in the discipline—and its stratification—in order to unearth the dynamics of subjugation. It analyzes how such dynamics emerged and their infrastructure. The theory of operations of Gilbert Simondon is introduced as a means to dialogue with brick molders and bricks by carefully examining their knowledge, lives, and material speech acts at the ontological level of architectural operations/architectures of operations.

**CHAPTER B** delves into architecture and the repertoire and the numerous ways knowledge from the repertoire unfolds in space and time, in such a way as it can be considered architectural and/or spatial knowledge. First, the chapter introduces how the social sciences discussed oral and embodied knowledge in the twentieth century in relation to social norms, and how they created the basis for theories of performativity and performative spatialities. Next, the repertoire is hypothesized as enacting the insertion of individuals into oriented and meaningful worlds through performance. The chapter then investigates the processes of imagination associated with oral and embodied knowledge thanks to the Gilbert Simondon's course *Imagination et invention*, while defining architectural images from the repertoire as figurations. Finally, the temporalities and modes of migration of this architectural and spatial knowledge are examined to grasp their historicity and potential ways of making contact with their operations.

**CHAPTER C** departs from a discussion with Gorba M. L. in the Sahrawi refugee camp of Smara in March 2020. In this conversation, she introduced the evolution of the interior of her Jaïma during the war (1976–1991) through the absence of her husband. The architectural agency of the absence is understood as ghostly, as something absent but which acts in the actual. The ghost is understood to be actualized through the gestures of Gorba who maintained hospitality toward his presence, temporalities and futurities, as a means of preparing for a return to Western Sahara's nomadic pastoralist life. These gestures of hospitality are one way in which architectural knowledge from the repertoire unfolds as acts of remaining and means of reappearance of histories, memories and lives. The temporalities of these gestures propose a radical coexistence of pasts, futurities, past futurities and future pasts, as something brought along as corporeal through her hospitality. The ghostly touch is finally examined as a worldly contact with structures of knowledge that have been estranged, that we do not fully understand yet or anymore. This means that the ghostly texture was only ghostly to me, due an entrenched incapacity to make contact with Gurba's knowledge, one that I nevertheless tried to unlearn.

**Interlude** proposes a speculative archive of Sahrawi figurations. It is an attempt to imagine potential strategies of conservation and migration of knowledge in between the archival gestures and the performance of the repertoire. It is proposed as an infrastructure that enacts the acts of remaining and means of reappearance of the endangered Sahrawi knowledge. It aims to avoid the need or desire to *archive* such knowledge, which would breach its relations with worlds and bodies, and in this motion, destroy its futurities.

80 “ce pharmakon est nécessairement toxique tant que de nouvelles thérapeutiques n’en sont pas prescrites.” In Stiegler, Bernard. *La société automatique*. Paris: Fayard, 2015:106. My translation

**CHAPTER C’** examines the relations between modes of circulation and conservation of knowledge from the archives and the repertoire. Literature of the archival turn is presented as means of engaging the ethics and paradoxes of a will to *archive* the oral and the embodied. The archival gestures will be set out according to their pharmacological dimensions. This means that they are both a poison and a remedy to the conservation and migration of knowledge from the repertoire. Bernard Stiegler wrote, “this pharmakon is necessarily toxic as long as new therapeutics are not prescribed.”<sup>80</sup> The temporal and socio-economical ambiguities of archives are discussed as potentials to support further performance, by providing a spatiotemporal basis that would otherwise be endangered by delays between performances. Lastly, undrawn spatialities are unraveled as a category of spatialities and architectures that grasps numerous architectural events and performances belonging to the repertoire. They are thus performative epistemological and conceptual tools in the architectural discipline, offering views of another regime of traces and circulation of knowledge.

**CHAPTER D** introduces the concept of protofigurations from which this research departed. Protofigurations refers to a spatial and cultural enactive technology that re-configures the field of the possible through a performative—thus embodied and iterative—structuring of the repertoire and thus of the possible relations with the environment. They cover spatial technologies that modify or enact what is afforded, while allowing or alienating dialogues with the material speech acts and ghosts of other temporalities. Protofigurations are explored with the help of an Atlas methodology based on Aby Warburg’s Mnemosyne Atlas as means to navigate in speculative cosmovision, investigate cardinality and calendarity, and unveil universes of images with their own temporal and technical dynamics. Finally, an analysis is developed of certain Roman protofigurations, namely the inscription of Etruscan and Roman settlements in their territories through the use of the grid, as a design from the repertoire that reconfigures the field of the possible through embodied and oral spatial and architectural knowledge.

**CHAPTER E** offers promises and insights into architectural reenactments as strategic practices of renegotiation of architectural theories, histories, pedagogies and operations from the repertoire, being a potential zone of peaceful reconciliation. It starts on the premise the repertoire has become a site of extraction and design. It departs from Adorno’s text “Do not knock” from *Minima Moralia*, which describes the automatization of the urban environment and gestural standardization to unravel how algorithmic touches engineer the scales of gestures. Considering this new form of extractivism that endangers the repertoire and its reach, the chapter delves into architectural reenactments as a strategy to momentarily stabilize the ontology of operations and allow them to be scrutinized, potentially thwarting repertoire extractivism. A short genealogy of reenactment is provided to unearth the ambiguities, paradoxes and critiques noted and formulated by historians and scholars from performance/dance studies. (Architectural) reenactments proceed from a flattening of temporalities and complex historical processes with current concerns. They involve an augmentation of the surface of contact with pasts for reenactors, while also providing the means to reconstitute some space and time to lives and knowledge concealed and subjugated by dominant narratives. As such, they pave the way to a critical, embodied and reflexive approach to the built environment, architectural histories, pedagogies and operations while strategically circulating and migrating knowledge from the repertoire.

## Strategies, methodologies and temporalities of the research.

This research began with many methodological inquiries into how to think of an architectural theory and how to make architectural history at the scale of a gesture or a word. How can one unravel the historicity of embodied and oral operations? In relation to the Atlas Poliphilo course—third year Bachelor in architecture, civil and environmental engineering—we developed research, as part of ALICE, on Aby Warburg's technics in his Atlas Mnemosyne. As a powerful instrument to bring a complex set of images into dialogue, we used large boards to navigate the diversity of sources, media, scales (temporal and spatial) and develop hypotheses upon the socio-technical relationships between spatialities, what they afforded (symbolically as much as gesturally), which dialogues with human beings and non-humans they allowed or silenced. The boards allowed us to display the materials without reducing the complexity of their textures or giving a final and conclusive answer.

46

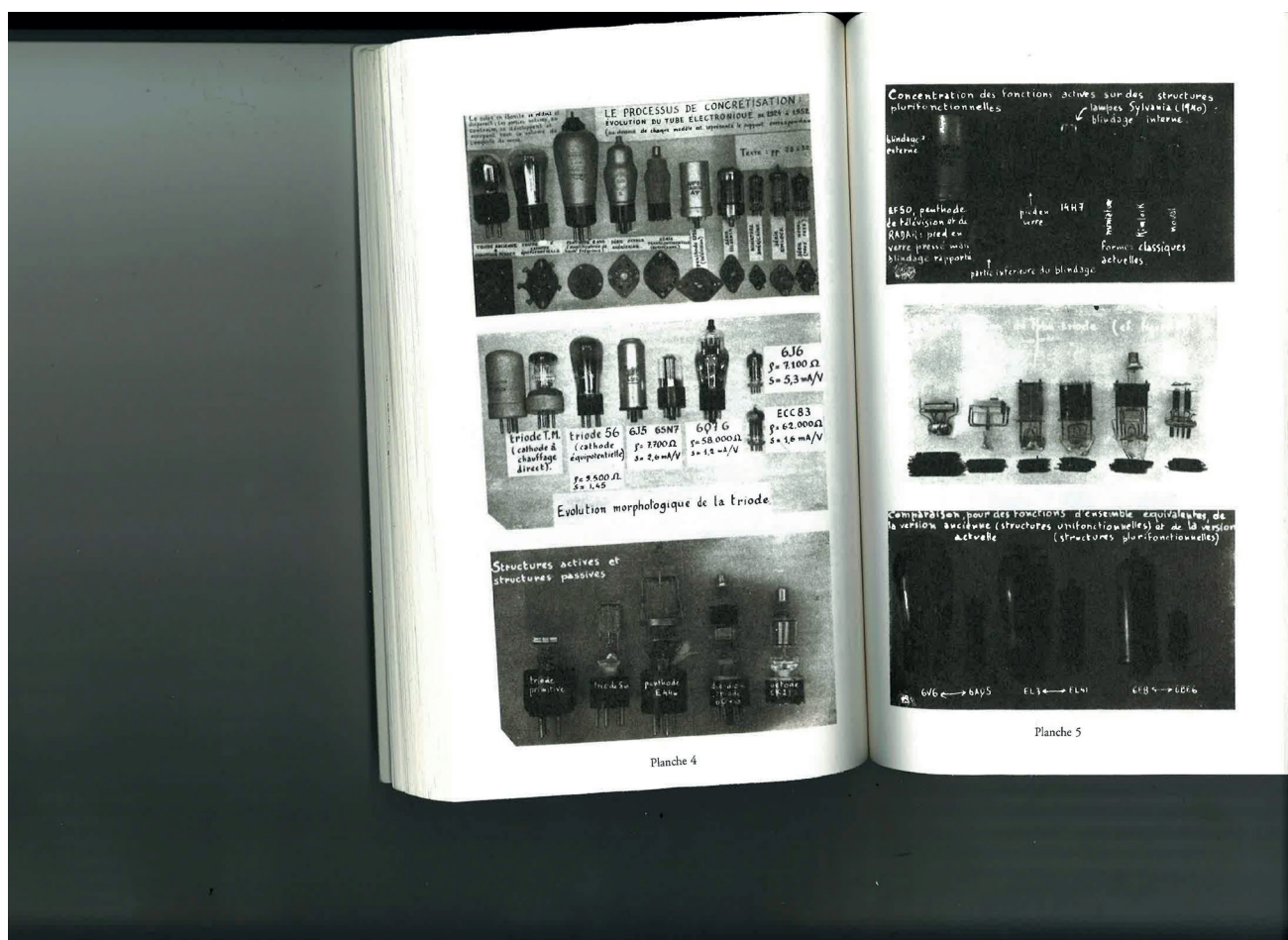
In his essays on the Atlas<sup>81</sup> and on the work of Warburg, Georges Didi-Huberman describes atlases as a way to host the “splitting up of the world” (“morcellement du monde”), to rearrange it and produce new forms of orientation. Through his investigations into the traces of Antiquity in occidental culture, Warburg was looking for some non-physical vestiges, called *Nachleben* (survivals) in *forms*, *behavior* or *psyche*. The boards of the Atlas were produced as a medium to host heterogeneous debates, being simultaneously the support, snapshots of the process, and the outcomes of the discussions in the *Kulturwissenschaftsbibliothek* Warburg built. Far from an archetypism,

81 Didi-Huberman, Georges.  
*L'œil de l'histoire. 3: Atlas Ou Le  
Gai Savoir Inquiet*. Paradoxe. Paris:  
Minuit, 2011.



| Fig. 13. | Photograph taken during the course Atlas Poliphilo, in Spring 2018. This workshop was organized after site visits. The boards were used a way to navigate the multiplicities of human and non-human bodies encountered, and to open up narrative threads and possible configurations—on the board and in return, on the potentialities of the territories. ALICE, EPFL.





| Fig. 14. | Page of Simondon, Gilbert. *Du Mode d'existence Des Objets Techniques*. Philosophie / Institut Catholique de Paris, Faculté de Philosophie. Paris: Aubier, 2001. In this work, Gilbert Simondon analyzes the individuation of technical objects and how they evolve. In the line of André Leroi-Gourhan, he argues that they go through major and minor inventions in a process of concretization, in which they are becoming more and more concrete—i.e., more and more fine-tuned within their own mechanisms and relations with the technical environment. These inventions possess in his theory a certain independence from human subjects, as they have their own internal determinations that are achieved independently from the human subject that operates. It is for the human operator to listen to technical expressiveness and determination.

the atlas permitted the discussants to use analogy and non-linear genealogy to investigate dynamics of postures, gestures and figurations through a long-term and cross-cultural history, the *Nachleben* being the temporal mode of remaining and reappearance. These remains did not aim at proving the existence of a universal model of human culture. Instead, they played a critical role in arguing that minor existence and survivals thread (hi)stories, and that art history should deepen its understanding of the agency of figurations in various contexts and their social roles. As an open-ended methodology, the system of boards in the Atlas Mnemosyne was a point of departure of this research. It was hypothesized as a means of allowing one to make contact with oral and embodied histories from the repertoire and follow threads of minor histories, escaping narrative forms, chronologies and linearities.

First developed in parallel to boards of the atlas, the genealogical methodologies of the theories of operations developed by Gilbert Simondon in *Du mode d'existence des objets techniques*, and, *L'individuation à la lumière des notions de forme et d'information*, later became critical to unravel the relations between techniques, inventions and figurations. Simondon provides concepts and methods to understand the genesis of technical objects—and techniques—in respect of their internal dynamics of organization. As such, it sketches a non-anthropocentric history of techniques, revealing the internal dynamics of organization of non-living bodies, and grants access to operatory knowledge through dialogues with non-human bodies and their futurities. Operatory knowledge is from this point understood as an ability to modulate and co-operate with a milieu through dialogues with plural temporalities. Chapter D develops a comparative analysis of Roman practices of inscription with the use of this methodology.

To prepare my research stay and discussions in the Sahrawi refugee camps, the Swiss National Fund granted me a doc.mobility to the Universidad Autónoma de Madrid, in the faculty of Social Anthropology, Department of postcolonial studies, a group of investigation on Western Sahara, under the direction of Prof. Juan Carlos Gimeno Martín. During this stay, I had the chance to meet several members of the Sahrawi diaspora, notably Bahia Mahmud Awah, poet, writer and researcher. Both introduced me to the project they were participating in, notably in the refugee camps, and were of immense help to understand the current situation and debates in the camp—and in the academic field—while providing me the instruments and contacts to dialogue with Sahrawi people in the refugee camps.

Arriving there in February 2020, I directly met Lahsen Selki Sidi Buna. Lahsen is used to collaborate with foreign researchers from the Universidad Autónoma and its network in Portugal and France. He works at the Ministry of Culture and is a collaborator and technical leader for the Oral Memory Conservation project I worked in. Lahsen was trained in educational sciences in Cuba during the eighties and nineties and is familiar with anthropological methodologies. I must say that without him, I would neither have been able to enter into dialogue with the people we met, nor grasp anything of the depth of knowledge and memories shared.

Zora, Lahsen’s wife, hosted me during my stay and provided me with all I needed while introducing me to her whole family and inviting me to events. The Jaïma of Zora is currently located in the refugee camp of Smara in the barrio 3 of Hausa. I lived there for most of my stay, except for four days spent in Dajla. The first week, we went with Lahsen each day to the Archives of the Ministry of information in Rabuni, where we got to know each other through the documents preserved there. I then encountered Mohamed Ali Laman, director of the department of oral memories at the Ministry of Culture and main instigator and investigator of the oral memory conservation project. Mohamed Ali Laman was trained in anthropology in Spain. He developed an explicit protocol to interview members of the Sahrawi community whose knowledge and memories are precious to understanding Sahrawi histories, resistance and modes of life. He meticulously transcribes every interview for the Archives of the Ministry of Culture, as vital testimonies of Sahrawi cultural autonomy.

Mohamed Ali Laman established a program of interviews and discussions during my stay. I must admit that I was not at ease with his selection, as more than 80 percent of the interviewees were men. As I was studying the refugee camps from 1975 to 1991, during which time it was the women who organized the camps, the state and lives of refugees, I thought the sample to be inadequate to give enough dialogues with protagonists who carry this history. Thus, in counterbalance, Lahsen and I visited some of his mother’s friends in Smara to have some less official but more convivial discussions. Most of the discussions introduced in this manuscript occurred in this context.

The stay in the camp was a revolution in regard to how I approached the concepts and methodologies prepared beforehand. The exchanges with Lahsen, particularly our interactions in the Archives of the Ministry of Information, and the discussions with Sahrawi women led to me to reformulate these methodologies concerning the knowledge shared and the preservation of its social, cultural and political agency. While I arrived with many methods and questions, I left with many more that I will try to unfold throughout the manuscript.

82 Diam’s. ‘Enfants du désert’. S.O.S. EMI Music France, 2009.

83 For an analysis of the relations between the access to the repertoire of knowledge of these persons compared to the access to an archive, with a perspective on my own position, see Chapter C' Archival Pharmakology.

84 See <https://unearthingtraces.ch>.

85 Csordas, Thomas J. "Somatic Modes of Attention." *Cultural Anthropology* 8, no. 2 (1993): 135.

86 See Schrader, Astrid. "Abyssal Intimacies and Temporalities of Care: How (Not) to Care about Deformed Leaf Bugs in the Aftermath of Chernobyl." *Social Studies of Science*, n.d., 26.

To avoiding betraying the trust of the knowledge shared with me and the world, the *methodology* of the interviews consisted of open dialogues led by Lahsen. Before discussing, I introduced myself, my background, why I was here, what I intend to do with what is shared in the discussion, and mainly evoked the topic I was working on, to allow discussants to choose what they wanted to talk about, applying as little pressure as possible. I took notes, and for each interview, wrote reports of the discussions and their contexts the same day, the following day, and one week after, accompanied by Lahsen in these revisions. These "reports" never quote directly, which brings the relations I had with the discussion within reach, as a material of research as means of objectivity. Consequently, they proceed from auto-ethnography in the context of social anthropological research. As evoked in the foreword, the sample is relatively small (8 formal discussions and more informal ones) as I was rapidly expelled from the refugee camps due to COVID 19 measures. However, I think it constitutes a great quality of the sample. The scarcity in number cultivated my attention to all the wealth of details that these people, primarily women over 60 years old, shared with me.<sup>83</sup> I am convinced that it enabled a much deeper understanding of Sahrawi spatial practices, histories and knowledge circulation than if I had the materials to produce a linear chronological urban or architectural history. This process, I believe, makes it impossible to detach the material from its contexts, enabling its situated and relational qualities.

Many research strategies were discussed and expanded during the doctoral course "Unearthing Traces. Dismantling the imperialist entanglement of archives and the built environment"<sup>84</sup> organized with Denise Bertschi and supported by Dr. Lucía Jalón Oyarzun, MER. Yves Pedrazzini and Prof. Stéphanie Ginalsiki. Among others, methodologies for unlearning sources regarding archival violence presented by prof. Samia Henni and pedagogies to enact repair through de-patriarchalization, and decolonization of public spaces through planetary alliances unfolded by Françoise Vergès, profoundly influenced this research. The instruments and tools to navigate material grains and their speech acts, to listen to materialities silenced by capitalist extractivism, notably presented by dr. Rohit Jain and dr. Shourideh C. Molavi fed this research, as well as the desire to ground operations as an ontology restituting space and time to subjugated knowledge and non-human bodies.

This document unravels methodologies of critical theories, in some instances discourse analysis, critical historiography, and thorough literature review. Nevertheless, most importantly, I believe that the central strategy is close contacts. To get access to the repertoire, presence, body-to-body transmission and trust are mandatory. Close contact with the materials, human and non-human bodies is critical for methodologies, but equally for an ethic of research on the repertoire. One needs to be affected, to be touched by its knowledge and memories, to incorporate them, to avoid erasing embodiment as "a starting point for analyzing human participation in a cultural world."<sup>85</sup> With the help of this strategy, I came to realize how reenactment might bring into renegotiation the spaces, spatialities and architectures from the repertoire, and avoid flattening the knowledge and lives of the bodies that *house* them. Lastly, close contacts as they enact radical solidarity and abyssal intimacies<sup>86</sup> with bodies, a kinship which foresees the (re)production of the repertoire as a *revolutionary perspective*.



## On navigating this document.

Some elements need to be explained to enable the reader to navigate the manuscript. Firstly, each chapter possesses its own color. You will find the color back in the text for several reasons. The main arguments, conclusions or elements of each chapter are highlighted in the chapter's color. Furthermore, making contact with knowledge formerly concealed by the discipline necessitates many new concepts and words. Their definitions and elaborations are spread throughout the manuscript. To find their definitions quickly, they are highlighted with the color of the chapter in which they are explained. Here is the list of words:

**Chapter A:** architectural hylomorphism; obscure zone; hylomorphic representation; epistemic violence; subjugated knowledge; operatory side; versant opératoire; architectural operations; architectures of operations; brick;

**Chapter B:** repertoire; performative spatialities; techniques of the body; gestures; figurations; body-to-body; imagination; architectural image; driving forces; migration; affordances; performativity

**Chapter C:** ghost; imaginary zone; temporalities; pasts; futurities; hospitality; institutional violence; actual; pressures; broken relations; distance;

**Chapter C':** archives; pharmakon; pharmacology; ethics; incorporation; excorporation; documents; undrawn spatialities; historiography;

**Chapter D:** protofigurations; atlas; cardinality; calendarity; grids; field of the potential; operative (hi)stories; design of the repertoire; design from the repertoire; orientation;

**Chapter E:** repertoire extractivism; reenactment; architectural reenactment; reach; contact; close contact; (re)production; ontology of operations;

In the manuscript, some quotations, after being cited once in a meaningful context, become axioms of the research. As such, you will find the following sentences many times; with each repetition, they aim to reveal the depth of their meaning and the support they provided in the production of this research:

87 Benjamin, Walter, Hannah Arendt, et Harry Zohn. *Illuminations*. New York: Schocken Books, 1986:254.

88 Schneider, Rebecca. "Performance Remains." *Performance Research* 6, no. 2 (January 2001): 103.

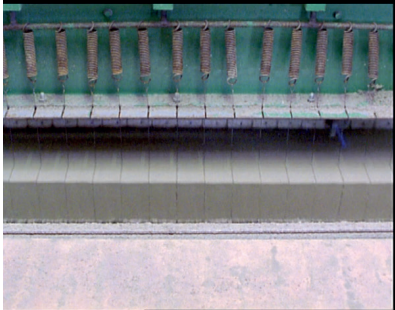
89 Horkheimer, Max, Theodor W. Adorno, and Gunzelin Schmid Noerr. 'The theory of ghosts'. In *Dialectic of Enlightenment: Philosophical Fragments*. Cultural Memory in the Present. Stanford, Calif: Stanford University Press, 2002:179.

- “A chronicler who recites events without distinguishing between major and minor ones acts in accordance with the following truth:
  - nothing that has ever happened should be regarded as lost for history.”<sup>87</sup>
- Performance is
  - “both the act of remaining and a means of reappearance”<sup>88</sup> of knowledge from the repertoire.
- Ghosts appear when
  - “Individuals are reduced to a mere succession of instantaneous presents, which leave behind no trace, or rather, the trace of which they hate as something irrational, superfluous, utterly obsolete.”<sup>89</sup>

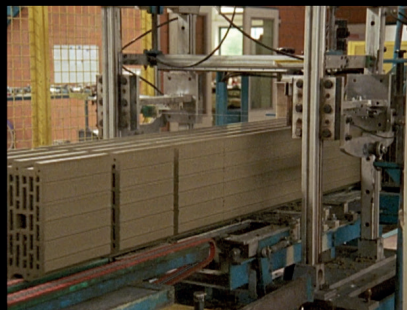
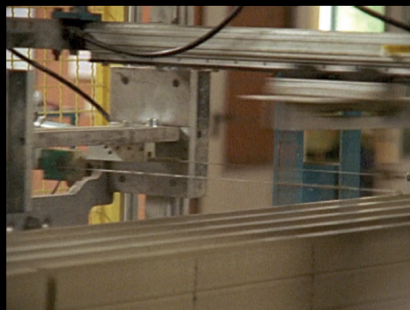
These orientational devices have been used to offer the reader a richer experience whereby different layers of connections can come to the fore, and indeed produce new connections in echoing one another.



| Fig. A1 | Snapshot of the film of Harun Farocki, Vergleich über ein Drittes (Comparison via a third), 61 min, 2007 (seen at <https://vimeo.com/225091024>, on the 20th of October 2020).



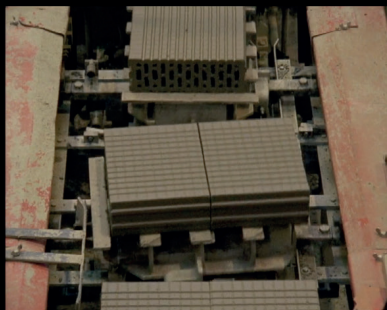
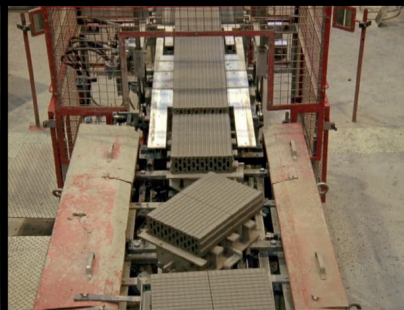
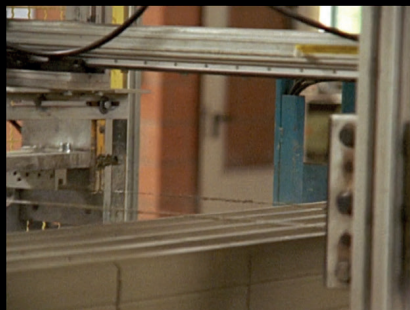




## CHAPTER A



## Architectural hylomorphism.



## Spatial (hi)stories of the



## brick molders.







## Brick ontologies. The obscure zone of the hylomorphic scheme.

This chapter introduces hylomorphism as entrenched in western philosophical systems. This system gave rise to a paradigm in architectural theory, history and profession coined as *architectural hylomorphism*. Architectural hylomorphism organizes the relationships between matter and form, thinking and making. It creates a stratification in knowledge parallel to social stratifications. The French philosopher Gilbert Simondon criticized hylomorphism in scrutinizing the processes of individuation of bricks, and how the hylomorphic model represents this individuation. In his words, this representation corresponds to the kind of knowledge possessed by someone who stays out of the workshop. As an alternative, he proposed a *theory of operations* to unearth the knowledge, lives and material speech-acts concealed in the *hole* created by hylomorphic representation. In this chapter, I will delve into the theories of Simondon while unraveling how this hole grounded the disciplinarization and professionalization of architecture. I will outline how it structured architectural *historiography* and epistemology. Through an attempt of dialogue with a brick and its molder, I will propose thresholds from which to unlearn architectural hylomorphism thanks to Simondon's theory of operations.

Then, when I first watched this video of Harun Farocki, I thought something like: "Merde, comment c'est possible?". Of course, *Workers leaving the factory* (*Arbeiter verlassen die Fabrik*, 1995) and *The Expression of Hands* (1997) had already roused something in me. They profoundly helped me think and formulate the perspective of my research concerning gestural spatial analysis, *migration* of *gestures*, and embodied knowledge. I don't know to what extent Harun Farocki was familiar with the essays of Gilbert Simondon, notably his Ph.D. published under the title *L'individuation à la lumière des notions de forme et d'information*. Nevertheless, this video seems to be a sharp and powerful embodiment of the first chapter of Simondon's thesis, in which he analyzes the individuation of a brick. This would seem to be an ideal starting point for this chapter.

In *Vergleich über ein Drittes*, three different processes of brick manufacturing are filmed, from the extraction to the baking, in Burkina Faso (Gando), India (Mumbai, Nimbut, Pune) and Europe (Leers, France; Dachau-Pellheim, Köln-Lövenich, Mücke-Atzenhain and Olfen-Vinnum, Germany). In each situation, the degree of mechanization and automation is variable. In India, the craft.women are using only a wooden mold, on-site and hand-prepared clay, and all the other tasks are done through muscular forces and fire. In Burkina Faso, they use muscular force, a press, a wheelbarrow, and a machine



to cut the earth regularly. Unfortunately, we cannot see the preparation of the clay. In Europe, the film shows a ballet of machines monitored by one man in the control room and a clay extraction site full of trucks and diggers. Then, the video shows three brick manufacturing processes: a traditional technical procedure, a recently industrialized one, and a highly industrialized and automated one.

The montage of the video lays out two series of images being presented beside one another issued from the three processes. Thanks to these comparisons, contrasts emerge between the geographies of extraction and production and their **temporalities**. In the Indian process, the extraction site is also the molding site. First, a woman is sitting on the ground, mixing water with tossed earth, filling the mold herself by hand, and compressing it by hitting the ground. Then, a man comes with a wheelbarrow and takes the brick out of the mold with him to arrange them along alleys for drying. In Europe, the extraction site is an endless field of dusty hills marked by the wheels of trucks. In contrast, the production site is an enclosed high-tech factory, with artificial light and a smooth floor surface for automatic machines to travel through it, each carrying out precise operations.

These comparisons clarify the multiplicities of relations with matter and geographies that can individuate the same manufactured object. Furthermore, **it unveils the social and labor organization between human and non-human bodies that can be said to be crystallized within these objects**. With the help of this video, one can observe the operations that bring these non-human bodies into being, the energy that catalyzes the operations, the sensuous and embodied knowledge implied, the continuum between molecular to territorial scales that bridges the operations, and the mediation accomplished by human bodies creating a dialogue between these scales. In the Indian and Burkinabé contexts, the technicity of the operations resides in human bodies, as a relational embodied knowledge entrenched in the workers' bodies. In other words, the video unearths **the operations of individuation in making bricks, which leave their trace on every brick-body, allowing for their material speech acts to finally be heard**.<sup>0</sup> To understand these operations acknowledges difference and haecceity, while an interest in form alone would flatten these ontologies, concealing the voices and traces of relations with other bodies that dwell within them.<sup>1</sup>

Despite the variety of methods used in the manufacture of these bricks, western architectural history discourses remain largely blind to these operations, as well as the knowledge and physical traces they imply. I argue that **this blindness results from an anchored paradigm in architectural culture and its epistemologies in architectural history**. This paradigm, called *hylomorphism*, was first formulated in written sources by Aristotle, who described the principles of individuation in which matter and form are entangled in a particular way; the first is considered inert and passive while submitted to the second.<sup>2</sup> This relationship gave rise to an authoritative definition of space and architecture, dominated by the thinkers and holders of power (*arkhē*), and continues to structure the dominant architectural discourse today.

The production of physical and metaphysical systems is a highly political act. Even if these discourses do not explicitly address political issues, both the social context of production—organization of labor and the role of the philosopher/intellectual in society—as well as its technical and technological systems enact and serve as an (implicit) model for the metaphysical organization of the world.<sup>3</sup> Such issues can be situated socially, culturally, and technically. In the history of western thought, hylomorphism or the split between matter and form, one of the “foundational binary oppositions”<sup>4</sup> laid out by Plato and Aristotle, is deeply embedded and entrenched in philosophy.

0 See Schuppli, Susan. *Material Witness: Media, Forensics, Evidence*. Leonardo. Cambridge, MA: The MIT Press, 2020.

1 On how labor is invisibilized, upon the work of Harun Farocki, and on the responsibility of the field of architecture in these processes, see Ursprung, Philip, Francisco Díaz, Francisco Quintana. *Representacion Del Trabajo = Representation of Labor: Historiografía Performativa = Performative Historiography*. Primera edición. ARQDOCS. Santiago de Chile: Ediciones ARQ, Escuela de Arquitectura Pontificia Universidad Católica de Chile, 2018.

2 For a detailed account of the genealogy of hylomorphism in Western metaphysical tradition, see the Annex ‘Hylomorphic understanding of Matter and Form.’

3 Protevi, John. *Political Physics: Deleuze, Derrida and the Body Politic*. Transversals: New Directions in Philosophy Series. London: Athlone Press, 2001.

4 Lloyd Thomas, Katie, éd. *Material matters: architecture and material practice*. London ; New York: Routledge, 2007:3

5 Aristotle writes: “To produce a this-thing here, after all, is to produce a this-thing-here-from, generally speaking, the substrate. What I am driving at is that producing a bronze ball is not producing the ball or sphere but rather another thing, which is as this form in something else. For if there is production here, it must ex hypothesi be production from something. For instance, a bronze sphere is produced, but this is in such a way that this-thing-here, which is a sphere, is produced from this-thing-here, which is bronze. If, however, this itself is the output of a production, then this production will take place in the same way and this will clearly generate an infinite regress.

What all this shows is that:

- (i) the form (shape in the object of perception—call it what you will) is not produced,
- (ii) there is no production of it, and
- (iii) neither does the what-it-was-to-be-that-thing (it is this that is realized in something else, by dint of skill, nature or ability)

However, that there is a bronze sphere is an output of production. The production is from bronze and sphere—the form is imported into this study and the result is a bronze sphere.’ In Aristotle, et Hugh Lawson-Tancred. *Metaphysics*. Penguin Classics. London ; New York: Penguin Books, 1998: Zeta 7, 1033a-b:194.

6 For an investigation on how the melting process of gold neutralizes the matter and its political economy, see Jain, Rohit. “Gold Is in the Air. Ethnographic Explorations into Postcolonial Amnesia in Switzerland and Beyond.” In *Swiss Psychotropic Gold*, edited by knowbotiq and Nina Bandi. Basel: Christoph Merian Verlag, 2020.

7 Aristotle, et Hugh Lawson-Tancred. *Metaphysics*. 1998: Zeta 7, 1032b:191.

8 Aristotle, et Hugh Lawson-Tancred. *Metaphysics*. 1998: Zeta 9, 1034a-b:199.

9 Aristotle, et Hugh Lawson-Tancred. *Metaphysics*. 1998: Zeta 9, 1034a:198.

10 Aristotle, et Hugh Lawson-Tancred. *Metaphysics*. 1998: Zeta 7, 1033a:192.

11 He writes: “Natural compositions do not differ radically from this. For, on the one hand, the productive effect of the seed is not different from that from skill, given that the seed

Hylomorphism was theorized by Aristotle in his *Metaphysics*, particularly in the book Zeta. The scheme that he used to describe the relationship between form and matter, to define the world’s substance, is technologically based. The technical operations of bronze sphere production served as a model that he attempted to universalize. Analogically, he uses his scheme to describe the relationship between the soul and the body and the individuation and growth of biological—vegetal and animal—beings. In the description of the bronze sphere’s individuation process,<sup>5</sup> the spheric form is *imported into* the substrate. However, it is no coincidence that the matter used as a model is bronze. Bronze is liquified and cast into a mold to take shape; this technical operation divides the form-taking process from the matter’s characteristics and idiosyncrasies before this process. The matter is *neutralized* in the liquefaction.<sup>6</sup> The two poles of form and matter are embodied by the mold (sphere) and the liquid, indeterminate and passive substrate. Thus, individuation and production are merely the act of bringing together a form (*morphe*) and matter (*hyle*).

“A part, then, of productive processes is called thinking and another part is called making. That which is from the principle and form is called thinking and that from the last stage of the thinking process is called making. And in fact each of the intermediate stages in the process is produced in the same way.”<sup>7</sup>

Consequently, the form is thought of *before* the form-taking process and requires a labor of thinking separate from the labor of making. It is not that the form pre-exists. The bronze is flexible and malleable but requires a plan before the molding operation. Furthermore, he recognized that “*form is not a product*, is not confined to the context of substance,”<sup>8</sup> thus allowing and legitimizing the labor on forms separated from substance and matter. For example, a building “is produced *from* a building to the extent that it is produced *by* thought, in that the skill is the form of the building.”<sup>9</sup> Moreover,

“conformably with this the building is said to be ‘bricked’ not ‘bricks’. In fact, we should not strictly even say, simply, that the statue comes from wood and the building from bricks given that production should be from what changes and not from what persists.”<sup>10</sup>

In this account, **the matter is entirely inert and passive**, silent and speechless. It possesses no agency in form-taking processes and is submitted to the thinking and ordering of ideas. Moreover, the matter is even deprived of the legitimacy of being quoted as a part of the building’s ontology, entirely silenced by the fact that it persists through the production. In continuation, Aristotle applied this model to articulate and explain a more comprehensive array of individuation processes.<sup>11</sup> In nature, the form-taking process requires the existence of *species-form* that exists similarly to the planner’s skill. Matter possesses the same agency, an inert and malleable substrate ordered by external will. The production process cannot be named *making*, as is the case for artifactual production, but is still outlined in the same fashion as the scheme for casting the bronze sphere. Aristotle argues that:

“in the case of animals, it is the soul (the substance of the living thing) that is the substance as specified in the account, the form and the what-it-is-to-be-that-thing for a body of this kind. [...] The body, on the other hand, and its parts will be posterior to the substance that is the soul, and it will be, not the substance, but the composite that is divided into them as into matter.”<sup>12</sup>

be exactly the same, on the lines of “a human being begets a human being”, since we can perfectly well say “a woman is from a man”. In Aristotle, et Hugh Lawson-

Tancred. *Metaphysics*. 1998: Zeta 9, 1034a-b:199.

12 Aristotle, et Hugh Lawson-Tancred. *Metaphysics*. 1998: Zeta 9, 1035b:203.

possesses the form potentially and that that from which it comes shares its name, in a way, with the product. In a way, because it is not to be supposed that the name of producer and product will always

In this way, the dualism of substance (the mind/body problem) is already outlined as a potential in hylomorphism.<sup>13</sup> The body is liquid and animated by the soul, which holds the status of form. It grants it the power of reason, of the plan or entelechy. The hylomorphic scheme induces the same mechanism for every being and individual. The precise strength of this model is in its capacity to be universal.

This universalization, based on a technical operation, creates what Simondon calls a *zone obscure*:

“The hylomorphic scheme retains only the ends of these two half-chains that the technical operation elaborates; the scheme of the operation itself is veiled, ignored. **There is a void in hylomorphic representation**, making the real mediation disappear, the operation itself links one half-chain to the other by instituting an energetic system, a state which evolves and indeed must exist so that an object appears with its haecceity.”<sup>14</sup>

The two technological half-chains Simondon refers to are, respectively, the preparation of the clay that is “what the shovel lifts from the deposit to the edge of the swamp, rush roots, grains of gravel [...], dried, ground, sifted, wet, long kneaded”<sup>15</sup>, and the fabrication and preparation of the humid wooden mold. “Before any elaboration, the clay, in the swamp, is already in shape because it is already colloidal.”<sup>16</sup> Virtually, the material qualities of the clay in the swamp have the potentiality of becoming a brick. The individuation of the brick is a mediation between the ends of the two technological chains. With the help of the energy incorporated by the craftswo.men’s mold, passing from molecules to molecules, the properties of the clay allow the transmission of energy and the distribution of its matter into the mold, all the while giving back an opposite force to equalize the system.

**These operations of mediation between the molecules in the swamp and the fabrication of the mold involve more human and non-human bodies than the hylomorphic scheme can encompass, which remains blind to their existence and deaf to their co-operations.** This zone conceals the agency of forced human and non-human bodies—and their virtualities. In this model, there is no possibility of differentiation.<sup>17</sup> The bronze spheres and the bricks are all the same and cannot be individualized. The human and non-human bodies that participated in the operations of individuation of the sphere and the brick are silenced and concealed in and by the obscure zone. Simondon elaborates on these reflections in a passage that, despite its length, I consider important to include for my own thesis:

“What the hylomorphic scheme reflects in the first place is a socialized representation of work, and an equally socialized representation of the individual living being; the coincidence between these two representations is the common basis for the extension of the scheme from one domain to another, and the guarantor of its validity in a given culture. The technical operation which *imposes a form on a passive and indeterminate matter* is not only an operation abstractly considered by the spectator who sees what enters the workshop and what leaves it without knowing the said elaboration. It is essentially **the operation ordered by the free human being and carried out by the slave**; the free human being chooses matter, indeterminate because it is enough to designate it generically by the name of the substance, without seeing it, without handling it, without preparing it: the object will be made of wood or iron, or of earth. **The true passivity of matter is its abstract availability behind the given order that others will execute.**

13 Simondon, Gilbert. L’individuation à la lumière des notions de forme et d’information. Krisis. Grenoble: Millon, 2005:50

14 ‘Le schème hylémorphique ne retient que les extrémités de ces deux demi-chaînes que l’opération technique élabore; le schématisme de l’opération elle-même est voilé, ignoré. Il y a un trou dans la représentation hylémorphique, faisant disparaître la véritable médiation, l’opération elle-même qui rattache l’une à l’autre les deux demi-chaînes en instituant un système énergétique, un état qui évolue et doit exister effectivement pour qu’un objet apparaisse avec son *haecceité*.’ In Simondon, Gilbert. L’individuation à la lumière des notions de forme et d’information. Krisis. Grenoble: Millon, 2005:46. My translation.

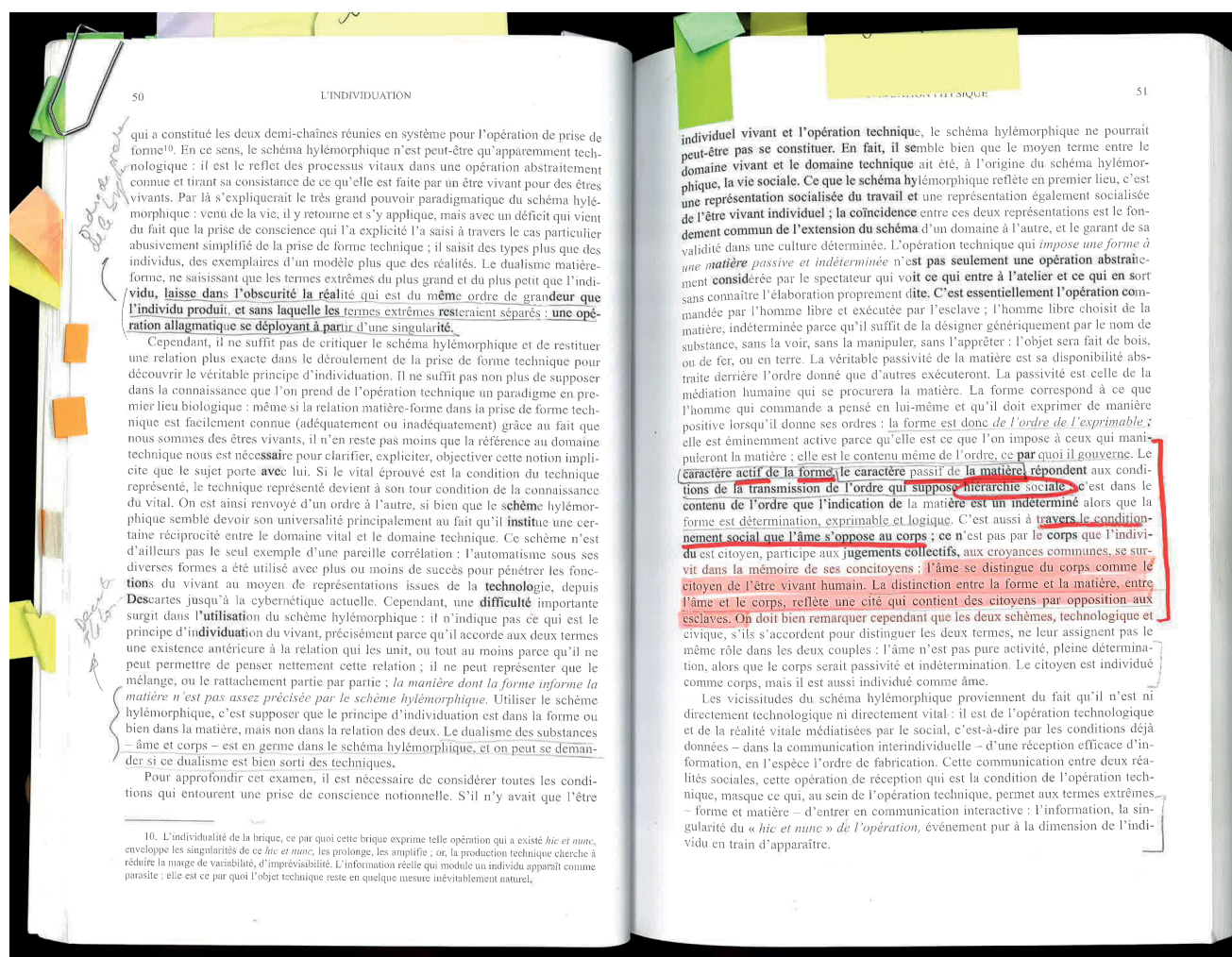
15 ‘ce que la pelle soulève du gisement au bord du marécage, racines de jonc, des grains de gravier, [...] séchée, broyée, tamisée, mouillée, longuement pétrie’ In Simondon, Gilbert. L’individuation à la lumière des notions de forme et d’information. 2005:40-1. My translation.

16 ‘Avant toute élaboration, l’argile, dans le marais, est déjà en forme, car elle est déjà colloïdale.’ Simondon, Gilbert. L’individuation à la lumière des notions de forme et d’information. 2005:41. My translation.

17 Lloyd Thomas, Katie, éd. Material matters: architecture and material practice. London ; New York: Routledge, 2007:3



18 In Simondon, Gilbert.  
L'individuation à la lumière des  
notions de forme et d'information.  
Krisis. Grenoble: Millon, 2005:51.  
For the translation, see the  
associated figure. My translation,  
my emphasis.



| Fig. A2 | Simondon, Gilbert. L'individuation à la lumière des notions de forme et d'information. Krisis. Grenoble: Millon, 2005:51.

The focus on form, on the external cause, is, for Simondon, due to its communicable qualities; “the form is therefore of the order of the expressible.” The form can be communicated as an order from a commander, a planner, an architect, to a maker, artisan, craftswo.man. From this perspective, **the hylomorphic scheme is a highly socialized model for the individuation process explaining the relationship between matter and form.** Deleuze and Guattari also discuss that “this scheme derived less from technology or from life than from a society divided into rulers-governed, then intellectuals-laborers.

The passivity is that of the human mediation which will obtain the matter. The form corresponds to what the commanding human being has thought in herself and that she must express in a positive way when she gives her orders: the form is therefore *of the order of the expressible*; it is eminently active because it is what is imposed on those who will manipulate the matter; it is the very content of the order, by which it governs. **The active character of the form, the passive character of the matter, answers the conditions of the transmission of the order, which supposes social hierarchy:** it is the content of the order that indicates the matter is indeterminate while the form is determination, expressible and logical. It is also through social conditioning that the soul is opposed to the body; it is not through the body that the individual is a citizen, participates in collective judgments, in common beliefs, survives in the memory of her fellow-citizens: the soul distinguishes itself from the body as the citizen from the human living being. The distinction between form and matter, between soul and body, reflects a city that contains citizens as opposed to slaves.”<sup>18</sup>

What characterizes it is that all matter is put on the side of content, while all form passes into expression.”<sup>19</sup> Indeed, it has been now largely claimed that the philosophy of Plato is highly entangled with a society practicing slavery, and that his theories militate against its abolition.<sup>20</sup> Each level of the platonic hylomorphic metaphysical system is slave to another, placing matter, women, children, and slaves at the end of the chain. This social stratification, clearly expressed by Platonic hierarchies, is justified by the lack of reason of inferior classes; while depriving them of their agency—given to the superior scale—, he also dispossesses them of their knowledge and political agency. For Plato, the Tekhne (the technical knowledge) has three significant characteristics that constitute its superiority over the artisanal knowledge: “(1) the look to a paradigm; (2) the use of numbers, measure or limit to render determinate indeterminacy; (3) the construction of a system of ends. [...]”<sup>21</sup> In this account, the vision of the architect as a commander is the ideal form of tekhnē, and the crafts.women embodied and artisanal knowledge is entirely subordinated to its end; “[t]he merely forceful body of the handwork, or even the skilled body of the artisan, working at the direction of the architect master in the phantasm of hylomorphic production, is a forced body.”<sup>22</sup> Thus, in Plato’s philosophy, the articulation between knowledge and power is a means to gain control over the population that does not possess the knowledge to be autonomous. Parallely, Aristotle reproduces this hierarchy:

“For Aristotle, the handwork is a mere possessor of muscle power to be directed by the architect, nothing but a forceful body. Indeed, the so-called efficient cause in Aristotle, as Heidegger notes, is not the action of hammer on stone, but is precisely the direction afforded by the architect in following his vision of the form of the object to be constructed by either the muscle power of laborers or by the unacknowledged somatic skill of artisans. Only in this way is the architect the source of the action (*archē tēs kinēseōs*), the commanding original principle of the change.”<sup>23</sup>

In their discussion of the philosopher’s body, both Aristotle and Plato argue that their bodies need “the necessities of life at [their] disposal.”<sup>24</sup> To accomplish the intellectual labor that philosophy demands as an abstract thinking practice, the Greek philosophers placed complete self-rule as one of the greatest virtues. However, as it was utterly impossible for them to realize both labors (biological autonomy and intellectual labor), they opposed two bodies: “the forced bodies, the enslaved, proletarianized and feminized bodies whose muscle power or artisanal skill produces the necessities for the leisured body that allows for training in self-rule.”<sup>25</sup> In this way, the philosopher’s body “has faded into the background, just as the labor of women and slaves fades into the background of the city.”<sup>26</sup> The knowledge and labor of crafts.women, their ability to prepare and follow material forces, and the muscular knowledge and labor of the caretakers and manual laborers are submitted in the end to the knowledge of the *tekhnē*, the *logos* in its pure and perfect form; the philosopher’s intellectual labor. This stratification, revealed through analysis of the hylomorphic understanding of the molding of bricks, exists analogically to the stratification between the forced bodies and the citizens, particularly in *The Republic* of Plato. This iterative **institutional violence** of social stratification renders large swathes of the human population in classical societies invisible, “reduced to a mere succession of instantaneous presents, which leave behind no trace.”<sup>27</sup> I argue that every one of their forced bodies reside as **ghosts** in the bricks of hylomorphic architectures.

Indeed, **the hylomorphic understanding of matter and form, thinking and making, correspond to a kind of human knowledge possessed by someone who stays out of the workshop**; she only sees the order she gives and the form of the work done by the crafts.woman. This consideration is consistent with the social division of labor

19 ‘ce schéma dérivait moins de la technique ou de la vie que d’une société divisée en gouvernants-gouvernés, puis intellectuels-manuels. Ce qui le caractérise, c’est que toute la matière est mise du côté du contenu, tandis que toute la forme passe dans l’expression’. Deleuze, Gilles, et Félix Guattari. Mille plateaux. Collection « Critique », t. 2. Paris: Éditions de minuit, 1980:457. My translation.

20 As argued by Gregory Vlastos: “Slavery, state, man and world all illustrate a single hierarchical pattern ... the slave lacks logos; so does the multitude in the state, the body in man, and material necessity in the universe. Let to itself each of these would be disorderly and vicious... Order is imposed upon them by a benevolent superior: master, guardian, mind, demiurge. Each of these rules (Archein) in his own domain. The common title to authority is the possession of logos.” In Vlastos, Gregory. « Slavery in Plato’s Thought ». The Philosophical Review 50, no 3 (mai 1941): 289. <https://doi.org/10.2307/2180538>.

21 He continues: ‘Over against this strict sense of techne, Plato’s texts also include a notion of a productive process superficially closer to that of the artisan than to that of the architect: a close working with materials. But this production process is both denied the status of techne and subordinated to a science of ends as the mere production of means.’ Protevi, John. Political Physics: Deleuze, Derrida and the Body Politic. Transversals: New Directions in Philosophy Series. London: Athlone Press, 2001:121.

22 Protevi, John. Political Physics: Deleuze, Derrida and the Body Politic. Transversals: New Directions in Philosophy Series. London: Athlone Press, 2001:164.

23 Protevi, John. Political Physics: Deleuze, Derrida and the Body Politic. Transversals: New Directions in Philosophy Series. London: Athlone Press, 2001:159.

24 Aristotle, *Metaphysica*, 1957, 1177a30.

25 Protevi, John. Political Physics: Deleuze, Derrida and the Body Politic. Transversals: New Directions in Philosophy Series. London: Athlone Press, 2001:165.

26 Protevi, John. Political Physics: Deleuze, Derrida and the Body Politic. Transversals: New Directions in Philosophy Series. London: Athlone Press, 2001:125.

27 This quote appears in a note written as an appendix called ‘The theory of ghosts’, that is trying to confirm the viability of the Marxist concept of Haunting. Horkheimer, Max, Theodor W. Adorno, and Gunzelin Schmid Noerr. *Dialectic of Enlightenment: Philosophical Fragments. Cultural Memory in the Present*. Stanford, Calif: Stanford University Press, 2002:179.

28 On this, see in the annex the section entitled ‘Hylomorphic understanding of matter and form.’

29 In a first time, this critique has been articulated mainly in the field of philosophy. See Deleuze, Gilles, and Félix Guattari. *Mille Plateaux*. Collection “Critique,” t. 2. Paris: Éditions de minuit, 1980. Simondon, Gilbert.

*L’individuation à la lumière des notions de forme et d’information*. Krisis. Grenoble: Millon, 2005. Vlastos, Gregory. “Slavery in Plato’s Thought.” *The Philosophical Review* 50, no. 3 (May 1941): 289. <https://doi.org/10.2307/2180538>

Then, Architectural Historian and theoretician translated it into the architectural field. See, Benjamin, AE. “Plans to Matter: Towards a History of Material Possibility.” In *Material Matters: Architecture and Material Practice*, Routledge., 13–28. London: Routledge, 2006. Grosz, Elizabeth. “Architecture from the Outside.” In *Space, Time, and Perversion*, by Elizabeth Grosz, 125–37, 1st ed. Routledge, 2018. <https://doi.org/10.4324/9781315656499>

Ingold, T. “The Textility of Making.” *Cambridge Journal of Economics* 34, no. 1 (January 1, 2010): 91–102. <https://doi.org/10.1093/cje/bep042> Ingold, Tim. *Making: Anthropology, Archaeology, Art and Architecture*. London ; New York: Routledge, 2013. Lloyd Thomas, Katie, ed. *Material Matters: Architecture and Material Practice*. London ; New York: Routledge, 2007. Protevi, John. *Political Physics: Deleuze, Derrida and the Body Politic*. Transversals: New Directions in Philosophy Series. London: Athlone Press, 2001. Simmons, Alison. “Sensory Perception of Bodies: Meditation 6.5.” *The Cambridge Companion to Descartes’ Meditations*, 2014, 258–77.

30 Spivak, Gayatri Chakravorty, Nelson Cary, and Grossberg Lawrence. “Can the Subaltern Speak?” *Marxism and the Interpretation of Culture* 271 (1988): 271–313.

in a highly stratified society at the classical age. The obscure zone, or void, *trou*, in this representation induces a hierarchy of knowledge, subordinating the crafts.women to the *tekhne* and logos of the architect, planner or thinker, the one who counts and determines the system of ends. **This void allows the reproduction and justification of domination and social stratification.** The economy of knowledge that this void enacts is a powerful political tool, used to maintain an inegalitarian social system and its political economy in favor of a few. I argue that this void has been perpetuated—intentionally or not, it is of no importance—as a strategic philosophical-political tool, enabling the reproduction of social stratification and hierarchies of knowledge. Not surprisingly, this void is not confined to the fields of politics or philosophy. Other disciplines and professions, such as architecture, deploy a similar epistemic infrastructure of domination, resulting in the creation of an architectural hylomorphism.

While the *origins* of the hylomorphic scheme are situated in Ancient Greece and its social systems, its philosophical paradigm endured the passing of time and was reinstated in the philosophical models of the *Renaissance*, as for example in the metaphysical system of Descartes.<sup>28</sup> But most importantly for this research, the void has also been reproduced and employed by the first architects and theoreticians of the *Renaissance* to position themselves as superior to crafts.women. They did so notably at the expense of the master-mason—formerly the head of construction sites, designers, managers of material and human resources. It helped justify their positions with respect to crafts.women and patronage, allowing them to move-up socially while downgrading the oral, embodied and sensuous knowledge of artisans. **To designate this reinstatement of knowledge hierarchies—and associated social stratification—specific to the architectural discipline’s reemergence, I will use the term architectural hylomorphism.**<sup>29</sup>

With the help of this concept, I aim to point at the characteristic cultural construction in architecture that has perpetuated, and indeed continues to perpetuate, the discipline’s contempt of architectural and spatial embodied and oral knowledge. In the next section, I will attempt to trace a genealogy of architectural hylomorphism through the dominant architectural discourse from the Renaissance to today in the western context, setting out its evolution and adaptation.

The crystallization of architectural hylomorphism and the perpetuation of the void in hylomorphic representation produced epistemic violence.<sup>30</sup> As a result, **architectural and spatial knowledge that did not fit within the dominant narratives, knowledge that couldn’t be drawn or built within a dominant system of ends, was expelled from architectural historiography and archives**<sup>31</sup> in the same way that other disciplines, such as politics, operated systematically.<sup>32</sup> In a third section, I will discuss the silencing practices<sup>33</sup> induced by the hierarchies of knowledge in classical and modern architectural **historiography** while relegating otherness to the realm of the indigenous, vernacular, or ethnographical. This will by contrast bring to light the magnitude of knowledge and (hi)stories expelled from the architectural discipline and discourses.

To counter the hylomorphic void in metaphysical world representation that both Simondon and Deleuze and Guattari criticized as profoundly engrained in western philosophical traditions, and which legitimize authoritarian governmentalities, Simondon proposed an alternative approach to the understanding of matter and form through the individuation of a brick in its “versant opératoire.” Following the operations of individuation in the making of bricks frame them as the encounter of

31 Gosseye, Janina, Naomi Stead, and Deborah Van der Plaats, eds. *Speaking of Buildings: Oral History in Architectural Research*. First edition. New York: Princeton Architectural Press, 2019.

32 Azoulay, Ariella. *Potential History. Unlearning Imperialism*. Verso Books, 2019.

33 Solnit, Rebecca, and Paz de la Calzada. *The Mother of All Questions*. Chicago, Illinois: Haymarket Books, 2017.



the material potentialities and virtualities of the clay, at the crossroads of the technical **gestures** of the crafts.women and their energy, shedding light on the material potential energy in the mold navigating molecule to molecule. This perspective defines the individuation of a brick as a mediation between its milieu (a technical set), the forces and the bodies at stake. In the theory of operations that Simondon developed, the agents of the individuation and the operations of mediation between the different scales—from the molecular scale to the human scale—are recognized for their agency and material qualities. The forms involve **gestures**, and these **gestures** “meet the future of the material and modulate it.”<sup>34</sup> This *versant opératoire* that I will discuss more in-depth in the last section, as a sensuous epistemology, provides a promising frame to remediate the silencing practices of the hylomorphic scheme. His theory values operations, and through them, the role of material forces, muscular energy, and sensuous/somatic, oral and embodied knowledge while creating a possibility for difference and haecceity. In order to produce alternative to architectural hylomorphism, I will introduce **the theory of operations, which permits another epistemology for critical architectural research and enables the emergence of minor narratives and consequently another definition of space, spatialities and their potential (hi)stories.**

34 ‘rencontrent le devenir de la matière et le modulent.’ In Simondon, Gilbert. L’individuation à la lumière des notions de forme et d’information. Krisis. Grenoble: Millon, 2005:42. My translation.

## Genealogies of architectural hylomorphism. Social stratification in architectural practices.

62

In this part, I aim to define architectural hylomorphism and analyze how it evolved, appeared and disappeared, in relation to the modes of production of architectural knowledge and objects in given social contexts. From there, I intend to disentangle how architectural hylomorphism is still perpetuated through the third and last Industrial Revolution, that of the personal computer and the internet,<sup>35</sup> and how it continues to permeate in architectural practice. I will analyze how external causes are invoked by different means and techniques to mold reality and the individual. As Foucault argued, in modern western practices, architecture has been used to individuate the population and bring about compliant behavior, in a similar fashion as architecture was used in the Roman Empire.<sup>36</sup> As Plato and Aristotle proposed, architecture was institutionalized to mold the individual into good forms; this desire for control and compliance embodies architectural hylomorphism. In tracing this genealogy, I intend to address the very mechanism that silences architectural and spatial embodied and oral knowledge, artisanal sensibility, forced human and non-human bodies. Accordingly, I will set out the genealogy of architectural hylomorphism, shedding light on key moments and shifts in the organization of labor and the paradigm of architectural practice.

This genealogy is neither definitive nor the only one. It is a condensed series of elements of architectural histories, writings and **documents** that crystallizes architectural hylomorphism. As pieces that shed light on processes of subjugation of discipline/profession upon oral and embodied knowledge, “it cannot be new: it is always already known, and it is only its authors that had to unlearn its imperial version in order to utter it properly.”<sup>37</sup> It then constitutes elements to unlearn the dominant discourses and get in **contact** with potential histories of what lies behind its glares.

35 As proposed in Stiegler, Bernard. La Technique et Le Temps. La Philosophie En Effet. Paris: Galilée/Cité des sciences et de l’industrie, 1994.

36 ‘Espace, savoir et Pouvoir’, entretien avec P. Rabinow, in, Foucault, Michel, and Daniel Defert. Dits et écrits: 1954 - 1988. 4: 1980 - 1988. Nachdr. Bibliothèque des sciences humaines. Paris: Gallimard, 1999:16-20.

37 Azoulay, Ariella. Potential History. Unlearning Imperialism. Verso Books, 2019:198.

## Roman Empire. The intellectual labor of proportions.

Architectural hylomorphism throughout the Roman Empire fits closely to the hylomorphism we discussed up to now. As with the paradigmatic form of knowledge used by both Aristotle and Plato, architectural knowledge and **architectural image** impose a form from the outside, providing order and reason to the chaos of matter and indeterminacy. Vitruvius is the most known literary source from this epoch and equally the most influential one that can shed light on this paradigm. In his account, the **architectural image** is composed of “*orthographia* (the natural, potential elements, in renaissance: elevation), *ichnographia* (the contraction of the potentiabilities of these elements, in renaissance: floorplan) and *scaenographia* (the operation of contracting, in renaissance: perspective or three-dimensional plan).”<sup>38</sup> Through these three mediums the **architectural image** is rendered in a consistent manner; providing the basis on which the architect and planner can apply the principle of *ordinatio*—using a model for a basic unit, in the best case, a member of the man-body—, *dispositio*—an arrangement in the plan of the elements between them—, eurythmia—general proportions—, *symmetria*, decor (or *correctness*) and *distributio* (or *allocation*)—an adequate management of the means. The three are to be thoroughly followed for “the on-site layout of the design to be achieved,”<sup>39</sup> as the work of the architect “consists of ordering [...] and of design.”<sup>40</sup> An **architectural image** is an ideal form, following certain principles that permit the harmonious ordering of the world. In this sense, the architect’s skill is to design the form, to create the external cause for the building, which “is produced *from* a building to the extent that it is produced *by* thought, in that the skill is the form of the building.”<sup>41</sup>

Architectural practices developed tremendously in the imperial and post-Vitruvian eras; architects mainly were of Greek origins and highly educated. Aristocrats (highest class) weren’t authorized to be architects, as their social class forbade them from participating in trading activities; nevertheless, architects were highly recognized as intellectuals: “Cicero ranks architecture with medicine and teaching (*De Off.*, 1.151); Vitruvius speaks of ‘so great a profession [*disciplina*] at this’ (1.1.11).”<sup>42</sup> Architects were close to the imperial system and the aristocratic class, where they found the assurance of good social status and good relations with their patronage. Architects’ training during the Roman Empire had to be both theoretical and practical, even if the theoretical teaching had to be certified before the practical in order to become a good architect. In themselves, architects were intellectuals, and building activities were fully accomplished by “gang” of craftswo.men, groups made according to certain specialties, which under the empire were organized in forms of *collegium*, close from what we know as corporations or guilds. **The artisanal labor of construction and intellectual labor of designing were highly divided in Roman society**, grounding the architectural practice in an idealist and hylomorphic scheme.

Despite the concealment of somatic knowledge and the neglect of the body that informed the theories of Vitruvius with their Aristotelian inspirations, man’s body served him as a perfect model for developing his laws (based on its observation of traditional Roman and Greek architecture). The use of man’s body, which shows the perfect natural proportion, ensures through an analogical transfer that “the natural law of beauty and nature are transferred into architecture.”<sup>43</sup> In the chapter “On symmetry in Temples and the human body,” we can read how human bodies served as measures:

38 Bühlmann, Vera. “Architectonic Disposition: Ichnography, Scenography, Orthography.” Monas Oikos Nomos (blog), February 20, 2016. <https://monasandnomos.org/2016/02/20/architectonic-disposition-ichnography-scaenography-orthography/>.

39 Vitruvius. Vitruvius: “Ten Books on Architecture.” 2001:24.

40 Vitruvius. Vitruvius: “Ten Books on Architecture.” 2001:24.

41 Aristotle, et Hugh Lawson-Tancred. *Metaphysics*. 1998: Zeta 9, 1034a:198.

42 Kostof, Spiro, ed. *The Architect: Chapters in the History of the Profession*. New York: Oxford University Press, 1986:28.

43 Agrest, Diana. *Architecture from without: Theoretical Framings for a Critical Practice*. Cambridge, Mass: MIT Press, 1991. And Agrest, Diana. “Architecture from Without: Body, Logic and Sex.” In *Gender Space Architecture*, 374–86. Routledge, 2002:360.

“Without symmetry and proportion, that is, if there is no precise relation between the members as in ‘a well-shaped man,’ there can be no principles of design. Furthermore, the measurements for buildings are all to be derived from the members of the body. The design of a temple depends on symmetry, the principles of which must be carefully observed by the architect. They are due to proportion, in Greek ‘*avanyia*.’ Proportion is a correspondence amongst measures of the members of an entire work, and the whole to a certain part selected as standard. From this results the principles of symmetry. Without symmetry and proportion there can be no principles in the design of any temple; that is, if there is no precise relation between its members, as in the case of those of a well-shaped man. Further, it was from the members of the body that they derived the fundamental ideas of the measures which are obviously necessary in all works, as the finger, palm, foot and cubit.”<sup>44</sup>

44 Vitruvius quoted by Agrest, Diana. “Architecture from Without: Body, Logic and Sex.” 2002:360.

45 Pevsner, N. “The Term ‘Architect’ in the Middle Ages.” *Speculum* 17, no. 4 (October 1942): 555. <https://doi.org/10.2307/2856447>.

46 Pevsner, N. “The Term ‘Architect’ in the Middle Ages.” *Speculum* 17, no. 4 (October 1942): 549.

Nevertheless, the body that is taken into account is a very precise one; **the philosopher’s body, proportionated, in accordance with the cosmic order, disciplined by his logos, the body of a fit and leisured man.** This body is composed of a harmonized set of members and organs duly playing one with the other, a *healthy* body, as is a good building. **From this image of the body, which is a highly socialized view on the body, reproducing social stratification, the architect can project onto the matter the good proportions of the architectural image using geometry.**

## The Dark Ages. Corporations, secrecy, and master masons.

64

With the fall of the Roman Empire and the decline of the economic elites that followed, the architect’s profession changed drastically. The patronage that gave them their social status and the prestige of their intellectual labor didn’t exist anymore, and an economy of local craftswo.manship developed, causing architecture as an intellectual discipline to disappear. Until the Renaissance, the term architect was used only rarely. It was employed without distinction as the terms “*caementarius, lathomus, lapicida, mason, macon, Steinmeth, or magister operis, magister fabricae, maitre des oeuvres, capudmagister, Werkmeister, etc.*”<sup>45</sup> The distinction of the “one who plans buildings as opposed to one who executes them, and one who plans with a view to aesthetically as well as functionally satisfactory results, as opposed to one who concerns himself only with the technical requirements of building—in short, the architect as opposed to both the mason and the builder”<sup>46</sup> disappeared to the benefit of other architectural practices fusionning making and designing within the same gestures and knowledge.

The judgment on this period, called *The Dark Age*, is a profound cultural construct that began in the Renaissance; indeed, architectural work realized in this period does not lack technicity, refinement, or quality regarding the preceding or the following period. A severe gaze has been scaffolded in the early Renaissance to justify the architect’s return to the high social classes as an intellectual. Deleuze and Guattari noted that the science of the architect in the Middle Ages and particularly in the Gothic are worthy of interest. Indeed, the relationship with materials and craftswo.men, **architectural images** and knowledge, are of a very different texture compared to during the Roman Empire:



47 'En effet, le gothique est inséparable d'une volonté de construire des églises plus longues et plus hautes que les romanes. Toujours plus loin, toujours plus haut... Mais cette différence n'est pas simplement quantitative, elle marque un changement qualitatif: le rapport statique forme-matière tend à s'estomper au profit d'un rapport dynamique matériau-forces. C'est la taille qui fera de la pierre un matériau capable de saisir et de composer les forces de poussée, et de construire des voûtes toujours plus hautes et plus longues. La voûte n'est plus une forme, mais une ligne de variation continue de pierres. [...] Or la taille des pierres est inséparable d'une part d'un plan de projection à même le sol, qui fonctionne comme limite plane, d'autre part d'une série d'approximations successives (équarissage), ou de mises en variation des pierres volumineuses. [...] Naus suivant la légende, Bernard de Clairvaux y renonce vite, comme trop 'difficile', et se réclame de la spécificité d'une géométrie opératoire archimédienne, projective et descriptive, définie comme science mineure, mathégraphie plus que mathélogie. Son compagnon, le monde-maçon Garin de Troyes, invoque une logique opératoire du mouvement qui permet à l'initié de tracer, puis de couper les volumes en pénétration dans l'espace, et de faire que le 'trait pousse le chiffre'. On ne représente pas, on engendre et on parcourt. C'est moins l'absence d'équations qui caractérise cette science que le rôle très différent qu'elles ont éventuellement; au lieu d'être de bonnes formes absolument qui organisent la matière, elles sont 'générées', comme 'poussées' par le matériau, dans un calcul qualitatif d'optimum.' In Deleuze, Gilles, and Félix Guattari. *Mille Plateaux*. Collection "Critique," t. 2. Paris: Éditions de minuit, 1980:451. My translation.

48 Kostof, Spiro. "The Architect in the Middle Ages, East and West." In *The Architect: Chapters in the History of the Profession*, Spiro Kostof. New York: Oxford University Press, 1977:74.

"Indeed, the Gothic style is inseparable from a desire to build longer and higher churches than the Romanesque ones. But this difference is not only quantitative, it marks a qualitative change: the static form-matter relationship tends to fade away in favor of a dynamic material-forces relationship. It is the cutting that will make the stone a material capable of seizing and composing the forces of thrust, and of building ever higher and longer vaults. The vault is no longer a form, but a line of continuous variation of stones. [...] Now the cutting of stones is inseparable from a projection plane on the ground, which functions as a flat limit, and from a series of successive approximations (squaring), or variations of large stones. [...] Following the legend of Naus, Bernard de Clairvaux quickly renounces it, as too 'difficult', and claims the specificity of an archimedean, projective and descriptive operative geometry, defined as a minor science, mathégraphie more than mathematics. His companion, the world-mason Garin de Troyes, invokes an operative logic of movement which allows the 'initiated' to trace, then to cut the volumes in penetration in the space, and to make it that the 'line pushes the figure'. One does not represent, one generates and one traverses. It is less the absence of equations that characterizes this science than the very different role they eventually have; instead of being absolutely good forms that organize matter, they are 'generated', as if 'pushed' by the material, in a qualitative calculation of optimum."<sup>47</sup>

During the Dark Ages, very few drawings on paper were made to accomplish the building: "The ground plan, in other words, are conceived in the architect's head; he would then go directly to the site, and use it as a full-scale drawing board to lay out the design. [...] By this time, the technique of construction had become too complicated to be handled intuitively, and full-scale detail drawings engraved on the structure itself had made their appearance."<sup>48</sup> The *orthographia*, *ichnographia*, and *scaenographia* of Vitruvius were not the techniques used to solve architectural and architectonical problems; the presence on-site of the architect and her embodied and artisanal knowledge of materials permitted a sensuous science, following the threads of matter. The forms were *generated*, *as pushed* by the material and its relations with the craftswoomen. In this architectural practice, there is no external cause; the *architectural image* is embodied and developed on-site with the milieu, with the matter and the workers, and the architecture's spatialities are brought about by embodied relations between human and non-human bodies.

The architectural practice's geometry is profoundly heterogeneous to the Vitruvian proportions. Vitruvius was only read by monks during the Dark Ages. Some of them were architects, and so it is no coincidence if the plans that we find from this period are mainly of monasteries. The Vitruvian "[a]rrangement, as a means of architectural communication between designer, patron, and builders, does not appear to have had much relevance to the medieval builders."<sup>49</sup> Between the master mason and the builders, moldings and on-site tracing were the main instruments of dialogue and conception, which permitted a constant on-site negotiation with the materials and the diversity of knowledge at work. It is hypothesized that small models were used mostly with patrons or contractors, or indeed direct references to, and discussions about, existing buildings that could be reproduced with minor inventions and transformations.<sup>50</sup>

49 Morrison, Tessa. "Architectural Planning in the Early Medieval Era." *Journal of the Australian Early Medieval Association*, 2009:153.

50 See Shelby, L. R. "The Role of the Master Mason in Mediaeval English Building." *Speculum* 39, no. 3 (July 1964): 387-403. <https://doi.org/10.2307/2852495>

and Morrison, Tessa. "Architectural Planning in the Early Medieval Era." *Journal of the Australian Early Medieval Association*, 2009.

Accordingly, **the theory and history of architecture and construction of this time were mainly oral and embodied.**<sup>51</sup> The crafts.women were organized in corporations of diverse specialties (stonecutters, masons, carpenters, etc.) that were in charge of keeping and transmitting disciplinary knowledge. These corporations were bounded by a pact of secrecy, forbidding them to share the secrets of the practice to anyone who did not desire to enter the corporation and work with the others.<sup>52</sup> The transmission of the knowledge was strictly oral and practice-based on construction sites. The training of master masons did not divide the architectural idea and image from the construction and execution of the idea. Both were undivided. The practice of geometry was consequently not dissociated from the understanding of material speech acts and forces, which suppose a co-operative relationship with matter and its lineaments. Social relations between the master masons and construction workers were on a very different level from those between modern architects and workers. They belonged to the same corporation, were bound by secrecy, and had similar agency while working with matters.

In these architectural building practices, **there is no social stratification between a thinker and a builder and between the idea and the matter.** In opposition to the Roman Imperial architectural practices, in which the architect belonged to the aristocratic circles and whose work was to design the building in her mind and then have it built by crafts.women; medieval architects, or master masons, belonged to the social class of the workers and to their discipline. Accordingly, architectural hylomorphism, its social stratification and hierarchies of knowledge were not perpetuated during the Dark Ages. The texture of knowledge and **architectural image** associated with these practices were mainly oral and embodied and did not rely on drawing or writing, which were instead considered as secondary instruments of communication.

66

### **Italian Renaissance and Renaissance. Inventing a new profession between the patronage and “third-class persons.”**

The re-birth of architectural practice in the Renaissance is said to be situated in Italy. The first writing on Architecture that clearly separates the practice of architecture from the practice of building (from crafts.womanship) is the *De re aedificatoria* written by Alberti:

“When, in the middle of the fifteenth century, Leone Battista Alberti (1404-72) wrote a treatise on architecture (*De re aedificatoria*), he echoed Vitruvius in his preface:

“An architect is not a carpenter or a joiner ... the manual worker being no more than an instrument to the architect, who by sure and wonderful skill and method is able to complete his work. [...] To be able to do this, he must have a thorough insight into the nobles and most curious sciences.”<sup>53</sup>

Alberti was part of a high social class and never developed a practice as an architect—or at least, we have no trace that he entirely directed the design and construction of any building as autonomously as he stated. He was an intellectual and had written on various topics beyond architecture—painting, sculpture, etc. In rebuilding this opposition, Alberti enacted a social stratification between the architects and the master-builder. As argued by Léopold Ettlinger:

“The medieval masons’ workshop had been a co-operative enterprise combining many skills. The Renaissance inherited this organization, like so much else, for the preceding period. But there was a difference. The medieval *capomaestro*, who had

51 See Rykwert, Joseph. “On the Oral Transmission of Architectural Theory.” *Res: Anthropology and Aesthetics* 3 (March 1982): 68–81. <https://doi.org/10.1086/RESv3n1ms41625300>.

52 See Morrison, Tessa. “Architectural Planning in the Early Medieval Era.” *Journal of the Australian Early Medieval Association*, 2009.

53 Ettlinger, Leopold D. “The Emergence of the Italian Architect during the Fifteenth Century.” In *The Architect: Chapters in the History of the Profession*, Spiro Kostof., 96–123. New York: Oxford University Press, 1977:98.

54 Ettlinger, Leopold D. "The Emergence of the Italian Architect during the Fifteenth Century." In *The Architect: Chapters in the History of the Profession*, Spiro Kostof., 96–123. New York: Oxford University Press, 1977:121. (Our emphasis)

55 Ettlinger, Leopold D. "The Emergence of the Italian Architect during the Fifteenth Century." In *The Architect: Chapters in the History of the Profession*, Spiro Kostof., 96–123. New York: Oxford University Press, 1977:196.

56 Wilkinson, Catherine. "The New Professionalism in the Renaissance." In *The Architect: Chapters in the History of the Profession*, Spiro Kostof., 60. New York: Oxford University Press, 1977:130-1.

57 Wilkinson, Catherine. "The New Professionalism in the Renaissance." In *The Architect: Chapters in the History of the Profession*, Spiro Kostof., 60. New York: Oxford University Press, 1977:126.

received her training in such a workshop, was familiar from her early days both with the traditional formal vocabulary and its structural possibilities and limitations. She had her pattern books and she could draw on the experience of generations when it came to the methods of building. Early in the fifteenth century the introduction of a novel set of forms, based on the Classical Roman and Greek architectures, brought anew a *division of labor*. The designer of a church or palace in the new style knew everything about Classical details and proportions, but was ignorant of the practical side of building since he had not gone through a mason's training. Hence he needed the help of a builder in order to realize his ideas. Normally the builder's job was comparatively simple, since Brunelleschi, Alberti, and others hardly ever changed the customary layout of churches or places but only their appearance. In fact, masons and builders adapted themselves more quickly to their new tasks than the designing architects, who took a long time to grasp the structural needs of building."<sup>54</sup>

In his writings, Alberti overtly neglected the practice of building as a part of architecture. Despite this neglect, he is said to be, together with Brunelleschi, the first architect of the Renaissance. At his time, no corporation of architects existed, as it was still an emerging discipline; in the publication of Vasari in 1550, *The Lives of the Most Excellent Painters, Sculptors and Architects*, only seven of them were listed as architects. Until he evokes Alberti, no architects are reported. The architects listed are all equally painter or sculptor, apart from two. Accordingly, in the fifteenth century, and in opposition to the preceding period, architects didn't come out of a craftswo.man's workshop anymore. Notably,

"Brunelleschi's beginnings in a traditional craft are not usual when we consider the careers of other fifteenth-century Italian architects, none of whom came out of a mason's workshop."<sup>55</sup>

Simultaneously, the classical reference to Roman and Greek Architecture became the norm, as written by Brunelleschi who desired to find, once again, 'the excellent and highly ingenious building methods of the ancients and their harmonious proportions.' A new form of patronage also emerged during the fifteenth and sixteenth centuries, associated with capital accumulation. This accumulation concerned only a part of the population, the emergence of a new aristocracy, both in the religious and ruling sphere and the liberal and economic sphere. As such,

"Alberti had quite consciously opened a gap between the architect and the craftsman, a gap so eagerly accepted by architects and, by the sixteenth century, already so firmly established in Italy that it was difficult to bridge from either side. [...] The craftsmen who were to execute the architect's design were, in Alberti's words, just 'an instrument to the architect' (*De re aedificatoria*, Preface). Philibert Delorme took much the same view when he spoke of the 'third-class persons ... the master masons, stone cutters, and workmen whom the architect must always control.'"<sup>56</sup>

This clear social division, justified by an intellectual gap and control over the artisanal sensibility and knowledge, was induced by "the distinguished patronage that every architect hoped for as the guarantee of this social status."<sup>57</sup> The neglect and concealment of artisanal knowledge and craftswo.manship in favor of intellectual and abstract labor provided the basis for, and was required to justify, the necessity of architects during the Renaissance in Europe. With the invention of the printing press, the secrecy of the



crafts.women's corporations was broken.<sup>58</sup> Indeed, some crafts.women broke their oaths and printed books sharing the secrets of their disciplines. The result was the **appropriation of their knowledge by other classes and professions—namely architects—, and the destruction of their political agency. This caused the submission of crafts.women to the will of architects, and neglect regarding their knowledge.**<sup>59</sup> In France, this intellectual and bourgeois form of architectural practice started with Philibert Delorme, who perpetuated and extended the proposition of Alberti while applying them to a practice that Alberti didn't have:

“Alberti had a clear idea of architecture as a vocation for a gentleman with a liberal education and a special knowledge of mathematics and geometry; but his view of architecture as a profession was indistinct. [...] In his [Philibert Delorme] *Premier tome de l'architecture*, published in 1567, he defined the spheres appropriate to the patron, the architect, and the workman and set up guidelines for their working relations. His second book opens with a summary of the aims that inform his treatise:

‘In the preceding book we have sufficiently advised the architect and the Seigneur, or whoever would like to build, of their positions and duties as the two principal heads of the building enterprise. It remains in this second book to turn our pen to the third class of persons, without whom no building can be perfect. These are the master masons, the stone cutters, and the workmen (whom the architect must always control) who as well must not be deprived of our labor and instruction here, since it had pleased God for us to give it.’

[...] Patrons, he said, should employ architects instead of turning to ‘some master mason or master carpenter as is the custom or to some painter, some notary or some other person who is supposed to be qualified but more often than not has no better judgment than the patron himself’ (Bk. I, Fol.&). Most of these would-be architects were really trained for manual work and had no knowledge of the principles of architecture. The others had stopped at book learning and, satisfied with their geometrical demonstrations, they could not apply their theory to the work. What they did was nothing but ‘a shadow of a real building’ (Bk. I, Fol. iv, a paraphrase of Vitruvius).<sup>60</sup>

This desire to change their social status, to the detriment of crafts.women and in favor of a stronger social stratification, had a substantial impact on architects' knowledge and the **architectural image**. Yet again, “The architect came to rely on models and increasingly on drawings to communicate his designs to the builders.”<sup>61</sup> The return of a classical set of forms, issued from observation of the buildings of antiquity, brought in a division of labor and the necessity to transmit orders through the *orthographia*, *ichnographia*, and *scaenographia*, which remained unnecessary during the Middle Ages. As argued by Ingold,

“[f]or Alberti, however, architecture was a concern of the mind. ‘It is quite possible’, he wrote, ‘to project whole forms in the mind without any recourse to the material, by designating and determining a fixed orientation and conjunction for the various lines and angles’ (Alberti, 1988, p.7). [...] Indeed, Alberti's lines have their source in the formal geometry of Euclid. ‘The straight line’, he explains, ‘is the shortest possible line that may be drawn between two points’, whereas ‘the curved line is a part of a circle’ (Alberti, 1988, p.19).<sup>62</sup>

58 See Rykwert, Joseph. “On the Oral Transmission of Architectural Theory.” *Res: Anthropology and Aesthetics* 3 (March 1982): 72.

59 For a discussion on the dangers of expropriation of oral and embodied knowledge belonging to the repertoire, and their translation onto documents belonging to the regimes of the archives, see chapter C, ‘Archival pharmacology.’

60 Wilkinson, Catherine. “The New Professionalism in the Renaissance.” In *The Architect: Chapters in the History of the Profession*, Spiro Kostof., 60. New York: Oxford University Press, 1977:124-5.

61 Wilkinson, Catherine. “The New Professionalism in the Renaissance.” In *The Architect: Chapters in the History of the Profession*, Spiro Kostof., 60. New York: Oxford University Press, 1977:142.

62 Ingold, T. « The Textility of Making ». *Cambridge Journal of Economics* 34, no 1 (1 janvier 2010): 93. <https://doi.org/10.1093/cje/bep042>.

63 'reflète une cité qui contient des citoyens par opposition aux esclaves.' In Simondon, Gilbert. L'individuation à la lumière des notions de forme et d'information. Krisis. Grenoble: Millon, 2005:51.

64 Evans, Robin. Translations from Drawing to Building. AA Documents 2. Cambridge, Mass: MIT Press, 1997:156.

65 Alberti, Leon Battista, Cosimo Bartoli, and Giacomo Leoni. The Ten Books of Architecture: The 1755 Leoni Edition. New York: Dover Publications, 1986. Quoted by Agrest, Diana. "Architecture from Without: Body, Logic and Sex." 2002:361. It is even more clearly stated in Filarete: "As I have said, the building is constructed as a simile for the human figure. You see that I have shown you by means of a simile that a building is derived from man, that is, from his form, members, and measure.... Now as I have told you above, I will show you how the building is given form and substance by analogy with the members and form of man. You know that all buildings need members and passages, that is, entrances and exits. They should all be formed and arranged according to their origins. The exterior and interior appearance of the building is arranged effectively in such a way that the members and passages are suitably located, just as the exterior and interior parts and members are correct for the body of man." In Filarete, Treatise on Architecture (1461–63). Translated and with an introduction and notes by John R. Spencer. New Haven: Yale University Press, 1965:12. Quoted by Agrest, Diana. "Architecture from Without: Body, Logic and Sex." 2002:361.

As noted by Diana Agrest, beyond the only analogical and symbolic transfer from man to the building, Filarete also develops an analogy between the conception of a building and the bearing of a child by a mother, he says: "You perhaps could say, you have told me that the building is similar to man. Therefore, if this is so it needs to be conceived and then born. As [it is] with man himself, so [it is] with the Building. First it is conceived, using a simile such as you can understand, and then it is born. The mother delivers her child at the term of nine months or sometimes seven; by care and in good order she makes him grow." In Filarete, Treatise on Architecture (1461–63). Translated and with an introduction and notes by John R. Spencer. New Haven: Yale University Press, 1965:15. Quoted by Agrest, Diana. "Architecture

The **architectural image** became quite literally an external order, easily communicable, grounding an idealist perspective and a strong opposition between form and matter, which, as quoted before, "reflects a city that contains citizens as opposed to slaves."<sup>63</sup> This labor division cultivated the fact that Renaissance and Modern architects are "never working directly with the object of their thought, always working at it through some intervening medium, almost always the drawing, while painters and sculptors, who might spend some time on preliminary sketches and models, all ended up working on the thing itself which, naturally, absorbed most of their attention and effort."<sup>64</sup>

Simultaneously, the *Classical set of forms* re-introduced andromorphism in the architectural discourse and design—use of the male body proportions. Alberti wrote:

"The whole Force of the invention and all our skill and Knowledge in the Art of Building, it is required in the Compartition: Because the distinct Parts of the entire Building, and, to use such a Word, the Entireness of each of those parts and the Union and Agreement of all the lines and Angles in the Work, duly ordered for Convenience, Pleasure and Beauty are disposed and measured out by the Compartition alone: For if a City, according to the Opinion of Philosophers, be no more than a great House and, on the other hand, a House be a little City; why may it not be said that the Members of that House are so many little Houses ... and as the Members of the Body are correspondent to each other, so it is fit that one part should answer to another in a Building; whence we say, that great Edifices require great Members."<sup>65</sup>

During the Italian and following Renaissance, the architectural discipline emerged out of a division of labor between the act of building and the act of drawing and thinking. Drawing allowed new forms to be reinvented upon the "rediscovered" Roman and Greek heritage. It demanded the reintroduction of mathematical proportions that were not used in medieval construction sites, where on-site geometry and projections were the primary tools of design. To create their profession and discipline, architects openly despised craftswo.men and disdained their knowledge and skills while reclaiming the refinement of drawing and planning. Accordingly, architectural drawing and the discipline were born out of class contempt. **Through the reappearance of drawing**

from Without: Body, Logic and Sex." 2002:363.

And thus, the architect is absorbs even the operations of women's bodies; "The building is conceived in this manner. Since no one can conceive himself without a woman, by another simile, the building cannot be conceived by one man alone. As it cannot be done without woman, so he who wishes to build needs an architect. He conceives it with him and then the architect carries it. When the architect has given birth he becomes the mother of the building. Before the architect gives birth, he should dream about his conception, think about it, and turn it over in his mind in many ways for seven to nine months, just as a woman carries her child in her body for seven or nine months. He should also make various drawings of this conception that he has made with the patron, according

to his own desires. As the woman can do nothing without the man, so the architect is the mother to carry this conception. When he has pondered and considered and thought [about it] in many ways, he ought to choose [according to his own desires], what seems most suitable and most beautiful to him according to the terms of the patron. When this birth is accomplished, that is when he has made, in wood, a small relief-design of its final form, measured and proportioned to the finished building, then he shows it to the father." In Filarete, Treatise on Architecture (1461–63). Translated and with an introduction and notes by John R. Spencer. New Haven: Yale University Press, 1965:15–16. Quoted by Agrest, Diana. "Architecture from Without: Body, Logic and Sex." 2002:364.

Here, women's body is wholly excluded, first by the andromorphism, and foremost, by transforming the building into a living organism. In these transsexual operations, as Agrest calls it, a "woman is then replaced—her place usurped by man who as the architect has the female attributes necessary for the conception and reproduction—in an extraordinary operation that I call here architectural transsexuality, for which the repression of woman is essential." In Agrest, Diana. "Architecture from Without: Body, Logic and Sex." 2002:364. This complete suppression is supported by the fact that the man's body is perfectly proportionate. It is not an abstract human body; it is again highly socialized. This is the leisured philosopher's body, giving birth to ideas and life to buildings and cities.

practices as something separate from the act of building, architectural theoreticians and practitioners (re)produced the obscure zone or the void of the hylomorphic scheme. This allowed them to conceal in it the knowledge, theories, and (hi)stories of crafts.women and present them as mere “third-class persons [...] that the architect must control.” By way of this reordering, they acquired a privileged position in relation to the patronage, and the status of artists.

This **reenactment**—with differences—of the hylomorphic scheme and its division between matter and form, making and thinking, is correlated with a return of dualism in philosophy and metaphysics outside monasteries.<sup>66</sup> This division in the Renaissance is equally grounded on class relations. **Architectural productions**—at least, that which pertains to the dominant architectural history discourse—**were once again organized according to the principle of architectural hylomorphism, whereby the forced, enslaved, feminized, and non-human bodies are all silenced.** Accordingly, all oral and embodied spatial and architectural knowledge—be it constructive or not—was expelled from the realm of the architectural discipline and its history.

### **Modernity. Discipline and norms: political, colonial entanglements, and architectural subject/population control.**

The emergence of Renaissance architectural hylomorphism is correlated—as developed in the annex—with the new mathematical cosmology and scientific epistemology that emerged in Europe. Matter, bodies, and oral and embodied, somatic and artisanal knowledge—and with them the forced, feminized, enslaved bodies—are concealed by the scientific paradigm and architectural practice and history echoing a division of labor and associated social stratification. The evolution of architectural practice in the early Renaissance provided the basis for this systematic exclusion and fabricated a socially stratified **architectural image** as an architectural mold for society. This approach to architectural practice “has characterized the profession until very recent times.”<sup>67</sup>

In the eighteenth century, architecture became an object of reflection and political debate to a greater extent than it had been in the Renaissance. At this point, “every discussion of politics as the art of the government of men necessarily includes a chapter or a series of chapters on urbanism, on collective facilities, on hygiene, and on private architecture.”<sup>68</sup> The city became the lens and the model to rule over and govern the entire territory and society; “one should avoid epidemics, avoid revolts, permit a decent and moral family life, and so on.”<sup>69</sup> Architecture was transformed into an instrument to govern societies.

As it was the case when using the male body as the perfect image to be applied to architecture, and thus, to the entire population—to be educated, to be civilized, to be molded as this perfect body—architectural forms were developed and used to control the population and discipline the subject. This was seen as necessary to counter numerous spatial problems that emerged in the seventeenth, eighteenth and nineteenth century including, amongst others: cholera epidemics (1830–1880) and urban revolts. Simultaneously, the government created the police, not as the institution of police.women as we intuitively think of today—which will later appear as a means of enforcing discipline—but as

“a program of government rationality. This can be characterized as a project to create a system of regulation of individuals’ general conduct whereby everything would be controlled to the point self-sustenance, without the need for intervention.”<sup>70</sup>

66 For a detailed account of the genealogy of hylomorphism in Western metaphysical tradition, and its relation to the Cartesian dualism, see the Annex ‘Hylomorphic understanding of Matter and Form.’

67 Wilkinson, Catherine. “The New Professionalism in the Renaissance.” In *The Architect: Chapters in the History of the Profession*, Spiro Kostof., 60. New York: Oxford University Press, 1977:156.

68 Foucault, Michel, and Paul Rabinow. *Space Knowledge and Power*, March 1982.

69 Foucault, Michel, and Paul Rabinow. *Space Knowledge and Power*, March 1982. <https://foucault.info/documents/foucault.spaceKnowledgePower/>.

70 Foucault, Michel, and Paul Rabinow. *Space Knowledge and Power*, March 1982.



71 'Elles marquent, à un siècle et demi de distance, les transformations du programme disciplinaire. Dans un cas, une situation d'exception : contre un mal extraordinaire, le pouvoir se dresse; il se rend partout présent et visible; il invente des rouages nouveaux; il cloisonne, il immobilise, il quadrille; il construit pour un temps ce qui est à la fois la contre-cité et la société parfaite; il impose un fonctionnement idéal, mais qui se ramène en fin de compte, comme le mal qu'il combat, au dualisme simple vie-mort : ce qui bouge porte la mort, et on tue ce qui bouge. Le Panopticon au contraire doit être compris comme un modèle généralisable de fonctionnement; une manière de définir les rapports du pouvoir avec la vie quotidienne des hommes.' In Foucault, Michel. *Surveiller et punir: naissance de la prison*. Bibliothèque des Histoires. Paris: Gallimard, 2003:206-7. My translation.

72 'd'exercer sur lui [subject] une coercition ténue, d'assurer des prises au niveau même de la mécanique — mouvements, gestes, attitudes, rapidité : pouvoir infinitésimal sur le corps actif. L'objet, ensuite, du contrôle : non pas ou non plus les éléments signifiants de la conduite ou le langage du corps, mais l'économie, l'efficacité des mouvements, leur organisation interne ; la contrainte porte sur les forces plutôt que sur les signes; la seule cérémonie qui importe vraiment, c'est celle de l'exercice. La modalité enfin : elle implique une coercition ininterrompue, constante, qui veille sur les processus de l'activité plutôt que sur son résultat et elle s'exerce selon une codification qui quadrille au plus près le temps, l'espace, les mouvements.' In Foucault, Michel. *Surveiller et punir: naissance de la prison*. Bibliothèque des Histoires. Paris: Gallimard, 2003:139. My translation.

In other words, the government created tools and instruments to discipline the population and introduce compliant behaviors with a relative economy of means. Architecture was one of these instruments. In these policies, Foucault noted a shift in the practice of disciplining, from the pestiferous city to the panoptic administration:

"They mark, a century and a half apart, the transformations of the disciplinary program. In one case, an exceptional situation: against an extraordinary evil, power rises up; it makes itself present and visible everywhere; it invents new mechanisms; it cloisons, it immobilizes, it quadrilles; it builds for a time what is at the same time the counter-city and the perfect society; it imposes an ideal functioning, but which comes down in the end, like the evil it fights, to the simple life-death dualism: what moves carries death, and one kills what moves. The Panopticon on the contrary must be understood as a generalizable model of functioning; a way of defining the relationship of power with the daily life of men."<sup>71</sup>

The panopticon model that characterizes the eighteenth and nineteenth centuries (until now, in Foucault's words) introduces a paradigmatic shift from a direct and representational discipline to a diffuse, generalized, more-than-representational and emergent discipline. This discipline permits

"to exert on him [subject] a tenuous coercion, to ensure holds at the very level of mechanics—movements, gestures, attitudes, speed: infinitesimal power on the active body. The object, then, of the control: not or not more the signifying elements of the behavior or the language of the body, but the economy, the efficiency of the movements, their internal organization; the constraint concerns the forces rather than the signs; the only ceremony that really matters, it is that of the exercise. Finally, the modality: it implies an uninterrupted, constant coercion, which watches over the processes of the activity rather than its result, and it is exercised according to a codification that squares time, space, and movements as closely as possible."<sup>72</sup>

The body itself, its **gestures**, behaviors and mechanisms became the target of the mechanisms of power. **Through architecture and discipline, power can shape and mold behavior with minimal intervention, by establishing programs that force compliant behavior.** While the architectural discipline's organization, practice, and patronage did not evolve much after the paradigmatic shift of the Renaissance, architectural hygienism and modern rationalism are instead correlated with this changing role of architecture and its new objective of molding the individual. Here, I translate the definition of Architecture of Georges Bataille in the magazine *Documents* in 1930, which perfectly embodies this shift from the masculine ideal to that of docile bodies and governmental rule.

**"Architecture.-** Architecture is the expression of the very being of societies, in the same way that human physiognomy is the expression of the being of individuals. However, it is above all to the physiognomies of official figures (prelates, magistrates, admirals) that this comparison must be reported. Effectively, only the ideal being of society, the one who orders and prohibits with authority, is expressed in the architectural compositions themselves. Thus, the great monuments rise like dikes, opposing the logic of majesty and authority to all the troubled elements: it is in the form of cathedrals and palaces that the Church or the State address themselves and impose silence on the multitudes. It is obvious, indeed, that monuments inspire social wisdom

and often even real fear. The taking of the Bastille is symbolic of this state of affairs: it is difficult to explain this crowd movement, other than by the animosity of the people against the monuments that are their true masters.

As well, whenever the architectural composition is found elsewhere than in monuments, whether in physiognomy, costume, music or painting, one can infer a predominant taste for human or divine authority. The great compositions of some painters express the will to constrain the mind to an official ideal. The disappearance of the academic construction in painting is, on the contrary, the way open to the expression (and thus to the exaltation) of the psychological processes most incompatible with social stability. This explains to a large extent the strong reactions provoked for more than half a century by the gradual transformation of painting, until then characterized by a kind of hidden architectural skeleton.

It is obvious, moreover, that the mathematical order imposed on stone is nothing other than the completion of an evolution of terrestrial forms, whose meaning is given, in the biological order, by the passage from the ape-like form to the human form, the latter already presenting all the elements of architecture. In the morphological process, men apparently represent only an intermediate stage between apes and great buildings. The forms have become more and more static, more and more dominant. Thus, the human order is from the very beginning together with the architectural order, which is only its development. That if we attack architecture, whose monumental productions are currently the true masters throughout the world, grouping together in their shadow servile multitudes, imposing admiration and astonishment, order and constraint, we are in a way attacking man. All earthly activity today, and undoubtedly the most brilliant in the intellectual order, tends in such a direction, denouncing the inadequacy of human predominance: thus, strange as it may seem when it concerns a creature as elegant as the human being, a path opens up—indicated by the painters—towards bestial monstrosity; as if there were no other chance to escape the architectural *chiourme*.<sup>73</sup>

In this text, Bataille develops a figure of style to trap the reader. *Architecture is the expression of the very being of societies, in the first sentence and, to finish, he talks of architectural chiourme*. In his account, architecture perpetuates the rulers' symbolic domination over the people; architecture represents the official figures—the prelates, the magistrates, the admirals. The external cause that architectural hylomorphism is invoking to rule over matter and body is not a godly or heavenly logos; it is an earthly *tekhne* of governmentality. However, architecture doesn't need to apply direct control over the population—a violent and direct control—, **the performativity of symbolic architectural hylomorphism is enough to enforce discipline and compliant behavior**—together with all the other forms of power that constitute the discipline of architecture. As architectural practices didn't evolve in its social and labor organization and division, the **architectural image** reproduces the systematic exclusion and segregation of knowledge introduced by architectural hylomorphism. White andromorphism pertains, disciplining and silencing the forced, feminized, and enslaved bodies. This has been extensively argued by feminist and postcolonial architectural critics, focusing on how modernist architectural space is gendered, colonial, and socially stratified.<sup>74</sup>

73 Bataille, Georges. "Architecture - Définition." Documents 2 (Mai 1929): 117. Author translation.

74 Amongst many others, we will make reference to: On Feminist Critique of Architectural Theory and Modern architectural space Agrest, Diana. Architecture from without: Theoretical Framings for a Critical Practice. Also see, Colomina, Beatriz, and Jennifer Bloomer. Sexuality & Space. Princeton Architectural Press, 1992, and, Rendell, Jane, Barbara Penner, and Iain Borden, eds. Gender Space Architecture: An Interdisciplinary Introduction. Architect Series. London ; New York: E & FN Spon, 2000. Cambridge, Mass: MIT Press, 1991. And Agrest, Diana, Patricia Conway, and Leslie Weisman, eds. The Sex of Architecture. New York: Harry N. Abrams, 1996.

On racism in Modern Architecture. Cheng, Irene, Charles L Davis, and Mabel O Wilson. Race and Modern Architecture: A Critical History from the Enlightenment to the Present. University of Pittsburgh Press, 2020.

And finally, on a critique of the epistemology of architectural history, see the introduction of Gosseye, Janina, Naomi Stead, and Deborah Van der Plaet, eds. Speaking of Buildings: Oral History in Architectural Research. First edition. New York: Princeton Architectural Press, 2019.

We will develop on these problematic in the part three, about silencing and epistemic violence.

## DICTIONNAIRE CRITIQUE

**ARCHITECTURE.** — L'architecture est l'expression de l'être même des sociétés, de la même façon que la physionomie humaine est l'expression de l'être des individus. Toutefois, c'est surtout à des physionomies de personnages officiels (prélats, magistrats, amiraux) que cette comparaison doit être rapportée. En effet, seul l'être idéal de la société, celui qui ordonne et prohibe avec autorité, s'exprime dans les compositions architecturales proprement dites. Ainsi les grands monuments s'élèvent comme des digues, opposant la logique de la majesté et de l'autorité à tous les éléments troubles : c'est sous la forme des cathédrales et des palais que l'Eglise ou l'Etat s'adressent et imposent silence aux multitudes. Il est évident, en effet, que les monuments inspirent la sagesse sociale et souvent même une véritable crainte. La prise de la Bastille est symbolique de cet état de choses : il est difficile d'expliquer ce mouvement de foule, autrement que par l'animosité du peuple contre les monuments qui sont ses véritables maîtres.

Aussi bien, chaque fois que la *composition architecturale* se retrouve ailleurs que dans les monuments, que ce soit dans la physionomie, le costume, la musique ou la peinture, peut-on inférer un goût prédominant de l'autorité humaine ou divine. Les grandes compositions de certains peintres expriment la volonté de contraindre l'esprit à un idéal officiel. La disparition de la construction académique en peinture est, au contraire, la voie ouverte à l'expression (par là même à l'exaltation) des processus psychologiques les plus incompatibles avec la stabilité sociale. C'est ce qui explique en grande partie les vives réactions provoquées depuis plus d'un demi-siècle par la transformation progressive de la peinture, jusque là caractérisée par une sorte de squelette architectural dissimulé.

Il est évident d'ailleurs, que l'ordonnance mathématique imposée à la pierre n'est autre que l'achèvement d'une évolution des formes terrestres, dont le sens est donné, dans l'ordre biologique, par le passage de la forme simiesque à la forme humaine, celle-ci présentant déjà tous les éléments de l'architecture. Les hommes ne représentent apparemment dans le processus morphologique, qu'une étape intermédiaire entre les singes et les grands édifices. Les formes sont devenues de plus en plus statiques, de plus en plus dominantes. Aussi bien, l'ordre humain est-il dès l'origine solidaire de l'ordre architectural, qui n'en est que le développement. Que si l'on s'en prend à l'architecture, dont les productions monumentales sont actuellement les véritables maîtres sur toute la terre, groupant à leur ombre des multitudes serviles, imposant l'admiration et l'étonnement, l'ordre et la contrainte, on s'en prend en quelque sorte à l'homme. Toute une activité terrestre actuellement, et sans doute la plus brillante dans l'ordre intellectuel, tend d'ailleurs dans un tel sens, dénonçant l'insuffisance de la prédominance humaine : ainsi, pour étrange que cela puisse sembler quand il s'agit d'une créature aussi élégante que l'être humain, une voie s'ouvre — indiquée par les peintres — vers la monstruosité bestiale ; comme s'il n'était pas d'autre chance d'échapper à la chloïrme architecturale.

G. B.

**ROSSIGNOL.** — Sauf en des cas exceptionnels, il ne s'agit pas d'un oiseau. Le rossignol est, en général, un lieu commun, une paresse, un narcotique et une ignorance : en effet, on indique à l'aide des mots moins un objet qu'une opinion vague ; on se sert des mots comme d'ornements de sa propre personne. Les mots sont en général des pétrifications qui provoquent en nous des réactions mécaniques. Ce sont des moyens de puissance suggérés par des personnes rusées ou en état d'ivresse. Le rossignol appartient à la catégorie des paraphrases de l'absolu ; il est le doyen de tous les moyens de séductions classiques dans lesquels on a recours au charme du petit. Personne ne pense que le rossignol est un fauve, un érotique d'une intensité dégoûtante. Le rossignol est un accessoire éternel, la vedette du répertoire lyrique, le réveillon des adultères, le confort des bonnes amoureuses : le signe d'un optimisme éternel.

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| Fig. A3 | Bataille, Georges.  
"Architecture— Définition."  
Documents 2 (Mai 1929): 117.

73

While molding western subjects, **modern architectural theories and practices were also deeply entangled with coloniality and imperialism.** Indeed, it is in this entanglement that the traces of architectural hylomorphism are the most significant. Racial and modern theories emerged at the same time, contexts, and often from the same hands and voices; all the theories of the origin of architecture from the XIXth century associate race with architectural style; "The variety of architectural forms, and the peoples that produced them, could be hierarchically arrayed along a temporalized scale of progress from the primitive to the modern."<sup>75</sup>

The first generations of racial architectural theories proposed a single origin to architecture, as the primitive hut of Laugier. In these theories, a gradient of progress permitted to situate one culture above the other in terms of technological development and aesthetic refinement. The reasons invoked for the progress of certain cultures above others were highly debated, but mainly, climatic reasons were proposed; the temperate climatic conditions of Europe permitted the development of the European civilization, from Ancient Egypt, Antique Greece, the Roman Empire to the European Enlightenment, while other cultures weren't able to progress due to harsh climates or scarcity of resources.

Rapidly, the mono-genetic hypothesis was abandoned in favor of polygenism, for example, in the work of Quatremère de Quincy or Viollet-le-Duc. The latter in his book *Histoire de l'habitation humaine* develops his racial typological knowledge and associates to each race an architectural style in an anthropomorphic movement; the physical morphology of racial typology served as a model for the architectural style. In his discourse, the Gallo-Roman people, that are, in his theory, at the origin of the European Style and refinement are inclined to rationalism; the gothic style emerged in the French context, whose people possessed a "natural genius", within a "supple and

<sup>75</sup> Cheng, Irene. "Structural Racialism in Modern Architectural Theory." In *Race and Modern Architecture*, edited by Irene Cheng, Charles L Davis, and Mabel O Wilson, 135. A Critical History from the Enlightenment to the Present. University of Pittsburgh Press, 2020.



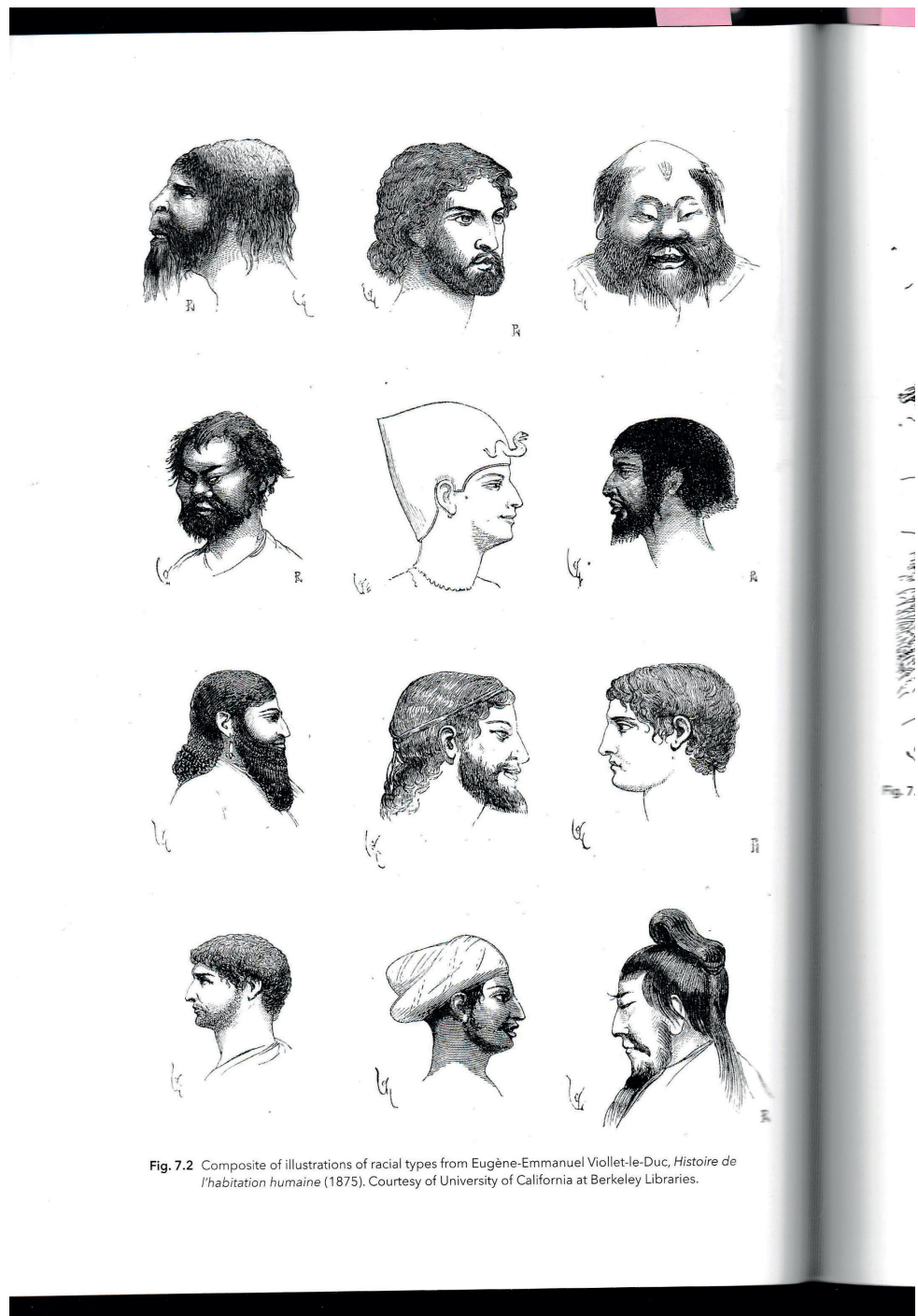
innovative nature”, and who were “quick to seize upon practical side of things. They were active and energetic, given to reasoning things out; and they were driven by good sense as much as they were by imagination.”<sup>76</sup>

Thus, “Viollet-le-Duc’s characterizations followed the racial stereotypes of the day: Blacks were an ‘abject race’, the Semites were simple, contemplative, and calculating; and the ‘Arya’ were of great stature and brave ... like superior beings, born to command.”<sup>77</sup> “This idea that a white race—whether it was Viollet-Le-Duc’s ‘Gallo-roman’ or ‘Aryan’ or the ‘Anglo-Saxon’ in England and America—had a special proclivity for independence, rationality, practicality, and innovation, which was reflected in its architecture, would be critical in modernism’s ability to adopt radicalized ideas while shedding explicit racism in the early twentieth century.”<sup>78</sup> Thus, theories emerged from other theories, classification trees of architectural style that duly correspond to those of racial theories, as we see, for example, in Fletcher’s tree.

76 Cheng, Irene. “Structural Racialism in Modern Architectural Theory.” (2020): 142.

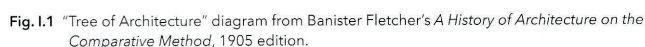
77 Cheng, Irene. “Structural Racialism in Modern Architectural Theory.” In *Race and Modern Architecture*, edited by Irene Cheng, Charles L Davis, and Mabel O Wilson, 141. *A Critical History from the Enlightenment to the Present*. University of Pittsburgh Press, 2020.

78 Cheng, Irene. “Structural Racialism in Modern Architectural Theory.” In *Race and Modern Architecture*, edited by Irene Cheng, Charles L Davis, and Mabel O Wilson, 142. *A Critical History from the Enlightenment to the Present*. University of Pittsburgh Press, 2020.



| Fig. A4 | Page from Cheng, Irene, Charles L Davis, and Mabel O Wilson. *Race and Modern Architecture: A Critical History from the Enlightenment to the Present*. University of Pittsburgh Press, 2020, presenting the drawings from Eugène Viollet-le-Duc, in *Histoire de l'habitation humaine*, 1875.

Fig. 7.2 Composite of illustrations of racial types from Eugène-Emmanuel Viollet-le-Duc, *Histoire de l'habitation humaine* (1875). Courtesy of University of California at Berkeley Libraries.



**Fig. I.1** "Tree of Architecture" diagram from Banister Fletcher's *A History of Architecture on the Comparative Method*, 1905 edition.

| Fig. A5 | Page from Cheng, Irene, Charles L Davis, and Mabel O Wilson. *Race and Modern Architecture: A Critical History from the Enlightenment to the Present*. University of Pittsburgh Press, 2020, presenting the Tree of Architecture of Bannister Fletcher, in *A History of Architecture on a Comparative Method*. 1905 edition.

79 Cheng, Irene. "Structural Racialism in Modern Architectural Theory." In *Race and Modern Architecture*, edited by Irene Cheng, Charles L Davis, and Mabel O Wilson, 150. *A Critical History from the Enlightenment to the Present*. University of Pittsburgh Press, 2020.

From the idea that non-white people were naturally inferior, supported by racial theories, at the beginning of the XXth century, flourished a racial historicism in which non-white people are less developed, immature, but not naturally inferior. By initiating a modernistic timeline on history within the idea of temporal progression from primitive societies to modern Western ones, **race disappeared from the official and dominant discourse to be replaced by technological domination**; “In the process, race became first subtext and then a specter of modernism.”<sup>79</sup> This new agenda still instills the urge for modern societies to colonize and help other ones develop. The work and writings of Adolf Loos embody this new perspective:

“Indeed, in his famous essay *Ornament and Crime* (1913), Loos borrowed Owen Jones’s association of ornament with ‘primitive’ peoples but went even further in arguing that the use of ornament should not just be reformed but abolished.



In labeling ornament a ‘crime’, Loos declared it an aesthetic practice suited only for ‘Papuan’, criminals, and other inhabitants of the evolutionary ladder’s lower rungs and not for modern Europeans. In his intentionally provocative treatment, ornamentation-or its lack—became an index of cultural development, a process that he described colorfully in terms of a racial timescale with a recapitulationist spin: ‘The human embryo in the womb passes through all the evolutionary stages of the animal kingdom. When man is born, his sensory impressions are like those of a newborn puppy. His childhood takes him through all the metamorphoses of human history. At two he sees with the eyes of a Papuan, at four with those of an ancient Teuton, at six with those of Socrates, at 8 with those of Voltaire.’”<sup>80</sup>

80 Cheng, Irene. “Structural Racialism in Modern Architectural Theory.” In *Race and Modern Architecture*, edited by Irene Cheng, Charles L Davis, and Mabel O Wilson, 150. A Critical History from the Enlightenment to the Present. University of Pittsburgh Press, 2020. Quoting Ornament and Crime of Adolf Loos.

81 Cheng, Irene. “Structural Racialism in Modern Architectural Theory.” In *Race and Modern Architecture*, edited by Irene Cheng, Charles L Davis, and Mabel O Wilson, 152. A Critical History from the Enlightenment to the Present. University of Pittsburgh Press, 2020.

Loos was convinced that at the end of the XXth century, only one culture would exist over the planet and that the Aryan and Germanic culture, being superior to the others, would spread. The emergence of the international style that attempted to erase the racist and nationalist discourse present in the preceding modern theories was developed within this structural racism.

“Yet like the ideology of color blindness that it mirrored, modernism continues to be haunted by its racist genealogy, which has yet to be fully exhumed.”<sup>81</sup>

Through the modern theories and modern internationalism, **white andromorphism and structural exclusion of the feminized, enslaved, forced, and racialized bodies pertain, explicitly or through implicit haunting**. Yet, through these evolutions of architectural theories, the dominant discourse and practices remained profoundly organized through social stratification, while the means, instruments, and precise subjects adapted according to diverse situations. Hierarchies of knowledge that supported the superiority of architectural disciplinary knowledge over other forms of spatial and architectural knowledge expanded their scope and force; from imperial infrastructures used to legitimize colonialism to the reproduction and perpetuation of subjugating discipline in maintaining class systems. **The obscure zone, or the void of architectural hylomorphism, expanded and cemented its foundations, blind to the feminized, enslaved, forced, and racialized bodies and deaf to material speech acts.**

And where are we now? Does architectural hylomorphism pertain in the taught and practiced discipline, in its discourses and histories? What has been unraveled here concerns the dominant architectural discourse. If it seems unitary, the actual milieu is much more idiosyncratic and multiple than this unfolded genealogy. A minor discourse has always existed, what has changed is the extent of the noise and concealment performed by the dominant one, and as such, the tools, instruments and scales on which it relies. The following chapters are all concerned with the reality of architectural hylomorphism, the infrastructures of its domination -epistemological as much as physical- and its adaptation to new modes of production. I will thus not describe this reality in the same way as I have above, since it deserves this whole manuscript -as could each epoch of the discipline and profession. However, research that exists at present may well be sufficient proof that architectural hylomorphism hasn’t come to an end, and that we still have much *deconstruction* and *unlearning* to accomplish. Delving into what constitutes the actual dominant architectural **historiography** is thus a starting point to understand the relationship between the discipline and the knowledge, bodies and lives it has concealed.



## Epistemic violence and obscure zones in architectural historiographies.

“The question, the questions that must be asked, are they not: Which types of knowledge do you want to disqualify from the moment you say you are a science? Which speaking subject, which discourse subject, which subject of experience and knowledge do you want to minorize from the moment you say: ‘I, who hold this discourse, hold a scientific discourse and I am a scientist?’ Which theoretical-political avant-garde do you want to enthrone, then, to detach it from all the massive, circulating and discontinuous forms of knowledge?”<sup>82</sup>

77

I have so far discussed the evolving power and class relationships at stake through the formation of architecture as a discipline and a profession in the early Renaissance, unearthing its constitutive hylomorphism to the benefit of architects. I followed this to the forces at stake in the dominant architectural practices—unfortunately, too rapidly to discuss all its subtleties. I have insisted upon the systematic exclusion of the feminized, enslaved, and forced bodies from the realm of architectural knowledge. I nevertheless only briefly mentioned the instruments, tools, and processes at stake to produce such exclusion, beyond the discursive theory that structured this practice. I will now try to introduce some elements to extend my argument and shed light on the **disciplinarization of architecture in the creation of architectural knowledge and historiography**. I will investigate how this process excluded and silenced certain knowledge and voices.

In his Cours au Collège de France *Il faut défendre la société*, Michel Foucault discussed the European process of disciplinarization of knowledge through the creation of medieval universities and during the XVIIIth-XIXth centuries. The creation of these universities is frequently related to the process of enclosure that happened in the XIVth to XVIIth England, which originates the accumulation of capital by dispossession.<sup>83</sup> As argued by Budd Hall and Rajesh Tandon, co-holders of the UNESCO Chair in community-based research and social responsibility in Higher Education:

“[t]he act of creating Oxford and the other medieval universities was an act of enclosing knowledge, limiting access to knowledge, exerting a form of control over knowledge and providing a means for a small elite to acquire this knowledge for the purposes of leadership of a spiritual, governance or cultural nature. Those within the walls became knowers; those outside the walls became non-knowers. Knowledge was removed from

82 ‘La question, les questions qu’il faut poser ne sont-elles pas celle-ci: « Quels types de savoirs voulez-vous disqualifier du moment que vous vous dites être une science ? Quel sujet parlant, quel sujet discourant, quel sujet d’expérience et de savoir voulez-vous minoriser du moment que vous dites : ‘moi qui tiens ce discours, je tiens un discours scientifique et je suis savant’ ? Quelle avant-garde théorico-politique voulez-vous donc introniser, pour la détacher de toutes les formes massives, circulantes et discontinues du savoir ? »’ In Foucault, Michel. *Il Faut Défendre La Société: Cours Au Collège de France, 1975-1976*. Hautes Études. Paris: Gallimard/Seuil, 1997:11. My translation.

83 Harvey, David. “The ‘New’ Imperialism: Accumulation by Dispossession.” *Socialist Register* 40 (2004). <https://socialistregister.com/index.php/srv/article/view/5811>.

the land and from the relationships of those sharing the land. The enclosing of the academy dispossessed the vast majority of knowledge keepers, forever relegating their knowledge to witchcraft, tradition, superstition, folkways or, at best, some form of common sense.”<sup>84</sup>

The same process happened elsewhere and not only on European soil; the imperial and colonial enterprise legitimizes the superiority of one form of knowledge, and relationship to land, over another, while relegating the knowledge of the conquered to the realm of folklore. The process of destruction and/or concealing of a knowledge system is called *epistemicide*, resulting from epistemic and cognitive imperialism. Universities played a key role in this process and the disciplinarization of knowledge throughout their history. We can observe the same process during the Renaissance within the architectural discipline. Education and training was enclosed in theoretical and aristocratic domains, a completely opposite situation compared with the master masons who were trained in workshops.<sup>85</sup> In selecting knowledge that would have a place in universities, other forms of knowledge, and their relations in society, were disqualified. Foucault wrote:

“The role of selection is exercised by this sort of de facto, but also de jure, monopoly, which means that knowledge that is not born, that is not formed within this sort of institutional field, with relatively floating limits, but which roughly constitutes the university, the official research organizations, outside of which, knowledge in the wild state, knowledge born elsewhere, is automatically, from the outset, if not completely excluded, at least disqualified a priori.”<sup>86</sup>

A series of institutions emerged to legitimate the western imperialist frame and its enterprise of concealment on its own land and in its colonies. **Archives**, comprising what is considered the **past**, were brought to the fore in an act of placing knowledge in a **past past**, to the detriment of its very existence as an embodied reality and practice in society.<sup>87</sup> Despite the fact that this knowledge never disappeared; it is from the very same place of the university that the voices of the excluded and bodies that contain them are difficult to be heard. And if an *alternative history* emerges out of a university, it has already existed. It is not an alternative history that can be built from concealed voices. On the contrary, it is **a thread of unheard narratives that I, as an academic from the western world, have difficulty listening to and unearthing because of the institutional and epistemic apparatus I have been molded in**. This knowledge, Foucault called it, *subjugated knowledge*. They are of two types; “what official knowledge represses within its own terms, institutions, and **archives**. And, on the other hand, it also refers to ‘disqualified’, marginalized, fugitive knowledge from below and outside the institutions of official knowledge production.”<sup>88</sup> Foucault wrote:

“Thus, the ‘subjugated knowledges’ are those blocks of historical knowledges that were present and hidden inside the functional and systematic ensembles, and that the critique was able to make reappear by the means, of course, of erudition. [...] By ‘subjugated knowledge’ I also mean a whole series of

84 Hall, Budd L., and Rajesh Tandon. “Decolonization of Knowledge, Epistemicide, Participatory Research and Higher Education.” *Research for All*, January 1, 2017:8. <https://doi.org/10.18546/RFA.01.1.02>.

85 The evolution of the training of the architects during the Renaissance was introduced in the preceding section, notably in regard to Alberti, Brunelleschi and Philibert Delorme,

86 And he continues: Disappearance of the scholar-amateur: it is a fact known in the XVIIIth-XIXth century. So: role of selection of the university, selection of knowledge; role of distribution of the stage, quality and quantity of knowledge in different levels; this is the role of teaching, with all the barriers that exist between the different stages of the university apparatus; role of homogenization of this knowledge by the constitution of a kind of scientific community with recognized status; organization of a consensus; and finally, centralization, by the direct or indirect character, of state apparatuses.”

‘Le rôle de la sélection, elle l’exerce par cette sorte de monopole de fait, mais aussi de droit, qui fait qu’un savoir n’est pas né, qui n’est pas formé à l’intérieur de cette espèce de champ institutionnel, aux limites d’ailleurs relativement flottantes, mais qui constitue en gros l’université, les organismes officiels de recherche, en dehors de cela, le savoir à l’état sauvage, le savoir né d’ailleurs, se trouve automatiquement, d’entrée de jeu, sinon tout a fait exclu, du moins disqualifié a priori. Disparition du savant-amateur: c’est un fait connu aux XVIIIe-XIXe siècle. Donc: rôle de sélection de l’université, sélection des savoirs; rôle de répartition de l’étage, de la qualité et de la quantité de savoirs en différents niveaux; c’est le rôle d’enseignement, avec toutes les barrières qui existent entre les différents étages de l’appareil universitaire; rôle de l’homogénéisation de ces savoirs

88 Gordon, Avery. *Ghostly Matters: Haunting and the Sociological Imagination*. New University of Minnesota Press ed. Minneapolis: University of Minnesota Press, 2008:xix.

87 I will develop on the archive as a process in the Chapter C’. See the chapter ‘Archives: The commons, not the past’ in Azoulay, Ariella. *Potential History. Unlearning Imperialism*. Verso Books, 2019. To go deeper on the topic of the disciplinarization of knowledge, see Foucault, Michel, and Angèle Kremer-Marietti. *L’archéologie Du Savoir*. Vol. 1. Gallimard Paris, 1969.

par la constitution d’une sorte de communauté scientifique à statut reconnu; organisation d’un consensus; et enfin, centralisation, par la caractère direct ou indirect, d’appareils d’état.” In Foucault, Michel. *Il Faut Défendre La Société: Cours Au Collège de France, 1975-1976*. Hautes Études. Paris: Gallimard/Seuil, 1997:163. My translation.

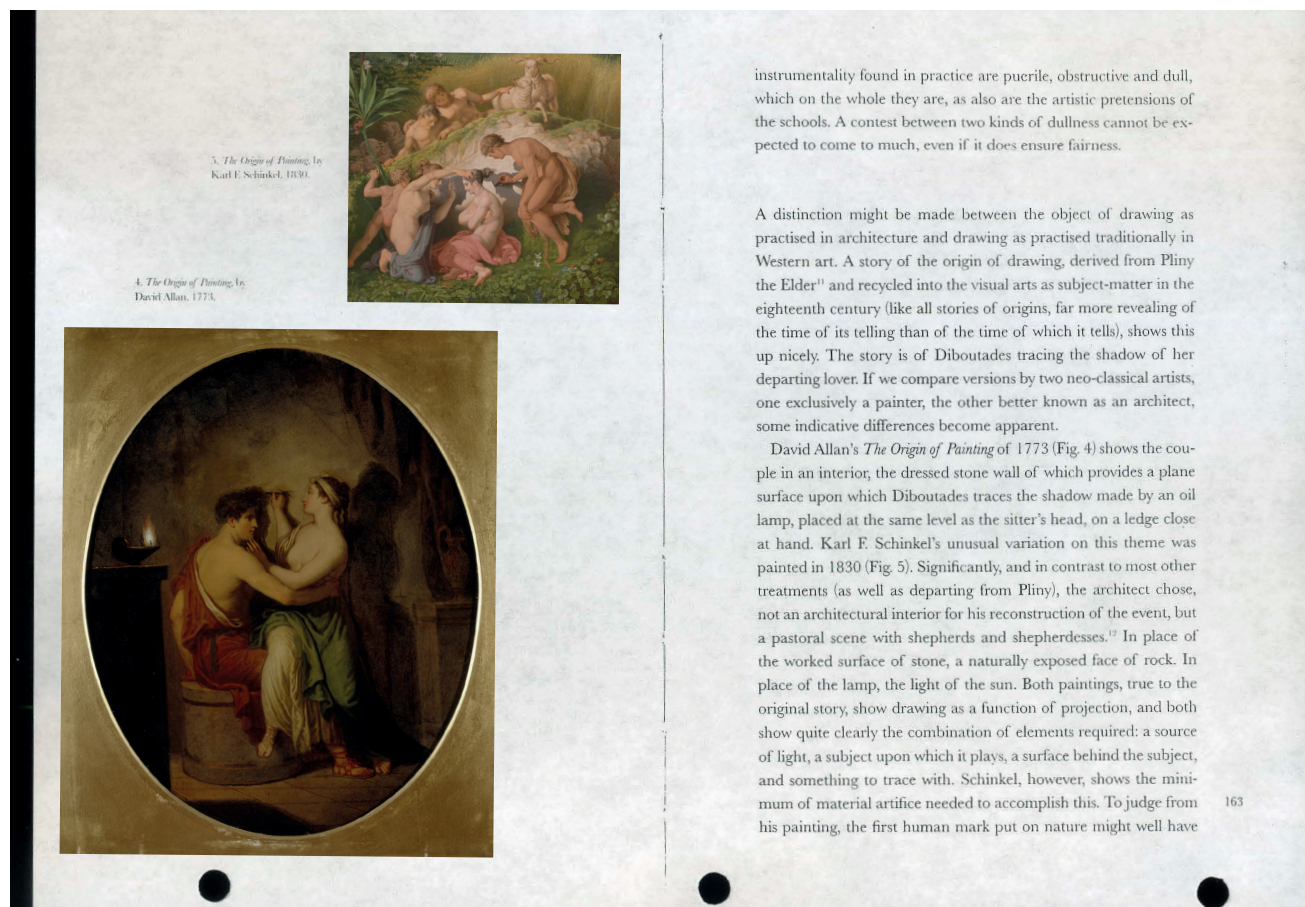
89 "And he continues: this knowledge that I would call, if you will, the "knowledge of the people" (and which is not at all a common knowledge, a common sense, but on the contrary, a particular knowledge, a local, regional knowledge, a differential knowledge, incapable of unanimity and which owes its strength only to the sharpness that it opposes to all those around it)-it is by the reappearance of these local knowledge of the people, of these disqualified knowledges that the critique was made."

"Donc, les « savoirs assujettis » ce sont ces blocs de savoirs historiques qui étaient présents et masqués à l'intérieur des ensembles fonctionnels et systématiques, et que la critique a pu faire réapparaître par les moyens, bien entendu, de l'érudition. [...] Par « savoirs assujettis », j'entends également toute une série de savoirs qui se trouvaient disqualifiés comme savoirs non

knowledge that was disqualified as non-conceptual knowledge, as insufficiently elaborated knowledge: naive knowledge, hierarchically inferior knowledge, knowledge below the level of knowledge or of the required scientificity. [...]"<sup>89</sup>

What, then, are the subjugated knowledges of the architectural discipline? What architectural knowledges have been concealed and silenced in the background of our spatialities, in the obscure zone of architectural hylomorphism, by the disciplinarization and professionalization of architecture, its social stratification, and the dominant historical discourse? And how can we once again imagine listening to them?

In the last section, I discussed the re-emergence of the *orthographia*, *ichnographia*, and *scaenographia* during the Renaissance, coinciding with a renewed organization of the construction site, depriving crafts.women of the tasks of planning and designing, and legitimizing the architect's labor through paper drawing and direct association with the patronage. This produced a paradigmatic shift of the **architectural image** and operations from direct **contact** with non-human bodies/matter—or at least, unmediated through a standardized **document** or record—to mediacy and fixity on a third non-human body. **From that point, the discipline<sup>90</sup> of architecture constructed itself within the media of drawing as an interface between the patronage and crafts.women.**



| Fig. A6 | Page from Evans, Robin. *Translations from Drawing to Building*. AA Documents 2. Cambridge, Mass: MIT Press, 1997, figuring the two myths of the origins of painting/drawing, Karl F. Schinkel, *The Origin of Painting*, 1830 and David Allan, *The Origin of Painting*, 1773.

conceptuels, comme savoirs insuffisamment élaborés: savoirs naïfs, savoirs hiérarchiquement inférieurs, savoirs dessous du niveau de la connaissance ou de la scientificité requise. [...] ce savoir que j'appellerais, si vous voulez, le « savoir des gens » (et qui n'est pas

du tout un savoir commun, un bon sens, mais au contraire, un savoir particulier, un savoir local, régional, un savoir différentiel, incapable d'unanimité et qui ne doit sa force qu'au tranchant qu'il oppose à tous ceux qui l'entourent)- c'est par la réapparition de ces savoirs locaux

des gens, de ces savoirs disqualifiés que s'est faite la critique<sup>1</sup>. In Foucault, Michel. *Il Faut Défendre La Société: Cours Au Collège de France, 1975-1976*. Hautes Études. Paris: Gallimard/Seuil, 1997:8-9. My translation.

<sup>90</sup> I have here to emphasize on the using of the word discipline as designating the dominant discourses and practices, concealing, but not erasing other forms of architectural knowledge.



In these two paintings, chosen by Robin Evans in “Translation from Drawing to Building”, we see two representations of the *origin of painting*. This myth was written by Pliny the Elder. In it, Diboutades is tracing the shadow of her lover on a surface that will soon leave as a trace not to forget his image. The painting by David Allan figures Diboutades, seated on her lover’s knees, inside, beside a stone wall on which is projected his shadow thanks to an oil lamp. On the other hand, the painting of Schinkel figured a pastoral scene in a “pre-architectural setting”; the rock surface is a stone in the middle of a field inhabited by shepherds. According to this proposition, “the first human mark put on nature might well have been the line of charcoal on the rock, while in Allan’s the accouterments of civilization were already in place;”<sup>91</sup>

“In Schinkel’s version drawing precedes building, in Allan’s it follows from it. Of the two, the architect was obliged to show the first drawing in a pre-architectural; without drawing, no architecture is possible, at least no classical architecture on lines of geometrical definition.”<sup>92</sup>

In Schinkel’s, be it conscious or not, drawing and architecture emerge out of a social stratification (a shepherd is drawing for Diboutades); Architecture exists after the drawing, and as such, “[d]rawing in architecture is not done after nature, but prior to construction; it is not so much produced by reflection on the reality outside the drawing, as productive of a reality that will end up outside the drawing.”<sup>93</sup> In this view of architectural practice, as mainly a drawing practice, the architect never works on its object itself; she never constructs the building. The real value of architectural work, its essence, lies in the preparatory drawings.

This division between drawing and construction, the one preceding the other, as foundational of architectural hylomorphism, built the epistemic frame of the emerging architectural discipline from the Renaissance until now. In this scope, the ontology of the **documents** that kept the architectural historians’ attention (beyond the building) is highly standardized; to constitute a traditional corpus, we find drawings, models, writings, and some personal belongings (notebooks or letters). Undoubtedly, archiving architecture is a peculiar practice. As in the architect’s case, an archivist never **archives** a building and **archives** something else of the architectural. An architectural **archive** stores the *representation* of buildings, the **documents**, and records produced during the conception. These representations even exceed the utilitarian perspective on the **documents**, as architects often produce visual material with qualities that overcome the construction utility or the client’s need. When stored in the **archive**, this collection of **documents** produced in the architect’s offices is protected from time; a double of the building is created when the building is built and the **documents** archived. The building is at the mercy of weather, time, appropriation, and evolution of the needs and uses; on the contrary, the **documents** possess an “aura of originality”, as the architects’ original work. **The architectural archives legitimate the authorship of the architects, transforming the building into a mere reproduction of the original work.**

A building cannot have a single author; crafts.wo.man, clients, inhabitants, workers and a wide array of people intervene directly in the construction process. The architect can, however, claim the authorships of drawing, and through it, the origin(ality) of the building. In this sense, “the archive is less a record of the genesis of built or projected work as it is a supplement for the qualities that the built work will inevitably lack,”<sup>94</sup> facilitating the opposition between a disciplinary architectural knowledge, pure and mediated, and a subjugated knowledge of crafts.wo.man, clients, inhabitants, workers (and others) concealed from the **archives**. The archivist’s documentation is thus “more

91 Evans, Robin. “Translations from Drawing to Building.” AA Files, no. 12 (1986): 163-4.

92 Evans continues: ‘In Schinkel’s work, drawing is, from the beginning, a divided activity, resolvable into a prior act of thought and a consequent manual undertaking which the arrival of architecture would duplicate, on a much larger scale, as the difference between design and construction.’ Evans, Robin. “Translations from Drawing to Building.” AA Files, no. 12 (1986): 164.

93 Evans, Robin. “Translations from Drawing to Building.” AA Files, no. 12 (1986): 165.

94 Kleinman, Kent. “Archiving/Architecture.” (2001): 322.

accurately described as a machine for forgetting—forgetting that architectural projects are ontologically distinct from, and quite distant from, their representations”<sup>95</sup>, buildings and worlds being unsatisfactory in comparison to the **architectural image** stored in the **archives**.

Accordingly, this documentation process provokes a series of blind spots, voids or *obscure zones* that support and perpetuate the ones produced by architectural hylomorphism. These obscure zones are of two kinds, following the two strands of the subjugated knowledge Foucault argued. The first obscure zone lies in the **archives** themselves. As discussed by Mark Wigley, this first critical gaze

“does not involve rewriting the history of modern architecture. Rather, it involves looking into some of the blind spots, interrogating the historiography for what is routinely left out of the picture. Or, more precisely, what is left out in order that there can even be a picture in the first place. [...] Rather than bring new archival material to the surface, it is a matter of looking at the evidence lodged in the public record, sitting right there in front of us, nestled between the lines of the all too familiar literature, hidden only because it is so close to our eyes. To see it simply involves letting the texts speak for themselves.”<sup>96</sup>

Yet this critical gaze on the **archives** should also go further. It does not shed light on the obscure zone of the **documents** themselves; the architectural **archives**—before, during, or *after* architectural modernity—should also be analyzed as a process of, and an infrastructure for, constructing the discipline and its legitimacy over knowledge and bodies. **This critique intends to study the drawings and documents not for what they represent, but for their operations (the very operations of drawing a line and the socio-technical context that enacts it), the structure that produced them and the effects they sought to provoke, in the entirety of the technological and social chains that led to them, to be able to acknowledge the silenced voices and the concealed knowledge and labor.** Thus, we have both to look at the archiving process and its power structure and at the limit of the **archive** as a boundary on which histories could be negotiated. As proposed by Saidiya Hartman,

“History pledges to be faithful to the limits of fact, evidence, and archive, even as those dead certainties are produced by terror. I wanted to write a romance that exceeded the fictions of history—the rumors, scandals, lies, invented evidence, fabricated confessions, volatile facts, impossible metaphors, chance events, and fantasies that constitute the archive and determine what can be said about the past.”<sup>97</sup>

However, the critical gaze on the **archive** isn’t sufficient to disentangle the underlying hylomorphism in dominant architectural discourse: it is necessary to take into account the second strand of subjugated knowledge. This strand is constituted by excluded and concealed knowledge and practices that aren’t possibly present in archival **gestures**; an architectural knowledge that is obstructed and neglected. It does not exist in a standardized format, but only through organic and/or physical witnesses and knowledge that failed to enter—as it was unable to be standardized—or was excluded from—as it was considered irrelevant—the **archives**. This knowledge is multiple. In the preceding section, I discussed artisanal sensibility, the somatic, and oral, and embodied architectural and spatial knowledge. In most cases, the circulation and the **actualization** of this knowledge do not produce **documents**, records, or artifacts that can be archived. There,

“a far vaster—indeed an infinite—library of knowledge never migrates from its organic form (memory, bodily praxis) to a standard text form (books, audio, or video recording).”<sup>98</sup>

95 Kleinman, Kent. “Archiving/ Architecture.” (2001): 323.

96 Wigley, Mark. *White walls, designer dresses: the fashioning of modern architecture*. Cambridge, Mass: MIT Press, 1995:xv)

97 Saidiya, Hartman. « Venus in Two Acts ». *Small Axe* 12, no. 2 (2008): 9.

98 Povinelli, Elizabeth A. “The Woman on the Other Side of the Wall: Archiving the Otherwise in Postcolonial Digital Archives.” *Differences* 22, no. 1 (January 1, 2011): 152. <https://doi.org/10.1215/10407391-1218274>.

If we consider architecture in its narrower definition, as a practice dependent on construction and leading to building, **the media supporting the emergence of the architectural image and bringing about its spatialization in the physical realm—architectural operations—cannot be only drawing, models and/or writing—standardized documents.** Architectural **documents** and records constituting the **historiography** of architecture reflect the disciplinarization of architecture. This standardization has been built as a negative process emphasizing what an architect and architecture are not—physical laborers, crafts.woman, etc. In this movement, architectural **documents** and records stored in the **archives** participate in social reproduction, performatively excluding the subjugated knowledge of architecture from the architectural operations and what the institutions constructed as a **past**. Ending in **epistemic violence**, this systematic exclusion is silencing;

“silence imposed from within; silence imposed from without; and silence that exists around what has not yet been named, recognized, described, or admitted. But they are not distinct; they feed each other; and what is unsayable becomes unknowable and vice versa, until something breaks.”<sup>99</sup>

Analogously,

“[w]hat happened after that [the construction] within the actual buildings, (as distinct from the archive) was rarely recorded in architectural historiography—even if it was well known that architecture is not static but subject to change. And yet, the spatial knowledge embedded in interventions in buildings made post-completion by inhabitants and users, as well as in the stories that they would be able to tell about buildings, were often regarded as beyond the bounds of the discipline, belonging to the realm of anthropology, sociology, or geography rather than architectural history.”<sup>100</sup>

This focus on the architectural operations of the architect’s drawing also silences the fact that architecture “is performative, in the sense that it involves ongoing social practices through which space is continually shaped and inhabited”<sup>101</sup> —a performative emergence of spatialities that could also be considered as architectural operations. **The architectural operations of the discipline—drawing as a media and order between the patronage and the workforce—drew on a hylomorphic background structuring the discipline, and thus concealed and excluded various textures of architectural and spatial knowledge and memories.** Accordingly,

“the place of oral history within the historiography of modern architecture is not yet fully accepted, understood or theorized. The question of who can speak for and about buildings, what they can say and how, and what it all means—both for buildings and for people—thus offers a rich field for theoretical discussion.”<sup>102</sup>

*“Nothing that has ever happened should be regarded as lost for history.”*<sup>103</sup> One thread of western knowledge history is of enclosure, of concealing and silencing. The architectural discipline is entirely part of this history. However, there are other threads to follow. “If a certain written story is an alternative to imperial premises, it cannot be new: it is always already known, and it is only its authors that had to unlearn their imperial version in order to utter it properly, that is, from the point of view of those who never accepted their imperial version as truth.”<sup>104</sup> This dissertation is also a record of my unlearning process, starting from a desire to unearth an alternative history, to finally disclose potential histories—that is, if one day I can unlearn enough to do so. Some threads are to be followed; **analyzing the archives-as-subject, or the process**

99 Solnit, Rebecca, and Paz de la Calzada. *The Mother of All Questions*. Chicago, Illinois: Haymarket Books, 2017:22.

100 Gosseye, Janina, Naomi Stead, et Deborah Van der Plaet, éd. *Speaking of buildings: oral history in architectural research*. First edition. New York: Princeton Architectural Press, 2019:12.

101 Lees, Loretta. « Towards a critical geography of architecture: the case of an ersatz colosseum ». *Ecumene* 8, no 1 (2001): 51.

102 Gosseye, Janina, Naomi Stead, et Deborah Van der Plaet, éd. *Speaking of buildings: oral history in architectural research*. First edition. New York: Princeton Architectural Press, 2019:16.

103 Benjamin, Walter, Hannah Arendt, et Harry Zohn. *Illuminations*. New York: Schocken Books, 1986:254.

104 Azoulay, Ariella. *Potential History. Unlearning Imperialism*. 2019:198.



105 Povinelli, Elizabeth A. "The Woman on the Other Side of the Wall: Archiving the Otherwise in Postcolonial Digital Archives." *Differences* 22, no. 1 (January 1, 2011): 154. <https://doi.org/10.1215/10407391-1218274>.

106 Gordon, Avery. *Ghostly Matters: Haunting and the Sociological Imagination*. 2008:178. Quoting Spillers, Hortense J. "Changing the Letter: The Yokes, the Jokes of Discourse, or, Mrs. Stowe, Mr. Reed." *Slavery and the Literary Imagination*, 1989, 51.

107 Gordon, Avery. *Ghostly Matters: Haunting and the Sociological Imagination*. 2008:205.

108 See chapter C, 'Archival pharmacology', in the section 'Undrawn Spatialities. Traces of architectural events.'

109 'les gestes contenus dans la forme.' Simondon, Gilbert. *L'individuation à la lumière des notions de forme et d'information*. Krisis. Grenoble: Millon, 2005:42. My translation.

110 This quote appears in a note written as an appendix called 'The theory of ghosts', that is trying to confirm the viability of the Marxist concept of Haunting. Horkheimer, Max, Theodor W. Adorno, and Gunzelin Schmid Noerr. *Dialectic of Enlightenment: Philosophical Fragments. Cultural Memory in the Present*. Stanford, Calif: Stanford University Press, 2002:179.

of archiving and its relation to disciplinarization, and widen the academic understanding of architectural and spatial knowledge, "to support subjugated knowledge, help alternative socialities endure, and challenge the formation of power."<sup>105</sup> As evoked, I will also focus on a second path in this work.

"Claimed or not, 'somewhere every culture has an imaginary zone for what it excludes and it is that zone we must try to remember today'. We must try to remember it today if for no other reason than that a ghost is haunting the living, forcing us in that uncanny way hauntings have to 'track the image' or the apparition 'back to a *point of density*'-the engraving—and toward a '*potentiality* induced from a *dispersion* of gestures'."<sup>106</sup>

I will intend both to work from and look for this **imaginary zone**, the zone where the **ghosts** of architectural hylomorphism's epistemic violence can be found; I will try to get in **contact** with them, to discuss with and write through them. I will look for this zone where they reside, where they haunt. *Nothing that has ever happened should be regarded as lost for history. This architectural knowledge that I am looking for never ceased to exist*; they have a tremendous agency in European and western contexts. We all participate in the **migration** of spatial and architectural knowledge of these sorts. To engage with this multiplicity, I first have to unlearn the sources of architectural history; sources that are not (only) in **archives**, but in the world, as *nothing that has ever happened should be regarded as lost for history*. This knowledge and histories are there, and I have to welcome them, as *unbearable* only from the place I am standing. This involves experiencing the threshold at which knowledge meaningfully starts to affect, to access the *density of experience*, "[p]roximate and vibrant,"<sup>107</sup> where we can track **architectural images** "back to a point of *density*".

Architectural histories of disciplinarization and hylomorphism, which drawing, **archives** and historiographies support in their imperial claim over architectural and spatial knowledge, relegates oral and embodied knowledge of the feminized, enslaved, racialized, and forced bodies. To reduce the **distance** with this knowledge and its (hi)stories in the manuscript, I will focus on oral and embodied knowledge as performative and operator architectural knowledge. In disentangling their relation to **archives** and drawing, their agency and their dialogue with human and non-human bodies, their circulation and the textures of their memories (and thus, of their **temporalities** and historicities), I will try to confirm the hypothesis that the **oral and the embodied are two active producers of undrawn spatialities**.<sup>108</sup> To make this argument, I elaborate on Gilbert Simondon's theory of operations as an epistemic and theoretical basis to unravel the architectural discipline's hylomorphic dimensions and sketch a *versant opératoire* of space. This *operator side* allows for differences to emerge in the fabrication of a brick. It lays foundations for a performative theory of space which acknowledge subjugated forms of knowledge. In doing so it traces back to "the **gestures** involved in the form"<sup>109</sup> that had been "reduced to a mere succession of instantaneous presents, which leave behind no trace"<sup>110</sup> and sketches potential paths to the obscure zones of hylomorphic architectural representation.

## A “versant opératoire”? Toward a theory of operations.

To overcome architectural hylomorphism, both in theories and practices, I have to find paths to **imaginary zones** from which I might interact with subjugated architectural knowledge. This knowledge is not one; it is multiple and fugitive. In this research, I do not contend to provide a universal framework that allows for all textures of knowledge to be taken into account; I seek to unravel a theoretical and critical framework to depart from singularities. Gilbert Simondon’s theories explore individuation processes thanks to the concept of *operations*. He argues that *operations* allow to access the obscure zone of hylomorphic representation without reproducing its stratification.

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To engage with oral and embodied knowledge, I will then try to unfold the architectural potential of the concept of *operations*. **The array of spatialities thought of as architectural will be extended by considering architectures of operations—i.e. spatialities emerging out of operations.** It induces to **extend what can be considered as architectural operations.** In pursuit of these operations, I will draw on Gilbert Simondon’s “versant opératoire” of science, and translate it into architectural theory toward a theory of operations.<sup>111</sup>

### Threshold 1: individuating the theory of individuation. Physical, vital, psychosocial operations.

The essays of Gilbert Simondon are some of the most indigestible texts I have ever read. Gilles Deleuze or Jacques Derrida are as clear as freshwater next to his work. I will try to introduce the concepts that structure his work to the extent that is possible and necessary for this research. I might use a more complex language than in the preceding sections, and those that follow, and I apologize if I am not able to synthesize his words.

In his thesis, Gilbert Simondon aims to “study the forms, modes, and degrees of individuation to replace the individual in the being, according to the three levels: physical, vital and psychosocial”<sup>112</sup> to counter the hylomorphic understanding of matter, form, and life. He considers that no pre-existing substances should be invoked to analyze individuation processes, but different individuation systems and their domain—(physical) matter, life, psyche, and society. In this movement, the “notions of substances, forms, and matter are replaced by the more fundamental notions of primary information, metastability, internal resonance, energetic potential, orders of magnitude.”<sup>113</sup>

111 In this part, there will be numerous quotations of the work of Gilbert Simondon. For the moment, we decided not to translate them into English. For reasons of clarity for non-french-speaking readers, we will exceptionally translate them.

112 ‘étudier les formes, modes et degrés de l’individuation pour remplacer l’individu dans l’être, selon les trois niveaux physiques, vital et psycho-social.’ Simondon, Gilbert. L’individuation à la lumière des notions de forme et d’information. Krisis. Grenoble: Millon, 2005:32.

113 ‘aux notions de substances, de forme, de matière, se substituent les notions plus fondamentales d’information première, de métastabilité, de résonance interne, de potentiel énergétique, d’ordres de grandeur.’ Simondon, Gilbert. L’individuation à la lumière des notions de forme et d’information. 2005:32.

The physical individuation developed in his thesis, thanks to an explanation of the crystallization process, is the paradigm of other individuation processes. He writes:

“Such individuation is not the encounter of form and matter existing as previously constituted separate terms, but a resolution arising within a metastable system rich in potentials: form, matter, and energy preexist in the system. Neither form nor matter are sufficient. The true principle of individuation is mediation, generally assuming an original duality of orders of magnitude and an initial absence of interactive communication between them, then communication between orders of magnitude and stabilization. At the same time, as potential energy (higher-order condition) is actualized, matter orders and distributes itself (lower-order condition) into individuals structured at an average order of magnitude developing through a mediating process of amplification.”<sup>114</sup>

114 ‘Une telle individuation n’est pas la rencontre d’une forme et d’une matière préalables existant comme termes séparés antérieurement constitués, mais une résolution surgissant au sein d’un système métastable riche en potentiels : forme, matière et énergie préexistent dans le système. Ni les formes, ni la matière ne suffisent. Le véritable principe d’individuation est médiation, supposant généralement dualité originelle des ordres de grandeur et absence initiale de communication interactive entre eux, puis communication entre ordres de grandeur et stabilisation. En même temps qu’une énergie potentielle (condition d’ordre de grandeur supérieur) s’actualise, une matière s’ordonne et se répartit (condition d’ordre de grandeur inférieur) en individus structurés à un ordre de grandeur moyen se développant par un processus médiant d’amplification.’ Simondon, Gilbert. *L’individuation à la lumière des notions de forme et d’information*. 2005:27.

115 ‘le vivant conserve en lui une activité d’individuation permanente ; il n’est pas seulement résultat d’individuation, comme le cristal ou la molécule, mais théâtre d’individuation.’ Simondon, Gilbert. *L’individuation à la lumière des notions de forme et d’information*. 2005:27.

116 ‘La vie comporte adaptation, mais pour qu’il y ait adaptation il faut qu’il y ait être vivant déjà individué ; l’individuation est antérieure à l’adaptation, et ne s’épuise pas en elle.’ Simondon, Gilbert. *L’individuation à la lumière des notions de forme et d’information*. 2005:208.

117 ‘contemporain de lui-même en tous ces éléments, ce que n’est pas l’individu physique, qui comporte du passé radicalement passé, même lorsqu’il est encore en train de croître.’ ‘système d’individuation, système individuant et système s’individuant’ Simondon, Gilbert. *L’individuation à la lumière des notions de forme et d’information*. 2005:29.

As such, the individuation process of a crystal is brought about by the emergence of the crystal from a milieu saturated by potentials, in which two different orders of magnitude (literally two scales, an energetic scale and a physics-chemical one) enter in communication and are mediated by the individuation process itself. This **actualization** of potentials develops at an average order of magnitude/scale, as a new phase, the individual itself. Finally, the physical individuation process is exhausted by itself; in the end, there is no potential anymore, the process has an immediate end.

On the contrary, the biological individuation is reiterated continuously during the life of the biological individual; “the living preserves in itself an activity of permanent individuation; it is not only the result of individuation, like the crystal or the molecule but the theater of individuation.”<sup>115</sup> The biological individual is then never a result, as in a fabrication scheme; in this reiterative process, the living being resolves a series of problems that are beyond mere adaptation; adaptation, as a machine would do, is a readjustment of the relationship to a milieu, “[l]ife involves adaptation, but for there to be adaptation there must be a living being already individuated; individuation is anterior to adaptation, and is not exhausted in it.”<sup>116</sup> The living being is absolutely “contemporary of itself in all its parts, which is not the case for the physical individual, which has a radically **past past**, even when it is still growing;”<sup>117</sup> the living being itself is a system of individuation, a system of mediation between orders of magnitudes. The living being as an “individuation system, an individuating system and a system individuating itself”<sup>118</sup> can resolve problems in inventing new internal structures and modifying itself.

As an example, the critical individuation process of green plants is based on a reiterative mediation between a molecular level, that of chlorophyll, and the energetic level of light. **The living then exists as more-than-one and, at the same time, less than one. It involves a broader field of potentialities than itself, a capacity to couple with the environment and to individuate with, in and through it.** This coupling is the coupling of heterogeneous pre-individual reality charges from different orders of magnitude. Each individual can then “enter as an element in a larger individuation through the pre-individual reality charge,”<sup>119</sup> allowing “to think of the inner and outer relationship to the individual as participation without resorting to new substances.”<sup>120</sup>

118 ‘système d’individuation, système individuant et système s’individuant’ Simondon, Gilbert. *L’individuation à la lumière des notions de forme et d’information*. 2005:28.

119 ‘entrer comme élément dans une individuation plus vaste par l’intermédiaire de la charge de réalité pré individuelle’, Simondon, Gilbert. *L’individuation à la lumière des notions de forme et d’information*. 2005:29.

120 ‘penser la relation intérieure et extérieure à l’individu comme participation sans faire appel à de nouvelles substances’, Simondon, Gilbert. *L’individuation à la lumière des notions de forme et d’information*. 2005:29.



The psychic and collective explanations of individuation depart from the necessity of understanding them without the need for an external substance-which is at the core of hylomorphism. Both are constituted by individuation arising after vital individuation;

“The psyche is the pursuit of vital individuation in a being who, in order to solve his own problem, is obliged to intervene himself as an element of the problem through his action as a subject; the subject can be conceived as the unity of the being as a living individuated being and as a being who represents his action throughout the world as an element and dimension of the world;”<sup>121</sup>

For Simondon, the psychic individual lives as though she is constantly and reiteratively individuating, through “memory activity as through **imagination** or abstract inventive thinking.”<sup>122</sup> The psychic is as vital as the vital is psychic, in the sense that vital individuation occurs through the invention of new structures of coupling with the milieu, beyond mere adaptation. According to this process, the collective individuation emerges from a coupling of the individuals’ *pre-individual reality charges*, thus individuating in collective units; in this definition the collective is in becoming like all the other individuals. Through this collective individuation emerges action and emotion in the individuating subject;

“the collective is, for the subject, the reciprocity of affectivity and perception, a reciprocity that unifies these two areas each in itself, giving them an extra dimension. [...]; this world has a meaning because it is oriented, and it is oriented because the subject orientates herself within herself according to her emotion; emotion is not only internal change, the intermixing of the individualized being and the modification of structures; it is also a certain impulse through a universe that has a meaning, it is the meaning of action. [...]; the emotion is prolonged in the world in the form of action as the action is prolonged in the subject in the form of emotion.”<sup>123</sup>

The reciprocity between action and emotion and between the collective and the individual underlines that action is not just a modification of the milieu, of the repartition of objects and forces;

“it is, in an equally global but more intimate and less radical way, the disappearance of incompatibilities that are overcome and integrated thanks to the discovery of a new dimension; the world before action is not only a world where there is a barrier between subject and goal; it is above all a world that does not coincide with itself because it cannot be seen from a single point of view [...]. The hodological space is already the space of the solution, the significant space that integrates the various possible points of view in systematic unity, the result of an amplification. [...]. The subject before the action is taken between several worlds, between several orders; the action is a discovery of the meaning of this disappearance, by which the particularities of each set are integrated into a richer and vaster whole, possessing a new dimension.”<sup>124</sup>

124 ‘ce sont, de façon également globale mais plus intime et moins radicale, les incompatibilités de disparition qui sont surmontées et intégrées grâce à la découverte d’une dimension nouvelle; le monde avant l’action n’est pas seulement un monde où il y a une

barrière entre le sujet et le but; c’est surtout un monde qui ne coïncide pas avec lui-même, parce qu’il ne peut être vu d’un unique point de vue [...]. L’espace hodologique est déjà espace de la solution, l’espace significatif qui intègre les divers points de vue possible en

unité systématique, résultat d’une amplification. [...]. Le sujet avant l’action est pris entre plusieurs mondes, entre plusieurs ordres; l’action est une découverte de la signification de cette disparition de ce par quoi les particularités de chaque ensemble s’intègrent dans

121 Le psychisme est poursuite de l’individuation vitale chez un être qui, pour résoudre sa propre problématique, est obligé d’intervenir lui-même comme élément du problème par son action comme sujet; le sujet peut être conçu comme l’unité de l’être en tant que vivant individué et en tant qu’être qui se représente son action à travers le monde comme élément et dimension du monde;’ Simondon, Gilbert. L’individuation à la lumière des notions de forme et d’information. 2005:29.

122 ‘à travers l’activité de mémoire comme à travers l’imagination ou la pensée inventive abstraite’, Simondon, Gilbert. L’individuation à la lumière des notions de forme et d’information. 2005:208.

123 ‘le collectif est, pour le sujet, la réciprocity de l’affectivité et de la perception, réciprocity qui unifie ces deux domaines chacun en lui-même en leur donnant une dimension de plus. [...]; ce monde a un sens parce qu’il est orienté, et il est orienté parce que le sujet s’oriente en lui selon son émotion; l’émotion n’est pas seulement changement interne, brassage de l’être individué et modification de structures; elle est aussi un certain élan à travers un univers qui a un sens, elle est le sens de l’action. [...]; l’émotion se prolonge dans le monde sous forme d’action comme l’action se prolonge dans le sujet sous forme d’émotion;’ Simondon, Gilbert. L’individuation à la lumière des notions de forme et d’information. 2005:248.

un ensemble plus riche et plus vaste, possédant une dimension nouvelle’, Simondon, Gilbert. L’individuation à la lumière des notions de forme et d’information. 2005:45.

125 'ne peuvent être représentés comme des éléments graphiques de la situation', Simondon, Gilbert. L'individuation à la lumière des notions de forme et d'information. 2005:234.

126 'Le véritable principe d'individuation est la genèse elle-même en train de s'opérer, n'est-à-dire le système en train de devenir, pendant que l'énergie s'actualise. Le principe véritable d'individuation ne peut être cherché dans ce qui existe avant que l'individuation ne se produise, ni dans ce qui reste après que l'individuation est accomplie ; c'est le système énergétique qui est individuant dans la mesure où il réalise en lui cette résonance interne de la matière en train de prendre forme, et une médiation entre ordres de grandeur. Le principe d'individuation est la manière unique dont s'établit la résonance interne de cette matière en train de prendre cette forme. Le principe d'individuation est une opération. Ce qui fait qu'un être est lui-même, différent de tous les autres, ce n'est ni sa matière ni sa forme, mais l'opération par laquelle sa matière a pris forme dans un certain système de résonance interne.' Simondon, Gilbert. L'individuation à la lumière des notions de forme et d'information. 2005:48.

127 'événement pur à la dimension de l'individu en train d'apparaître.' Simondon, Gilbert. L'individuation à la lumière des notions de forme et d'information. 2005:51.

128 'il faut abandonner le schéma hylémorphique pour penser l'individuation ; la véritable individuation ne se ramène pas à une prise de forme. L'opération d'individuation est un phénomène beaucoup plus général et beaucoup plus vaste que la simple prise de forme.' Simondon, Gilbert. L'individuation à la lumière des notions de forme et d'information. 2005:303.

However, it is essential to stress the reciprocity of individuation through action. The elements, the being, and the milieu are all individuating in the same motion by *actualizing* the potentials. Furthermore, the milieu is considered not only as a topological dimension; **the milieu is a field of potentialities, latent, that "can not be represented as graphical elements of the situation,"**<sup>125</sup> a metastable spatio-temporal situation saturated with potentials. Individuation can't be explained through a scheme based on matter or form. Then, Simondon contends that

"[t]he true principle of individuation is the genesis itself in the process of taking place, i.e., the system in becoming, while the energy is being actualized. The true principle of individuation cannot be sought in what exists before the individuation takes place, nor in what remains after the individuation is accomplished; it is the energy system that is individuating insofar as it realizes in itself this internal resonance of the matter taking shape, and mediation between orders of magnitude. The principle of individuation is the unique way the internal resonance of the matter taking shape is established. The individuation principle is an operation. What makes a being itself, different from all others, is neither its matter nor its form, but the operation by which its matter has taken shape in a certain system of internal resonance."<sup>126</sup>

As a process emerging from the **actualization** of potential energy through form and material in all their points, the operations form the basis for difference, embodying a concrete *hic* and *nunc*. The critique of hylomorphism proposed by Simondon analyzed through the individuation of a brick, is articulated around this impossibility of difference; **the social reality in which hylomorphism was first stated, based on the order given to a crafts.woman to fabricate a brick, hides the communication made by her through the technical operations between form, matter and energy in a concrete *hic* and *nunc*,** "pure event at the dimension of the individual in the process of emergence."<sup>127</sup> That is why

"it is necessary to abandon the hylomorphic scheme to think about individuation; true individuation is not just taking shape. The operation of individuation is a much more general and much vaster phenomenon than the simple taking of form."<sup>128</sup>

## Threshold 2: a theory of operations. Dialogues with a brick.

"However, since a structure is given as the result of a construction, we can say that the operation is what makes a structure appear or modifies a structure. The operation is the ontological complement of the structure and the structure is the ontological complement of the operation. The act contains both the operation and the structure; therefore, depending on the side of the act on which attention is focused, it retains the operation element or the structure element, leaving its complement aside. Thus, when the surveyor draws a parallel to a straight line by a point further away from this line, the surveyor pays attention, in the totality of his act, to the structural element which alone interests geometrical thought, namely the fact that it is a line that is drawn, and with such a relation to another line. The structure of the act is here the parallelism of a straight line with respect to another straight line. But the surveyor could also pay attention to the operatory aspect of his act, that is, to the gesture by which he draws, without worrying about what he is drawing.

This gesture of drawing has its own schematism. The system of which it is a part is an operative system not a structural system; this gesture in fact proceeds from a volition which is itself a certain mental gesture; it supposes the availability of a certain energy which is freed and controlled by the mental gesture through all the links of an internal and external regulation of the movement in an operative scheme of finality. Thus, geometry and allagmatics take divergent paths from the very beginning of their activities.<sup>129</sup>

**Operations are the structures by which she draws.** They are not the act in itself but they do possess a schematism proceeding from **gesture**—mental or physical **gestures** if the difference is foreseeable. But we can't isolate operations; the structural system exists in the definition of the operation itself, both the preceding structure and the following structure, as the operation "will come down to defining a certain convertibility of the operation into a structure and of the structure into an operation, since the operation carries out the transformation of a structure into another structure, and is thus invested with the antecedent structure which will be reconverted."<sup>130</sup>

Let's come back to the ontology of the brick. If we think about the end product, a single brick, our chances to enter in dialogue with it to understand its uniqueness and relations with other human and non-human bodies are very likely to fail, as the brick's body in itself, finished and polished is not so talkative. If we consider, when trying to enter in dialogue with the brick, with its *material speech acts*, the operations that brought it into being, that individuated the brick, then we might uncover many potential histories. **By focusing, not on the bricks, but the genesis of the brick, the operations of its individuation, many more human and non-human bodies, their knowledge and dialogues start to emerge; the structures by which it bricks.** Following the operations of brick's individuation, leads to a highly specific type of knowledge and epistemology:

"it is thus not an immediate knowledge nor a mediated knowledge that we can have of the individuation [of a brick], but a knowledge that is a parallel [bricking] operation to the known [bricking] operation; we cannot, in the usual sense of the term, know the [brick] individuation; we can only individuate, individuate ourselves and individuate in ourselves; this seizure is thus, in the margin of the knowledge itself, an analogy between two operations, which is a certain mode of communication."<sup>131</sup>

So, according to Simondon, we cannot fully know the brick individuation; in his system, it would mean to become or individuate as a brick literally. Nevertheless, we can create a communication between the order of magnitudes of the brick's individuation operations and our psychic individuation and individuating through it a certain analogical knowledge of its individuation operations. In doing so are brought in through the analysis of the operation:

- the "human **gesture** fixed and crystallized in structures that work,"<sup>132</sup>
- the potential energy entering in the molecular cohesion when molding the clay,
- the responding forces of the mold that distribute the energy through the clay,
- the clay potentiality of becoming a brick in the swamp,

132 'Ce qui réside dans les machines, c'est de la réalité humaine, du geste humain fixé et cristallisé en structures qui fonctionnent.' Simondon, Gilbert, and Nathalie Simondon. Du mode d'existence des objets techniques. 2012:13.

131 'Seule l'individuation de la pensée peut, en s'accomplissant, accompagner l'individuation des êtres autres que la pensée; ce n'est donc pas une connaissance immédiate ni une connaissance médiante que nous pouvons avoir de l'individuation, mais une

connaissance qui est une opération parallèle à l'opération connue; nous ne pouvons, au sens habituel du terme, connaître l'individuation; nous pouvons seulement individuer, nous individuer et individuer en nous; cette saisie est donc, en marge de la connaissance

129 'Il est aussi difficile de définir une opération que de définir une structure autrement que par l'exemple. Toutefois, une structure étant donnée comme le résultat d'une construction, on peut dire que l'opération est ce qui fait apparaître une structure ou qui modifie une structure. L'opération est le complément ontologique de la structure et la structure est le complément ontologique de l'opération. L'acte contient à la fois l'opération et la structure; aussi, selon le versant de l'acte sur lequel l'attention se porte, elle retient l'élément opération ou l'élément structure, en laissant son complément de côté. Ainsi, quand le géomètre trace une parallèle à une droite par un point plus hors de cette droite, le géomètre prête attention, dans la totalité de son acte, à l'élément structural qui seul intéresse la pensée géométrique, à savoir le fait que c'est une droite qui est tracée, et avec telle relation avec une autre droite. La structure de l'acte est ici le parallélisme d'une droite par rapport à une autre droite. Mais le géomètre pourrait aussi prêter attention à l'aspect d'opération de son acte, c'est à dire au geste par lequel il trace, sans se préoccuper de ce qu'il trace. Ce geste de tracer possède son schématisme propre. Le système dont il fait partie est un système opératoire non un système structural; ce geste procède en effet d'une volition qui est elle-même un certain geste mental; il suppose la disponibilité d'une certaine énergie qui se trouve libérée et commandée par le geste mental à travers tous les maillons d'une régulation interne et externe du mouvement dans un schème opératoire de finalité. Ainsi, la géométrie et l'allagmatique prennent des voies divergentes dès le début même de leur activités.' Simondon, Gilbert. 'Allagmatique'. 2005:529-30.

130 'reviendra à définir une certaine convertibilité de l'opération en structure et de la structure en opération, puisque l'opération réalise la transformation d'une structure en une autre structure, et est donc investie de la structure antécédente qui va se reconvertir' Simondon, Gilbert. 'Allagmatique'. 2005:531.

proprement dite, une analogie entre deux opérations, ce qui est un certain mode de communication.' Simondon, Gilbert. L'individuation à la lumière des notions de forme et d'information. 2005:36. My additions.



133 ‘L’allagmatique est la théorie des opérations. Elle est, dans l’ordre des sciences, symétrique à la théorie des structures, constituée par un ensemble systématisé de connaissances particulières: astronomie, physique, chimie, biologie. On ne peut désigner chaque branche de l’allagmatique par un domaine objectif comme étude de la matière, étude de la vie... En revanche un façon primitive mais utilise de distinguer ses spécifications consiste à se servir des sciences déjà constituées pour dénommer des intervalles. Un intervalle signifie en effet possibilité d’un rapport et un rapport implique opération. Nous obtiendrons ainsi l’allagmatique physico-chimique, l’allagmatique psychophysique, l’allagmatique mécanique-thermodynamique.’ Simondon, Gilbert. ‘Allagmatique’. In *L’individuation à la lumière des notions de forme et d’information*. Krisis. Grenoble: Millon, 2005:529. This text is published in this edition as a supplement, as it remained in the preparatory documents of Simondon.

134 ‘Seule l’individuation de la pensée peut, en s’accomplissant, accompagner l’individuation des êtres autres que la pensée; ce n’est donc pas une connaissance immédiate ni une connaissance médiante que nous pouvons avoir de l’individuation, mais une connaissance qui est une opération parallèle à l’opération connue; nous ne pouvons, au sens habituel du terme, connaître l’individuation; nous pouvons seulement individuer, nous individuer et individuer en nous; cette saisie est donc, en marge de la connaissance proprement dite, une analogie entre deux opérations, ce qui est un certain mode de communication.’ Simondon, Gilbert. *L’individuation à la lumière des notions de forme et d’information*. 2005:36.

135 ‘La concrétisation de l’objet, qui est l’intégration de ses fonctions par “surdétermination fonctionnelle”, est son histoire absolument sortie de sa matière et du même coup absolument singulière. Comprendre cette individualité technique, c’est comprendre sa genèse comme devenir-indivisible des fonctions dans le fonctionnement, et passage d’un stade abstrait à un stade concret de l’objet. Cette dynamique de la matière qui, pour accomplir une fonction, fonctionne, est celle d’une matière inorganique qui s’organise.’ Stiegler, Bernard. “Temps et Individuations Technique, Psychique et Collective Dans l’oeuvre de Simondon.” *Intellectica* 26, no. 1 (1998): 243.

- the **gestures** of extraction and preparation,
- and the human and non-human bodies—instruments, tools, other materials, etc.—co-operating to the individuation of the brick.

The geographical, social, affective, technical, biological, molecular, etc., milieus with which the brick is individuated are carried with the operations and constitute hinges on which to enter in dialogue with the brick. And from there, patterns in the operations can emerge that he will call *phylum*, as the *structures by which it bricks*.

What is, then, the theory of operations? Simondon writes:

“Allagmatics is the theory of operations. In the order of sciences, it is symmetrical to the theory of structures, constituted by a systematized set of particular knowledge: astronomy, physics, chemistry, biology. One cannot designate each branch of allagmatics by an objective domain as the study of matter, the study of life... On the other hand, a primitive but useful way to distinguish its specifications consists in using the already constituted sciences to name intervals. An interval indeed means the possibility of a relationship and a relationship implies operation. We will thus obtain physico-chemical allagmatics, psycho-physiological allagmatics, mechanical-thermodynamic allagmatics.”<sup>133</sup>

For Simondon, the theory of operations is a particular type of science; it is a science of the intervals, the in-between the sciences. The knowledge formed in one domain is transduced—transferred, translated—informing the other domain, and this transduction cannot occur through an analogy of structure but an analogy of operations. It is neither an inductive nor a deductive but a transductive science based on analogies between domains. This interval embodies the nature of individuation that is always an operation between different orders of magnitude that enters in communication and couples their pre-individual reality charges. To understand and follow the operations of individuation, from the physical to the technical, the analyst has to operate an analogical transfer;

“Only the individuation of the thought can, by being accomplished, accompany the individuation of the beings other than the thought; it is thus not an immediate knowledge nor a mediated knowledge that we can have of the individuation, but a knowledge that is a parallel operation to the known operation;”<sup>134</sup>

This analogical theory of science, as its “*versant opératoire*” is thus based on **reenactments** of individuations as mental operations of individuation, as we cannot properly know, in the classical sense of the verb, the operations, but only reenact mentally the individuation, which is an individuation of a thought.

Simondon applied this theory of operations to grasp the individuation of technical objects in the supplement of his Ph.D. published under the title *Du mode d’existence des objets techniques*. The individuation is coined as a *concretization* process—as there are some fundamental differences between the other individuation and the technical individuation that requires nuance. The technical objects exist firstly as abstract, participating in **gestures** and mental operations. Through the invention of new **gestures** and technical operations, the technical object can then enter in the process of concretization;

“The concretization of the object, which is the integration of its functions by “functional overdetermination”, is its history absolutely out of its matter and at the same time

absolutely singular. To understand this technical individuality is to understand its genesis as becoming indivisible from the functions in the functioning and passing from an abstract stage to a concrete stage of the object. This dynamic of matter which, in order to accomplish a function, functions, is that of an inorganic matter which organizes itself.”<sup>135</sup>

As in the other individuation processes, form and matter already exist before the individuation, as potentials, and the concretization process and invention are a seizure or crystallization of these potentialities. As such, Simondon argues that there is a certain genetic of the technical object. This genetic found itself realized in the machinic phylum and the transfer of competencies from the equipped human hand to the machine. In this realization, the internal vitality and dynamic of matter are rendered sensible and

“[t]he history of this organic becoming is not therefore a simple extension of that of the person who ‘manufactured’ the object, and the historicity of the technical object makes it impossible to speak of it as a simple heap of inert matter which would be shaped from the outside, by a manufacturing and organizing will: the form is already in the matter, and only the functioning can reveal its necessity.”<sup>136</sup>

Thus, the technical individual can be understood in its becoming, in a series of individuals and individuation processes. An operatory history of techniques would then trace the technical tendencies, a genealogy of the human capacities of dialogue with techniques, with material speech acts and with human and non-human bodies, through which humans would be able to listen to how materials function. As argued by Stiegler, there is then an independence, a seizure between the technical and the other forms of individuation;

“If the anthropological milieu is both the motor and the user of genesis, it is not the organizing principle (which Leroi-Gourhan still saw on the side of the [wo.]man and qualified as intentional): it is only the operator. Technical genesis need them because they alone anticipate. But they must read within it what dictates what is to be done. Inorganic matter organized by its functioning has its own genetic laws, its own genius (and it constitutes by this very fact a kind), which the human operator must learn to ‘listen’ in the material functioning: such is the goal of mechanology.”<sup>137</sup>

This perspective allows us to understand how **the technical object, its genesis, and its historicity are framed beyond the use of intentionality and external will** in the explanation of the individuation operations,<sup>138</sup> as argued by Simondon,

“[i]f technical objects evolve into a small number of specific types, it is by virtue of internal necessity and not as a result of economic influences or practical requirements. It is not chain work that produces standardization, but intrinsic standardization that allows chain work to exist. An effort to discover, in the transition from artisanal to industrial production, the reason for the formation of specific types of technical objects would take the consequence for the condition: the industrialization of

140 ‘Ce qui réside dans les machines, c’est de la réalité humaine, du geste humain fixé et cristallisé en structures qui fonctionnent.’ Simondon, Gilbert, and Nathalie Simondon. *Du mode d’existence des objets techniques*. 2012:13.

correspond au stade primitif de l’évolution des objets techniques c’est à dire au stade abstrait.’ Our emphasis, in Simondon, Gilbert, and Nathalie Simondon. *Du mode d’existence des objets techniques*. Nouv. éd. rev. et corr. Philosophie. Paris: Aubier, 2012:27.

artisanale à la production industrielle, la raison de la formation des types spécifiques d’objets techniques prendrait la conséquence pour la condition : l’industrialisation de la production est rendue possible par la formation de type stable. L’artisanat

136 ‘L’histoire de ce devenir-organique n’est donc pas un simple prolongement de celle des hommes qui ont “fabriqué” l’objet, et l’historicité de l’objet technique fait que l’on ne peut pas en parler comme d’un simple amas de matière inerte qui serait mise en forme de l’extérieur, par une volonté fabricante et organisatrice : la forme est déjà dans la matière, et seul le fonctionnement peut révéler sa nécessité.’ Stiegler, Bernard. “Temps et Individuations Technique, Psychique et Collective Dans l’œuvre de Simondon.” no. 1 (1998): 243-4.

137 ‘Si le milieu anthropologique est à la fois moteur et utilisateur de la genèse, il n’en est pas le principe organisateur (que Leroi-Gourhan voyait encore du côté de l’homme et qualifiait d’intentionnel) : il n’en est que l’opérateur. La genèse technique a besoin de lui parce que lui seul anticipe. Mais il doit lire en elle qui dicte ce qu’il s’agit d’effectuer. La matière inorganique organisée par son fonctionnement a ses lois génétiques propres, son génie (et elle constitue par là même un genre), que l’opérateur humain doit apprendre à “écouter” dans le fonctionnement matériel : tel est le but de la mécanologie.’ Stiegler, Bernard. “Temps et Individuations Technique, Psychique et Collective Dans l’œuvre de Simondon.” no. 1 (1998): 245.

138 As we will develop further, intentionality is an ontological trap to understand the individuation processes and the historicity of a technical object, which necessitates an involvement of definition of subjectivity and freedom in non-satisfactory ways. Intentionality also denies (at least in a problematic way) the vitality and internal dynamic of matter, placing human mind and will before potentialities and virtualities, as an external reason, and thus, an hylomorphic reminiscence.

139 ‘Si les objets techniques évoluent vers un petit nombre de types spécifiques, c’est en vertu d’une nécessité interne et non par suite d’influences économiques ou d’exigences pratiques. Ce n’est pas le travail à la chaîne qui produit la standardisation, mais la standardisation intrinsèque qui permet au travail à la chaîne d’exister. Un effort pour découvrir, dans le passage de la production

141 On this topic, see the premise to chapter E, 'Repertoire extractivism.'

142 'L'être technique ne peut être défini qu'en termes d'information et de transformation des différentes espèces d'énergie ou d'information, c'est-à-dire d'une part comme véhicule d'une action qui va de l'homme à l'univers, et d'autre part comme véhicule d'une information qui va de l'univers à l'homme. La technologie culturelle devient un mixte d'énergétique et de théorie de l'information.' Simondon, Gilbert. *L'individuation à la lumière des notions de forme et d'information*. 2005:342.

143 'L'opposition dressée entre la culture et la technique est fautive et sans fondement ; elle ne recouvre qu'ignorance ou ressentiment. Elle masque derrière un facile humanisme une réalité riche en efforts humains et en forces naturelles ; et qui constitue le monde des objets techniques, médiateurs entre la nature et l'homme.' Simondon, Gilbert, and Nathalie Simondon. *Du mode d'existence des objets techniques*. 2012:10.

144 Ingold, Tim. "The Temporality of the Landscape." *World Archaeology* 25, no. 2 (October 1993): 158. <https://doi.org/10.1080/00438243.1993.9980235>.

production is made possible by the formation of stable types. Craft corresponds to the *primitive* stage of the evolution of technical objects, i.e. the abstract stage."<sup>139</sup>

"What resides in machines is human reality, the human **gesture** fixed and crystallized in structures that work,"<sup>140</sup> a matter in becoming-organized and mediated by human operations. What Stiegler proposes and regrets as an absence in the work of Simondon is to think of the technical objects as an externalization of memory, as human **gesture** fixed and crystallized. Simondon provided the theoretical frame to think of the technical object's individuation operations analogously to the physical, vital, and psychosocial individuations. But he did not study how the *pre-individual reality charges* could be coupled with an inherited set of technical objects and how they could participate in the trans-individuation/psychosocial individuation.<sup>141</sup>

This is what Stiegler precisely calls *epiphylogenetic*, or the third memory, after genetic (specific, in the sense of belonging to a species) and epigenetic (nervous memory). Through *epiphylogenetic* memory, the individuation process is mediated by an organized matter that is non-organic and non-human. In this sense, **the trans-individuation—psychosocial—cannot be thought of without the technical individuation that produces an epiphylogenetic memory-human gesture fixed and crystallized**. This memory is constituted as *commons*, an already-there non lived by the contemporary individuals, coupling with the *pre-individual reality charges*, which is also a form of *common*, a capacity to become. Through trans-individuation, this memory is individuated into knowledge or *know-how*. Further in his thesis, Simondon argues that

"[t]he technical being can only be defined in terms of information and the transformation of the different species of energy or information, that is to say on the one hand as a vehicle of an action that goes from man to the universe, and on the other hand as a vehicle of information that goes from the universe to man. Cultural technology becomes a mixture of energetics and theory of information."<sup>142</sup>

In other words, the technical and the cultural merge a united way to engage with the world. Simondon boldly denounced their false opposition during his life; "The opposition between culture and technique is false and unfounded; it only covers ignorance or resentment. It hides behind an easy humanism a reality rich in human efforts and natural forces, and which constitutes the world of technical objects, mediators between nature and man."<sup>143</sup> Technical objects are ways of engaging with the world; they are tools to act upon the world and instruments to sense and navigate it. **Technical objects involve human gesture fixed and crystallized, repositories of memory, that are enabling in and of themselves. They allow for the field of potentialities of a milieu to be amplified, in the sense that they augment the possible communication with a milieu; they operate as amplifiers of potential operations.**



### Threshold 3: architectural operations/architecture of operations.

How best to combine the perspectives of the theory of operations with the field of architectural practice, theory, and research? Which kind of objects of research, definitions of architecture and space, and methodologies would this theory propose?

The first perspective is to consider the production of space and architectures through operations to outline a definition of an architecture of operations. In “The temporality of the landscape,” Tim Ingold proposes the term *taskscape* to describe the qualitative and heterogeneous “ensemble of tasks, performed in series or in parallel, and usually by many people working together.” By tasks, he means “any practical operation, carried out by a skilled agent in an environment.”<sup>144</sup> The *taskscape* then points at the rhythms of tasks, of people engaged in operations, co-operating in an immersive milieu. Accordingly, in these operations,

“the forms of the landscape are generated in movements. [...] the landscape takes on its forms through a process of incorporation, not of inscription. That is to say, the process is not one whereby cultural design is imposed upon a naturally given substrate, as through the movement issued from the form and was completed in its concrete realization in the material.”<sup>145</sup>

In this perspective, the landscape, space, and architectures are immersive sedimentation of operation-scape -or *taskscape* if we consider labor and *practical* operations. Constituted as an assemblage of human and non-human bodies that supports and emerges out of co-operations, architectures of operations are milieus of potentialities, negotiations, and dialogues with other human and non-human bodies and their rhythms. The temporary assemblage of human and non-human bodies is both the fugitive result and the means of the operations and individuates itself in mediating diverse orders of magnitude. Thus, architectures of operations do not consist in a fixed form, but as an emergent constellation of human and non-human bodies that individuate in a transindividual process, a series of operations bringing bodies into dialogue and enabling communication between them.

Architectures of operations imply a technicity because they are the results, supports, and means of the operations. This technicity possesses its *phylum* and historicities, invention and transformation, minor and major. As a straightforward example, I contend that the way two bodies are seated, one in front of the other, implies a culturally situated technicity that is a fundamental part of the spatial and architectural culture. They deserve close attention, notably to the way these spatialities enact dialogues and agencies at the level of the operation and the gestures. The attention is then toward the constellation by which it operates and spaces, its physical traces, and temporalities. Accordingly, the knowledge that enact these architectures of operations is entrenched in human and non-human bodies, incorporated through individuation. Moreover, they remain mostly undrawn, as enacted by and through multiple operations.

Architectural operations consist in a reconfiguration of the field of operations, of the potentialities of the bodies, in rearranging the milieu and assemblage of human and non-human bodies. Either mediated by lasting documents or not, architectural operations enact new driving forces and relations with the milieu. They induce a particular type of imagination that has been abstracted and divided from the bodies’ potentialities by architectural hylomorphism. Some architectural operations are supported and produce

145 Ingold, Tim. “The Temporality of the Landscape.” *World Archaeology* 25, no. 2 (October 1993): 162.

**documents** and records external to human bodies, such as drawings and texts. Other entirely rely on the knowledge belonging to the **repertoire** -oral and embodied spatial and architectural knowledge. However, even when supported by an external **document** that delays—and extends the **reach** of—the reconfiguration, architectural operations are necessarily **actualized** by human—crafts.women and inhabitants—and non-human bodies, and knowledge belonging to their **repertoire**. Thus, architectural drawing can be understood in its ‘versant opératoire’, in the operations it is enacting.

#### Threshold 4: an operatory analytic gaze on architectural drawing and image.

Let’s think of drawing, as suggested by Simondon when he defines operations through the surveyor’s drawing, taking the lens of the architectural operations. What might be the questions that an operatory analysis of a drawing would lead to?

An operatory analysis of drawing would not focus on *what* is drawn in the sense of representation. It does not understand drawing as a descriptive act of re-producing a reality—even if it is the operator’s intention. Instead, through its individuation, it produces a milieu and is produced by and through its milieu. Thus, an operatory analysis of drawing would tend to focus on *how*. The **architectural image** engaged in this analysis is an operatory image,<sup>146</sup> composed of a set of realized **gestures** and a set of **gestures** yet-to-come, as well as new **driving forces** opened up as possibilities by the drawing operations in themselves. The drawing is understood as a medium that permits these very operations to touch realities and be themselves touched by realities in return; *from which architectural image-as-gesture do the drawing operations come from? What are producing the drawing operations in their milieu?*

Drawing operates from virtualities on potentialities; the **gestures** were already part of “the fog of virtual images” surrounding the milieu as virtual **driving forces**. In this proposition, the drawing operations, as the crystal emerging from a milieu saturated by potentials, individuates in and through its milieu in initiating a mediation process between two orders of magnitude; in this process of mediation, the drawing, as the average order of magnitude, develops and catalyzes the virtualities surrounding that becomes operative potentialities. The individuation of the drawing, accompanied by the human operator, afford leverage points into the environment; these leverage points, again, aren’t fixed physical elements and images; they are **driving forces**, new **gestures**, and operations enacted by the drawing operations. *What driving forces emerged out of the drawing operations? And then, which potentialities are afforded by these driving forces?*

The operatory drawing is not an absolute category. It would not be accurate to say: “this drawing is operatory, this one is not, it is representational”. No drawings are the representation of reality while other producers of potentiality. It is a which dialectical couple. Every drawing implies gestural and operatory qualities and opens up new potentialities and **driving forces**. My gaze tends to reconstitute a dialectic in the lecture of the drawing; nevertheless, all drawings could be analyzed through the lens of a theory of operations.<sup>147</sup> Still, some drawings, in the attempt to reproduce reality—particularly when discussing maps—, exhaust themselves; in these operations, they reproduce themselves—their codes and rules—without reproducing a reality. Deleuze and Guattari have thoroughly conceptualized this phenomenon while describing the difference between tracing and maps; “The tracing has already translated the map into an image; [...] and

146 The notion of operative image is nowadays largely debated in the field of media studies, following notably Farocki, Harun. “Phantom Images.” Public 0, no. 29 (January 1, 2004). It refers mostly to the image created by machines, and that are used to operate the programs. The visual dimension of the image is thus not the dimension of the image the machine are using, but the data stream that are associated. We will develop further the relationship of our definition of the architectural image (figurations) and the operative image in the chapter two and three.

147 It is, at this point, important to note that the theory of operations proposed by Simondon is an attempt to form a universal cybernetic. The theory of operations is based on a theory of information and communication. I could apply these theories along the analysis of the drawing I propose, to thus, determine the value of the drawing in its information load. Drawing that are attempting to reproduce a reality would thus appear to be, in the light of a theory of communication, mostly not containing informations. Nevertheless, this proposition will not be developed in this research, as a classification is not our research objective.

148 Paez, Roger. Operative Mapping: The Use of Maps as a Design Tool. Print edition. New York, NY: Actar Publishers, 2018:25, quoting Deleuze and Guattari. 1987:13.

when it thinks it is reproducing something else it is in fact only reproducing itself.”<sup>148</sup> Tracing implies stabilizing an image, overdetermining certain elements of a map, and closing it to further operations. Tracing does not imply communication between orders of magnitude or the catalyzation of virtualities. However, drawing opens up to new and unexpected relations, and tracing could always be put back on drawings and produce new relations.

In applying the theory of operations to the architectural drawing, the milieu’s role and its virtualities go beyond *theories of agency*. Virtualities, understood as the liquid saturated by potential and one of the orders of magnitude, are crystallized through the drawing operations. The drawer or operator could thus be analogized with the molder of the brick or the machine operator of Stiegler. The drawing already exists virtually in the milieu and on the paper, and “the human operator must learn to ‘listen’ in the material functioning.”<sup>149</sup> This operatory view nevertheless does not dispossess the human operator of her (political and imaginative) agency; she operates in the **actual**, inscribing in the **actual** while inscribing on paper, in material fluxes of organized non-organic matter as much physical as virtual and potential, molecules upon molecules from the extraction site of clay and graphite on the framed surface of the paper. **She operates in reconfiguring and rearticulating the virtualities into potentialities, new gestures, and driving forces yet to come.**

- drawing operations are performative. In this sense, they operate in a citational way if we frame citationality as analogies of operations,<sup>150</sup>
- drawing operations are emerging out of a fog of virtual images becoming potentialities,
- drawing operations bring new **driving forces** into a/effect, understanding **architectural image/figurations** as **gestures**,
- drawing operations are not reproducing reality, neither are they producing it fully. Instead, they are emerging out virtualities, like a liquid saturated by potentialities that crystallizes in these operations.

In analyzing a drawing, an operatory architectural theorist or historian is thus performing a **reenactment** of the drawing operations;

“it is thus not an immediate knowledge nor a mediated knowledge that we can have of the individuation [of a drawing], but a knowledge that is a parallel [drawing] operation to the known [drawing] operation; we cannot, in the usual sense of the term, know the [drawing] individuation; we can only individuate, individuate ourselves and individuate in ourselves; this seizure is thus, in the margin of the knowledge itself, an analogy between two operations, which is a certain mode of communication.”<sup>151</sup>

In the same way that, in the field of dance, **reenactment** is considered an “active (rather than reactive), and generative (rather than imitative) approach to ‘historical material’ [that] led dance **reenactments** to resist ‘the disciplinary and controlling structures of repressive, representational regimes.’”<sup>152</sup> The operatory gaze on architectural **documents** and records tends to reenact the individuation operations to individuate in parallel the **driving forces** of the **architectural image**.<sup>153</sup>

The role of architectural drawing in the enactment of new spatialities is redefined by the transduction of the theory of operations in the analysis of architectural **documents**. **Spatialities are emergent and brought into being by a drawing understood not as a representation of a future state to be realized, but as an active agent in the**

149 ‘Si le milieu anthropologique est à la fois moteur et utilisateur de la genèse, il n’en est pas le principe organisateur (que Leroi-Gourhan voyait encore du côté de l’homme et qualifiait d’intentionnel) : il n’en est que l’opérateur. La genèse technique a besoin de lui parce que lui seul anticipe. Mais il doit lire en elle qui dicte ce qu’il s’agit d’effectuer. La matière inorganique organisée par son fonctionnement a ses lois génétiques propres, son génie (et elle constitue par là même un genre), que l’opérateur humain doit apprendre à “écouter” dans le fonctionnement matériel : tel est le but de la mécanologie.’ Stiegler, Bernard. “Temps et Individuations Technique, Psychique et Collective Dans l’œuvre de Simondon.” no. 1 (1998): 245.

150 I will develop on the relations between the theory of operations and citationality in the second chapter. In this works, I attempt to challenge the constructivist perspective of performativity while bringing both the interoceptive feedback in performance as a political momentum and on the active role of virtualities in the play.

151 ‘Seule l’individuation de la pensée peut, en s’accomplissant, accompagner l’individuation des êtres autres que la pensée; ce n’est donc pas une connaissance immédiate ni une connaissance médiante que nous pouvons avoir de l’individuation, mais une connaissance qui est une opération parallèle à l’opération connue; nous ne pouvons, au sens habituel du terme, connaître l’individuation ; nous pouvons seulement individuer, nous individuer et individuer en nous; cette saisie est donc, en marge de la connaissance proprement dite, une analogie entre deux opérations, ce qui est un certain mode de communication.’ Simondon, Gilbert. L’individuation à la lumière des notions de forme et d’information. 2005:36.

152 Lepecki, André. “The Body as Archive: Will to Re-Enact and the Afterlives of Dances.” *Dance Research Journal* 42, no. 2 (2010): 29-30. Quoting Burt, Ramsay. “Memory, Repetition and Critical Intervention: The Politics of Historical Reference in Recent European Dance Performance.” *Performance Research* 8, no. 2 (January 2003): 39.

153 I developed on reenactments in architectural theory and history in the chapter E, ‘Architectural Reenactments.’



world, as a communication between orders of magnitude enacting new gestures and operations. Drawing brings driving forces into a/effect; equally, gestures and other operations such as speaking, which are not yet considered documents, records, or architectural traces, can also play this same mediator role in the emergence of spatialities.

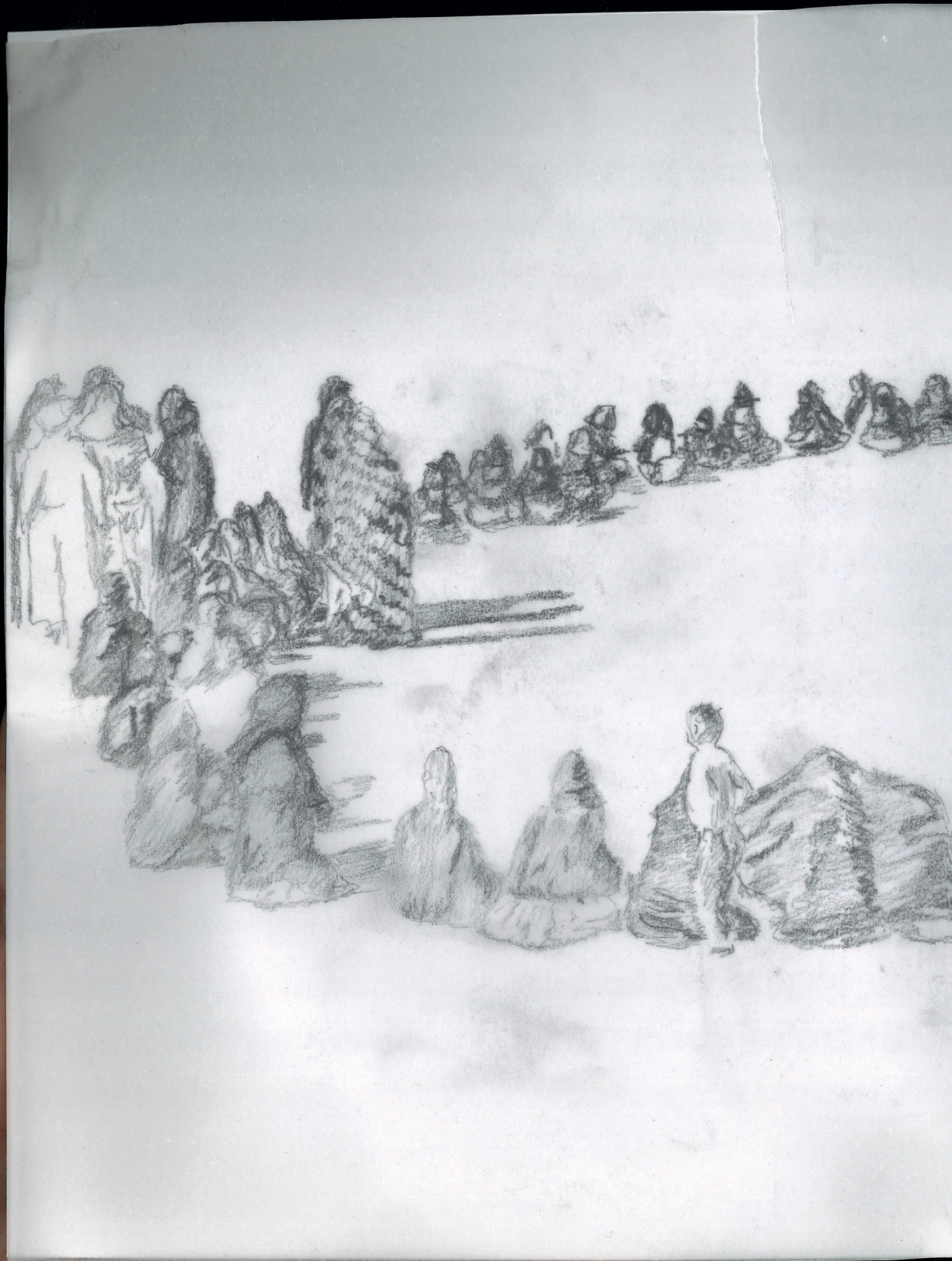
### Threshold 5: toward a historiography of architectures of operations.

The *versant opératoire* of space, I believe, allows us to go beyond architectural hylomorphism. Architectures, spaces and spatialities can be brought into being without standardized documents but only organic and embodied knowledge and memories. In doing so, it appeals to different architectural and spatial histories and theories. In digging into architectures of operations, the oral and embodied knowledge concealed by architectural hylomorphism might find its own space and time, and be recognized fully as an active producer of architecture and spatialities. The scales, temporalities, modes of transmission, and agencies that lie in these architectural and spatial knowledge are profoundly distinct from the architectural operations traditionally belonging to the operatory modes of architects in western societies. The *operatory side* of architectural knowledge and theory might prove to be an hospitable zone for peaceful reconciliation with knowledge and lives formerly concealed in the obscure zone of hylomorphic architectural representation.

Two main fields of research are outlined by this theory of operations. The first one consists of a re-reading of our architectural archives, our commons, with an operatory gaze on the documents it contains. This would mean working from the gaps and voids existing in these archives to try to reinstate some space for the voices it concealed. A second field is to define, thanks to this epistemology, the tools and instruments to acknowledge operatory and performative architecture and spatiality from the repertoire—as a repository of architectural and spatial oral and embodied knowledge. In this regard, the organization of space and time can be understood as a potentiality of the body, negotiating and intervening with its environment and individuating through its milieu and virtualities. The scales of the gesture and words become a critical momentum to renegotiate spatialities and individual and collective agency.

However, the actual archival regime of architectural historiography can hardly support the construction of a historiography of architectures of operations, according to its temporal and spatial scales. As such, in the following chapters, I will explore the repertoire, as introduced by Diana Taylor, as a mode of conservation and transmission of knowledge and memory, including their dynamics and remainders, that could constitute a resource for such an historiography. How can we trace the genealogies and migration of these spatialities? How can we act upon them, or more accurately, what are the tools and instruments to put them into practice? These are the challenges I will face throughout this research, to remediate the inability of architectural practice, be it physical or conceptual, to address reparative futurities concerning this knowledge.

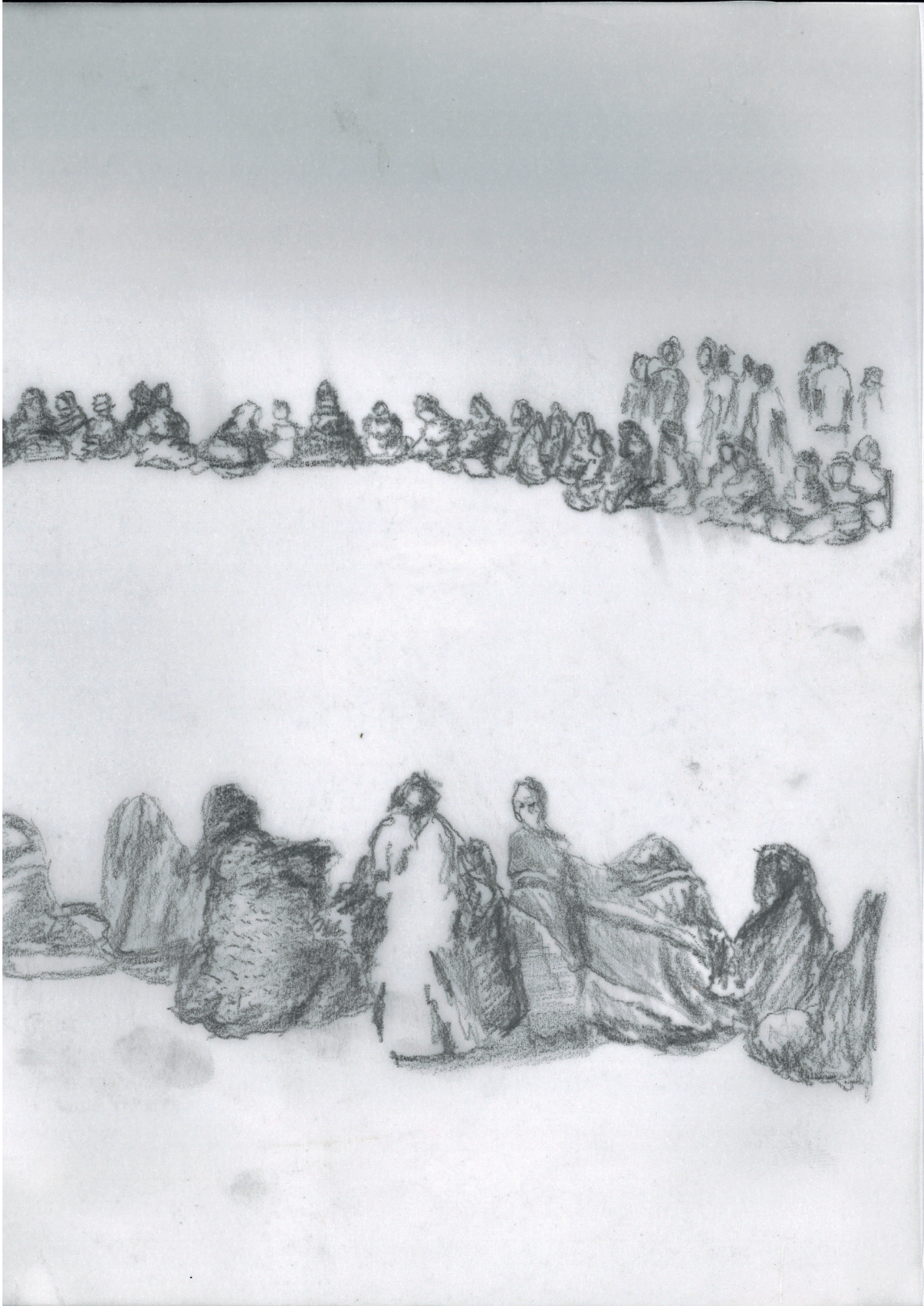




| Fig. B1 | Drawing of a Morning Meeting in the refugee camps in 1976. Source: Manfred O Hinz, '3WM Interview mit Gunther Hiliger', *Terre des Hommes* (1977): VIII. Found in the Archives of the Ministry of Information of the SADR, redrawn by the author. I took the decision to redraw the photograph I found in the Archives for two reasons. Firstly, following the research of Ariella Azoulay about the imperial shutter in Civil imagination: A Political Ontology of Photography, I questioned myself about the abundance of photographic material in the archives that were all taken by international and foreign observers. The redrawing of the photographic materials allowed me to think about and enact a form of delay, a temporal short-circuit in the imperial shutter. In transforming the texture of the material, I had to take the time to read the photograph, individuate each of the people of the photograph, and understand their role and dialogues. Furthermore, it allowed the drawing to enter the discussions, not the photograph and all the bodies and histories, hidden, concealed or not, that participated in the photographic act. Secondly, and most urgently, contact with the Archivist became much more difficult since the armed conflict restarted between the Moroccan Army and the Polisario Front in the liberated territories. As such, for ethical reasons, I consider that the oral authorization from the Archivist in the camps did not constitute sufficient consent.



# CHAPTER B



Architecture and the  
repertoire.





## A photograph in the Archives of the Ministry of Information.

In the Archives of the Ministry of Information in Rabuni, the capital of the Sahrawi in exile, in a room called the library or reading room, hundreds of magazines and booklets are stored. To the right of the entrance, on the third shelf, I found a booklet illustrating the refugee camps, printed in the seventies. This folio was made to reach international support. In a short passage discussing democracy and political organization, I found the photograph this drawing is based on. When I encountered the picture, I asked Lahsen Selki Sidi Buna, who hosted and welcomed me in the oral memory conservation project, if he knew what the photograph was about and which event it aimed to represent. For Lahsen, the photograph was not specific, close to banal. As he said, the round way to sit is anchored in the Sahrawi culture. Organically, when a political discussion was organized in the camps, especially when there was no infrastructure to host such moments, the round shape was a regular spatial form, even more so when there was a crowd.

To better understand the previous uses of the round spatial form in the Sahrawi culture and its transformation and reconfiguration when fleeing to the camps, I discussed it with several people during the interviews we made with Lahsen. During our stay in the camp of Dajla, we met a craftswoman called Rabiia E. I. When discussing the transmission of artisanal knowledge between generations, especially in the context of the camps and their scarcity of materials, I asked Rabiia about sitting practices associated with the *Etwiza*;<sup>155</sup> which are equally used by women in political committees and meetings. She answered that in some instances it is a circle, in others a semi-circle. The way to move the body, and the general shape, depends on the subject of the meeting. The person leading the discussion is the first to sit and will form the starting point of the circle. He or she sits in this position because it allows for the best sound diffusion and information flow. For example, in music groups, the drum, which gives the rhythm and is an essential instrument in Sahrawi culture, is in the center of the semi-circle.

When the number of people is too large for a single circle, bodies arrange in concentric circles around the initial formation, which may cause the speaker to stand up to be heard clearly. For Rabiia, this spatial configuration is central to the Sahrawi culture as it allows all members to be treated equally in the discussion. A Sahrawi is never subservient to anyone. It comes from the importance given to the family and the parents in her mind. The parents are always at the center; they are the source of knowledge. Therefore, to listen to all their words, the circle is the best arrangement for the best visibility and listening.

155 Or *tuiza*, collective work of solidarity and mutual aid.

At this moment, Rabiia took hold of a ceremonial headdress that she manufactured. First, she pointed out that for teaching, when she wanted to show her girls how to make this jewelry, the circle was necessary. Then she indicated a stone in the center of the headdress. In Sahrawi jewelry, the center stones are always circular, and they are what organize all the others. During the formation of Sahrawi refugee camps, all meetings were held in a circle, sometimes concentric when they were important meetings; semi-circles when facing an event or an audience. This form then became central in the first administrative and political constructions of wilayas and daïras. Effectively, the circle seems to have become a symbol of the Sahrawi democracy and political ideals, present in built architectures, crafts, and practices.

This spatiality is a radical example to begin this chapter. Enacted quasi-exclusively from human bodies, this economy of bodies provides the basis for dialogue, and equalitarian relations. This spatiality is profoundly entrenched in the Sahrawi spatial culture and possesses a technicity that has evolved and been reconfigured to operate in different socio-political contexts. As it is constituted mainly of mobile non-human bodies, the Sahrawi spatialities are, for the most part, enacted through reiterative embodied operations, as a capacity of the body to negotiate with the milieu and settle in its flows. As economies of human and non-human bodies, these architectures and spatialities rely on embodied and oral knowledge—as the Sahrawi culture and knowledge remained until recently almost entirely **undrawn** and unwritten, and thus, transmitted body-to-body.

**How do these spatialities and architectures migrate and circulate? How are they reconfigured or invented, and along which temporalities? What is the texture of the architectural image associated with this oral and embodied spatial knowledge? What would be the potential architectural (hi)stories of these knowledge and spatialities?**

This chapter will try to open up these questions in defining **spatialities as a performative and embodied entanglement of human and non-human bodies and virtual images that emerge through operations**. I will discuss the spatial and architectural knowledge that brings about these spatialities as belonging to the repertoire—a specific mode of conservation and circulation of knowledge and memories. Accordingly, I will introduce a particular texture of architectural image—figuration—that articulates spatialities, and the set of potential gestures they involve, while making room for virtualities and minor existences. I will then be able to contextualize the **temporalities** of architectural histories from the repertoire, with its own system of traces, imagination, invention, and design.



## The repertoire, from techniques of the body to performative spatialities.

After the address to the Société de Psychologie Française in May 1934, Marcel Mauss published in the *Journal de psychologie* an article entitled “Les techniques du corps.” He started with an explanation of a revelation he had some years before. In 1898, he met a researcher working on a chapter for the *Encyclopedia Britannica* for the entry “Swimming.” In their discussion, Mauss learned about the

“historical and ethnographical interest of the question. It was a starting point, an observational framework. Subsequently-I noticed it myself—we have seen swimming techniques undergo a change, in our generation’s lifetime.”<sup>156</sup>

In sharing a series of anecdotes, he observed the evolutions of swimming techniques during his lifetime, and especially the transformation of children’s swimming. He supposed that “there is perhaps no ‘natural way’ for the adult,”<sup>157</sup> when it comes to the question of gestures and embodied behaviors. He argued, “[t]he child, the adult, imitates actions which have succeeded and which he has seen successfully performed by people in whom he has confidence and who have authority over him.”<sup>158</sup> In his view, the gestures are somehow imposed from above or, at least, imitated. Upon these observations, he elaborated that a new field of sociological inquiry, departing from the assumption that the body should be considered an instrument. And “[i]n this case all that need be said is quite simply that we are dealing with techniques of the body.”<sup>159</sup> In other words, **every gesture is a technique; and the use of these techniques are defined by socio-spatial norms that apply differently to each individual.**<sup>160</sup> Nevertheless,

“it is a question of conceiving the social norm as a positive process of socialization. According to Mauss, if the social can insert itself in the deepest part of the individual, in his psyche and in his body, it is not to determine it against him, but to produce it positively.”<sup>161</sup>

156 Mauss, Marcel, and Nathan Schlanger. *Techniques, Technology and Civilisation*. New York: Durkheim Press/Berghahn Books, 2006:78.

157 Mauss, Marcel, and Nathan Schlanger. *Techniques, Technology and Civilisation*. 2006:81.

158 Mauss, Marcel, and Nathan Schlanger. *Techniques, Technology and Civilisation*. 2006:81.

159 Mauss, Marcel, and Nathan Schlanger. *Techniques, Technology and Civilisation*. 2006:83.

160 In his article, Mauss only acknowledges a different set of techniques of the body according to the age and or sex of the individual. In certain social constructivist theories, notably the one developed by Judith Butler, the diverse socio-economical categories are associated with a set of techniques of the body, that are enacted by discursive practices imposed from the exterior. I will not discuss it upon the

example of *Throwing like a girl*, which is produced by a series of performative discursive injunction to the girl that structures the way she is able to move and act with her body, and produces the subsequent category. Through these repetitive and iterative discursive injunctions that anchor socio-economical categories at the level of the body, we could hypothesize that techniques of the body differ according to gender, race, age, class.

Nevertheless, I must insist on the fact that they are both not only produced by discursive practices (the milieu also has agency in the formation of the techniques of the body) and that we must not consider them as essential (in the sense of the essence) to these categories, but produced and always renegotiated. I will consider it more as a field of struggle than a field of alienation.

161 “[i]l s’agit de concevoir la norme sociale comme un *processus positif de socialisation*. Selon Mauss, si le social peut s’insérer au plus profond de l’individu, dans son psychisme et dans son corps, ce n’est pas pour le déterminer à son encontre, mais pour le produire positivement.” Karsenti, Bruno. “Techniques Du Corps et Normes Sociales : De Mauss à Leroi-Gourhan.” *Intellectica. Revue de l’Association Pour La Recherche Cognitive* 26, no. 1 (1998): 228-9. My translation.

Social norms do not (necessarily) alienate; on the contrary, they are social institutions that allow each individual to be inserted in society. These bodily techniques profoundly differ in each culture—resulting from traditions and belongings—and allow us to associate meaning with embodied actions beyond only effectiveness in a given situation. These techniques belong to the study of what Mauss called the *habitus*, in which “we should see techniques and work as of collective and individual practical reason rather than, in the ordinary way, merely belonging to the soul and its repetitive faculties.”<sup>162</sup> This concept and field of sociological investigation stresses that “we try to treat the memory of the body as a specific memory, with its own mechanisms of conservation, stabilization and integration.”<sup>163</sup> It is thus neither a conscious enterprise—as we will see, for example, in the work of Goffman—nor only defined by language and subjectivities. Consequently, these norms are not pre-existing or fixed elements,

“clearly established and waiting to be implemented, but rather in a normative device that is invented, at the biological level, in the very movement of its socially situated operation. [...] For the living human being, the norm is exercised at the articulation of the social and the vital.”<sup>164</sup>

The work of the French paleoanthropologist André Leroi-Gourhan is widely based on the observations of Mauss in “*Les techniques du corps*,” who was his Ph.D. supervisor.<sup>165</sup> He considered techniques an externalization that completes or extends the genetic and nervous memories. This third memory follows a curve of evolution much more exponential than the human body. In his writings, he reformulated the notion of *habitus* and socio-spatial norms by broadening their analysis in forging the concept of program/operatory chains:

“Resituated in this vital dynamic, the tool appears, in the case of the animal, as irremovable and specific to the species. Tool and gesture merge in the organ, to the point that the connection between the motor part and the acting part does not present any solution of continuity. The removability of the tool is on the contrary the distinctive character of human technical behavior. Here, the operative programs are projected outside the body and embodied in the social device. In other words, removability is inseparable from a social contextualization of the gesture. This thesis is crucial for several reasons: first of all, we see that the actualization of certain neuro-physiological virtualities of the individual is not predetermined by hereditary biological structures, but obeys the requirements of a singular form of collective existence. But above all, we see that the body is the privileged angle of approach for the socio-historical understanding of the technique.”<sup>166</sup>

The fact that the tool can be detached from the body, put aside, implies the creation of a social sphere in the human species. **To re-use the tool that has been put aside, human bodies need an operatory program/chain, a set of gestures, to re-member and re-articulate the tool with the body, demanding another reservoir of memory.**

166 “Resitué dans cette dynamique vitale, l’outil apparaît, dans le cas de l’animal, comme inamovible et propre à l’espèce. Outil et geste se confondent dans l’organe, au point que la connexion entre *partie motrice* et *partie agissante* ne présente aucune solution de continuité. L’amovibilité de l’outil est au contraire le caractère distinctif du comportement technique humain.

Ici, les programmes opératoires sont projetés à l’extérieur du corps et s’incarnent dans le dispositif social. En d’autres termes, l’amovibilité est inséparable d’une contextualisation sociale du geste. Cette thèse est capitale à plusieurs titres : en premier lieu, on voit que l’actualisation de certaines virtualités neuro-physiologiques de l’individu n’est pas prédéterminée par les structures biologiques

héréditaires, mais obéit aux exigences d’une forme singulière d’existence collective. Mais surtout, on voit que le corps est l’angle d’approche privilégié pour la compréhension socio-historique de la technique.” Karsenti, Bruno. “Techniques Du Corps et Normes Sociales : De Mauss à Leroi-Gourhan.” (1998): 235. My translation.

162 Mauss, Marcel, and Nathan Schlanger. *Techniques, Technology and Civilisation*. 2006:80.

163 “On s’efforce de traiter de la mémoire du corps comme d’une *mémoire spécifique*, avec ses propres mécanismes de conservation, de stabilisation et d’intégration.” Karsenti, Bruno. “Techniques Du Corps et Normes Sociales : De Mauss à Leroi-Gourhan.” (1998): 230-1. My translation.

164 “nettement institués et en attente d’être appliqués, mais plutôt dans un *dispositif normatif* qui s’invente, au niveau biologique, dans le mouvement même de son opération socialement située. [...] Pour le vivant humain, la norme s’exerce à l’articulation du social et du vital.” Karsenti, Bruno. “Techniques Du Corps et Normes Sociales : De Mauss à Leroi-Gourhan.” (1998): 233. My translation.

165 Thanks to his archaeological research, he developed the central idea that it is bipedality that frees the human hands, thus arguing that the premises of the *Homo sapiens* started with the foot. Moreover, his studies permitted to analyze how certain techniques affected bodily evolutions through generations, proposing that the evolution of techniques is an entire part of the human evolution, which also in return structured the biological evolution of the human body. He even proposed that the human body is still very archaic compared to the refinement of modern techniques, and worries about the potential obsolescence of the body facing the exponential technical evolutions.

167 The concept of *différance*, introduced by Derrida in *De la grammatologie*, is based on these considerations of Leroi-Gourhan.

168 “En effet, l’outil n’existe que dans le cycle opératoire; il est un bon témoin car il en porte généralement des traces significatives, mais au même titre qu’un squelette de cheval porte l’empreinte de l’être herbivore à course rapide dont il a été un jour la charpente. [...] l’outil n’est réellement que dans le geste qui le rend techniquement efficace. [...]”

La synergie opératoire de l’outil et du geste suppose l’existence d’une mémoire dans laquelle s’inscrit le programme du comportement. Au niveau animal cette mémoire se confond avec tout le comportement organique et l’opération technique revêt au sens commun un caractère instinctif. On a vu plus haut que chez l’homme l’amovibilité de l’outil et du langage déterminait une mise à l’extérieur des programmes opératoires liés à la survie du dispositif collectif.” In Leroi-Gourhan, André. *La mémoire et les rythmes*. Repr. *Le geste et la parole* 2. Paris: Michel, 1998:35-6. My translation.

169 “Les pratiques élémentaires constituent les programmes vitaux de l’individu, tout ce qui dans les gestes quotidiens intéresse sa survie comme élément social: habitus corporel, pratiques d’alimentation ou d’hygiène, gestes professionnels, comportement de relation avec les proches. Ces programmes, dont le fonds est immuable, s’organisent en chaînes de gestes stéréotypés dont la répétition assure l’équilibre normal du sujet dans le milieu social et son propre confort physique à l’intérieur du groupe. L’acquisition des chaînes opératoires élémentaires se fait durant la première partie de la vie, sous la triple incidence du dressage par imitation, de l’expérience par tâtonnement et de la communication verbale.” In Leroi-Gourhan, André. *La mémoire et les rythmes*. 1998:29. My translation.

This *différance*<sup>167</sup> in time and space of the tool, previously put aside and later taken back in hand, implies a transmission of knowledge and a tradition, and consequently, a social organization to organize these programs’ transmission. As written by Leroi-Gourhan:

“Indeed, the tool exists only in the operative cycle; it is a good witness because it generally carries significant traces of it, but in the same way as a horse skeleton carries the print of the fast-running herbivorous being of which it was once the frame. [...] The tool is only truly made technically effective in the gesture. [...]”

The operative synergy of the tool and the gesture supposes the existence of a memory in which the program of behavior is inscribed. At the animal level, this memory merges with all organic behavior and the technical operation has an instinctive character in the common sense. We have seen above that in man the removability of the tool and of language determined an externalizing of the operative programs linked to the survival of the collective.”<sup>168</sup>

“The tool is only truly made technically effective in the gesture.” These gestures, or operatory programs/chains, guarantee the human individual’s insertion into the social and the technical spheres that are completely intertwined. Leroi-Gourhan proposes three types of programs: the automatic programs (purely biological and upon which traditions are imprinted), the machinal programs (acquired programs), and the exceptional or periodical programs (that imply the use of symbol or language to solve a complex situation):

“The elementary practices constitute the vital programs of the individual, all that in the daily gestures interests its survival as social element: body habitus, practices of food or hygiene, professional gestures, behavior of relation with the close relations. These programs, whose base is immutable, are organized in chains of stereotyped gestures whose repetition ensures the normal balance of the subject in the social environment and his own physical comfort within the group. The acquisition of the elementary operative chains is done during the first part of life, under the triple incidence of training by imitation, experience by trial and error and verbal communication.”<sup>169</sup>

Again, precisely as the socio-spatial norms and techniques of the body, **these operatory programs/chains permit the human individual to regulate her relationship with the social and technical spheres**. She acquires them through **diverse processes of inheritance, migration, learning, through imitation, trial and error, invention, or oral transmission**. In this view, gestures and operatory chains are socially enacted techniques; articulation with the milieu. The set of gestures associated with a milieu are socio-spatial norms; not fixed and institutionalized rules, but programs/chains that permit interaction, which possesses its own structures and embodied social significance. This social, biological, and technical articulation codifies interaction and provides a basis for meaning beyond and below language. They are sedimented through generations which implies that certain gestures evolve, changing their meaning and operations.

To unravel their historicity, it is fundamental to introduce the dynamics of inheritance, migration, and learning processes to frame how gestures and operatory chains are transmitted between generations. First, there is a **passive form of inheritance**; we inherit transgenerationally a physical world, its architectures, infrastructures, materialities; all the non-human bodies populating and inhabiting our milieus. This inheritance that we already understood according to the words of Bernard Stiegler—himself following Leroi-Gourhan and his third form of memory—is called an epiphylogenetic memory.



This is made up of non-human bodies organized in repositories of memories, human gestures fixed and crystallized. It includes technical objects and machines and is said to be passive because of its necessary coupling with active forms of inheritance, even if it concerns a living world with its dynamics.

Secondly, humans and other living beings possess a **genetic heritage**. This inheritance is constituted in a phylum that defines species, thus designating phylogenetic dynamics. It defines numerous biological operatory chains -or vital programs- and relations with the milieu. It equally transmits a repertoire of driving forces and gestures that enact our knowledge of the worlds. Bernard Stiegler designates the last repository of knowledge and programs as **nervous or epigenetic memory**, which contains the memories of individuals. However, I will define it as bodily memory, or even just as the body. Effectively, in mentioning only the neuronal, we might miss all the organic memories and physical traces that are not externalized and epiphylogenetic, which constitutes human—as non-human bodies—as **archives**.<sup>170</sup>

However, another memory conservation and transmission system has been neglected as an independent form in Stiegler's essays: the repertoire. **The repertoire comprises the techniques of the body, gestures, and operatory chains that organize the relations between the body and the epiphylogenetic memory, the milieu.** The status and texture of the repertoire are ambiguous; it resides in the body/bodily memory and, at the same time, externally, as a transindividual system of memory conservation and transmission. The concept of repertoire as I use it was first coined by the performance scholar Diana Taylor in her book *The Archive and the Repertoire*. In it, she builds a dialectic between both systems of memory and history conservation;

“The rift, I submit, does not lie between the written and the spoken words, but between the archive of supposedly enduring materials (i.e., texts, documents, buildings, bones) and the so-called ephemeral repertoire of embodied practice/knowledge (i.e., spoken language, dance, sport, rituals).”<sup>171</sup>

And she continues,

“The repertoire, on the other hand, enacts embodied memory: performances, gestures, orality, movement, dance, singing—in short, all those acts usually thought of as ephemeral, nonreproducible knowledge. Repertoire, etymologically “a treasury, an inventory,” also allows for individual agency, referring also to “the finder, discoverer,” and meaning “to find out.” The repertoire requires presence: people participate in the production and reproduction of knowledge by “being there,” being a part of the transmission.”<sup>172</sup>

**Oral and embodied knowledge** resides in the repertoire. It functions through the **temporalities** of the performance: it is produced and reproduced, it exists, and is transmitted only through embodiment and participation. As such, the gestures and operatory chains that organize the insertion of the individual in meaningful social worlds belong to the repertoire. **Alongside the repertoire is the system through which are incorporated and excorporated every form of knowledge.**<sup>173</sup> As opposed to the dead memory of the **archives**, the repertoire is transmitted body-to-body—and can be transmitted from non-human body to human body through performance. This body-to-body mechanism implies that inheritance through the repertoire is necessarily a migration from one body to another.<sup>174</sup> Possessing the same technicity and genetic dynamism, the repertoire could be thought of as the **operatory side** of the epiphylogenetic memory; the living memories and knowledge that allow performance to incorporate and excorporate non-human memory and allow us to live and inhabit

170 See the last section of this chapter for more on the body as an archive.

171 Taylor, Diana. *The Archive and the Repertoire: Performing Cultural Memory in the Americas*. Durham: Duke University Press, 2003:19.

172 And she continues: ‘As opposed to the supposedly stable objects in the archive, the actions that are the repertoire do not remain the same. The repertoire both keeps and transforms choreographies of meaning. Sports enthusiasts might claim that soccer has remained unchanged for the past hundred years, even though players and fans from different countries have appropriated the event in diverse ways. Dances change over time, even though generations of dancers (and even individual dancers) swear they’re always the same. But even though the embodiment changes, the meaning might very well remain the same.’ In Taylor, Diana. *The Archive and the Repertoire: Performing Cultural Memory in the Americas*. Durham: Duke University Press, 2003:20.

173 On incorporation and excorporation, see chapter C ‘Archival pharmacology’, especially the section ‘Ethics and paradoxes of ‘archiving’ the oral and the embodied.’

174 Noland, Carrie, and Sally Ann Ness, eds. *Migrations of Gesture*. Minneapolis: University of Minnesota Press, 2008.

in a milieu in a meaningful way. The operatory knowledge of the repertoire gives a/effect to the potential relations and communication that a body can build with its environment.

As an example, the geometric and construction knowledge of crafts.women or medieval masons belongs to the repertoire. It does so, firstly, because of its organic, unwritten and **undrawn** textures; consequently, its transmission and migration respond to the mechanisms of the repertoire through performance. Moreover, this embodied knowledge allows us to enter in dialogue with non-human bodies, matter, and from there to give a/effect to latent potentialities and modulate common **futurities** in a performative way.

Arguably, architectural and spatial cultures and histories could be analyzed following the same dynamics of inheritance and migration. **We effectively inherit architectures, spaces, buildings, infrastructures, books about architecture** as external, as epiphylogenetic memories. Simultaneously, **this inheritance goes hand in hand with the migration of a repertoire that allows oneself to incorporate (into) the latter, to operate, orient oneself; to dialogue and co-operate.** The meaning of spaces, milieus, and architectures does not exist in the void, separated from the human and non-human bodies that populate it. Spaces are brought into being by gestures and operatory chains, as socially enacted techniques of the body, that are “both the act of remaining and means of reappearance”<sup>175</sup> of spatialities, their **orientations**, meanings, and accordingly, sociocultural norms.

This perspective on space and spatialities as an embodied and collective utterance is close to the work of certain geography scholars who, following the concepts associated with the performativity approach forged by John Langshaw Austin and Judith Butler, elaborated a performative theory of space. Nicky Gregson and Gillian Rose published a foundational text from this perspective in 2000, entitled ‘Taking Butler elsewhere: performativities, spatialities, and subjectivities.’<sup>176</sup> In this article, the two authors applied the theory of performativity<sup>177</sup> in two given situations—a study of community art workers and a car-boots sale—:

“to disrupt and alter some of the terms of this emergent consensus and to establish the potential of the tools of performance and performativity for critical human geography. [...] Space too needs to be thought of as brought into being through performances and as a performative articulation of power.”<sup>178</sup>

And they continue:

“performances do not take place in already existing locations: the city, the bank, the franchise restaurant, the straight street. These ‘stages’ do not pre-exist their performances, waiting in some sense to be mapped out by performances; rather, specific performances bring these spaces into being. And, since these performances are themselves articulations of power, of particular subject positions, then we maintain that we need to think of spaces too as performative of power relations.”<sup>179</sup>

In other words, physical materiality, the non-human bodies -architectural or not- of spatialities, plays a significant role in the performance. Nevertheless, the embodied and iterative repetitions of performance bring into being both the subjectivities and the meanings of the spatialities. Subjectivities are always performatively bound to a situation and define the emergent location’s meaning. No space pre-exists the performance. As suggested by the feminist and queer architectural theorist Katarina Bonnevier,

175 Schneider, Rebecca. “Performance Remains.” *Performance Research* 6, no. 2 (January 2001): 103. <https://doi.org/10.1080/13528165.2001.10871792>.

176 Gregson, Nicky, and Gillian Rose. “Taking Butler Elsewhere: Performativities, Spatialities and Subjectivities.” *Environment and Planning D: Society and Space* 18 (2000): 433–52.

177 It is critical to note that there are diverse definitions of performance and performativity, issued from various theoretical traditions. Two such definitions, while not opposed, place agency and consciousness at different degrees of the citational practice. The sociologist Erving Goffman’s theory is grounded on a theatrical metaphor that acknowledges an almost entire consciousness of the actors playing the mask of their social roles. On the contrary, the Austin-Butler genealogy (linguistic performativity), and especially when coming to the writings of Butler on gender performativity, is based on the arguments of Luce Irigaray and Joan Riviere (psychoanalytic performativity), denying the intentional manipulation of the social mask and especially the gendered feminine mask. This view on performativity proposes that subjectivities are constructed in and through citational practices and do not exist a priori performance.

178 Gregson, Nicky, and Gillian Rose. “Taking Butler Elsewhere: Performativities, Spatialities and Subjectivities.” 18 (2000): 434.

179 Gregson, Nicky, and Gillian Rose. “Taking Butler Elsewhere: Performativities, Spatialities and Subjectivities.” (2000): 431.

“[i]n any building activity ideologies and norms are reiterated. What I want to bring into play is that this also works the other way around—subject positions are partly construed through building activities.”<sup>180</sup>

This reiteration also occurs in the common world of everyday spatialities. **Spatialities are brought into being through the embodied performances of individuals gesturing and wording coupled with the potentialities of the milieu and its tacit set of norms that the architectural practice reiterates in designing.** Through this same performance, as a technique of the body, individuals are inserted and subjectivized into the social world.

This social constructivist approach to spatialities situates human beings’ agency in the subversion of this set of norms in the performance itself, in the consciousness of the mask, and the restaging of the masquerade (even if the precise hinge toward other subjectivities is debated). As argued by Judith Butler, “all signification takes place within the orbit of the compulsion to repeat; ‘agency,’ then, is to be located within the possibility of a variation on that repetition.”<sup>181</sup> To understand this subversive potentiality,<sup>182</sup> the critical theoretical point is to decipher the blurry boundary between performance and performativity. In this regard, it is essential to stress the architect/designer/urbanist’s agency-and responsibility—in enacting new spatialities and subjectivities while insisting on the limits of this agency, ensuring not to reiterate the figure of the powerful architect. This exploration requires a profound understanding of **temporalities** and co-presence. How a specific and situated performance exists in space, time, and/or human and non-human bodies, and how each specific performance influence future performative spatialities in other temporal and spatial scales are complex questions that we will try to address.<sup>183</sup>

In her book *Agency and Embodiment: performing gestures/producing culture*, Carrie Noland develops a careful reading of Butler’s main work, *Gender Trouble and Bodies that matter*. She outlines the absence of embodiment in Butler’s conception of performativity: the body is a “surface inscribed with meanings,” “a form whose distinct parts have been assigned incontrovertible valences within a limited and limiting male/female dichotomy of signification.”<sup>184</sup> In this perspective, there is no pre-cultural or pre-gendered sensory-motor experience. The feeling of one’s own somatic experience is culturally and socially situated and interpreted through signs. Inscriptions, signs, or marks mediate and produce one’s subjectivity within the body and between one’s soma and associated cognitive processes.

Iris Young’s research, *Throwing like a girl*, and other essays in feminist philosophy and social theory, widely cited and discussed in the work of Butler, entails a very telling example commented by Noland. *Throwing like a girl* is demonstrated to be a gestural routine of feminized bodies produced by cultural conditioning. She argues that the taught experience of space is highly different for boys and girls.

“Instead of mobilizing the entire body to propel an object, as boys do, girls concentrate the motion in one limb, misjudge the space they can encompass, and thus fail to ‘reach, extend, lean, stretch, and follow through in the direction’ of their intention.”<sup>185</sup> “Further, this gendered privation of sensitivity to the moving self appears to be predicated on and produced by discursive commands and warnings: the young girl is ‘told that she must be careful not to get hurt, not to get dirty, not to tear her clothes, that the things she desires to do are dangerous for her. Thus she develops a bodily timidity that increases with age.’”<sup>186</sup>

180 Bonnevier, Katarina. *Behind Straight Curtains: Towards a Queer Feminist Theory of Architecture*. Trita-ARK, 2007,1. Stockholm: Axl Books [u.a.], 2007:16.

181 Butler, Judith. *Gender Trouble: Feminism and the Subversion of Identity*. routledge, 2011:145.

182 I will discuss it in the chapter E, ‘Architectural reenactments.’

183 I suggest that it is not yet the time to answer these questions, as I still need to lay the scene more precisely to give insight into this broad debate in feminist theories.

184 Noland, Carrie. *Agency and Embodiment: Performing Gestures/Producing Culture*. Cambridge, Mass: Harvard University Press, 2009:173.

185 Noland, Carrie. *Agency and Embodiment: Performing Gestures/Producing Culture*. 2009:173.

186 Noland, Carrie. *Agency and Embodiment: Performing Gestures/Producing Culture*. 2009:174.



187 The concept of invention is a critical point both in the theory of Leroi-Gourhan and in the one of Simondon. I will not have the chance to develop the precise continuities and discontinuities between the two, but one important dimension, that has also been underlined by Stiegler, is the dis-automation related to invention, as a mediation between two unrelated scales of the problem that enter in communication through an unexpected third dimension which forms a new milieu. This disautomation, as a virtuality becoming a potentiality (an actionable actual), is the source of bifurcation and new values ending in driving forces.

Like every other gestural routine, young girls' gestural routines are determined culturally through repetitive discursive practices that discipline behaviors and gestures. Nevertheless, as Noland argued, the capacity of a feminized body to learn how to throw like a boy, as a result of experience and training, is not acknowledged by Butler as a subversive potentiality. As I will discuss in '**Architectural Reenactment**,' the moving body can sense and create a dissonance in the very act of gesturing, as a capacity to feel conditioned gestures kinesthetically, and open the gap in this interoceptive affect—internal affects of gestures. **In the performance of making spatialities emerge, in reiterating their norms, subjectivities, and relations of power, gestures—and not only language—are a field of subversion and invention, in the very affect they afford to bodies in their gestural and performative routine.**

Following Noland, Butler, and Young, when working on oral and embodied architectural and spatial knowledge, it is important to consider the bodies at stake, their knowledge, and how the spatialities are highly socialized, gendered and situated. It equally means that class relations—understood through intersectionality—are helpful to analyze the repertoire and its spatialities. To sum up:

- **Spatialities are techniques of the body.** They are brought into being following a set of socio-spatial norms that are culturally situated. Spatialities are inherited by various migration, teaching and learning techniques throughout individuals' lives. The body is "man's first natural technical object," constructed socially. Spatialities imply a specific embodied memory, "with its own mechanisms of conservation, stabilization, and integration." Furthermore, spatialities are at the intersection of the social and the biological and ensure the integration of one into the other. Spatialities, understood as socially constructed techniques and gestures, imply norms that are applied differently to bodies according to socially enacted subjectivities.
- **Spatialities imply operatory chains or programs.** Meanings and effectiveness emerge only from the operatory chains and their gestures, as "the tool is only truly made technically effective in the gesture." Thus, the body, and its operatory chains, is the privileged lens through which to develop a socio-historical approach to spatialities. There are various types of chains, automatic, machinal, and exceptional, containing a constructed sets of gestures and spatialities, which outline a particular theory of invention.<sup>187</sup>
- **Space doesn't exist.** Spatialities are performances which do not take place "in already existing locations." In these performances, the subjectivities and their positions are performed and maintained throughout their reiteration. This repetition of norms or citational practices constitutes the process through which individuals produce themselves socially. In this performance, the subjectivities of individuals act as masks. However, it is not a conscious staging but a disciplined repetition of tacit and incorporated social norms that allow the individual to be oriented and situated socially and culturally.
- **Spatialities are enacted from the repertoire.** The repertoire is made up of oral and embodied architectural and spatial knowledge and is produced and reproduced, it exists, and is transmitted only through embodiment and participation. It comprises techniques of the body, gestures, and operatory chains that articulate the relations between the body and the epiphylogenetic memory—the milieu. As an **operatory side** of space, the repertoire is thus the mechanism of conservation and circulation of a knowledge that gives effect to the potentialities of relationships within a milieu and of performative spatialities. The repertoire allows one to incorporate the milieu, to insert in a meaningful world. In this movement of **incorporation** and **excorporation**, the repertoire is a site of subversion of relations between human and non-human bodies.

## Figuration and the embodied architectural image.

In this part, I attempted to define spatialities as performative and a particular kind of technique of the body. Their performance implies operatory chains that allow individual subjectivities to be reiterated in the performative spatialities. These considerations outline the necessity of a renewed definition of, and approach to, the architectural image and knowledge as a set of potential gestures afforded and reenacted through performative spatialities. As such, **a particular type of architectural and spatial knowledge and image belongs to the repertoire, fully embodied, and brings about spatialities**. I will name them using the concept of **figurations**. A certain architectural and spatial culture corresponds to this knowledge and image, with its own history of its invention and reconfiguration. To unearth the textures of this knowledge, I will follow another (rarely cited) writing of Gilbert Simondon, *Imagination and Invention*, coupled with the theory of affordances, to build up an embodied and performative approach to architectural image and knowledge-in the form of figuration.

I have previously insisted on how the disciplinarization of architecture throughout the Renaissance—the rise of the role of the architect as a mediator between crafts.women and patronage—led to the exclusion of feminized, forced, enslaved, and racialized bodies from the realm of architecture and as holders of architectural and spatial knowledge. This disciplinarization was mediated by externalizing architectural knowledge and imagination, from the bodies of crafts.women to architectural drawings, which permitted architects to gain control over the construction site and the actions of the builders. Since then, European —and western— architectural histories have focused mainly on these **documents** and all the other supposedly enduring materials that brings about the archival systems. These epistemologies assume that memory is kept in items that resist change and, as such, they consequently devalue embodied practices and forms of knowledge in transmitting and transforming (spatial) culture. Thus, the definitions and concepts of the architectural image developed lack the embodied dimensions and are mostly confined to representation. I will now bring a definition of architectural image that attempts to recognize its embodied forms, challenging representation, with the concept of figuration. I hope to get closer to these **subjugated** forms of spatial and architectural knowledge that reside in the repertoire, transmitted body-to-body.

## Architectural images: dialectics of representation and figuration.

We are surrounded by thousands of images. Constantly, the incessant flow of seducing and hyperrealistic architectural images pervasively invades every corner of our attention and imagination. It is now a repeated argument that architectural representation in the twenty-first century has become a commodified means of visual communication used to convince potential investors by selling joyful and fluid **futurities**, while manufacturing fame in sustaining social media presence. Seduction has become the critical objective of architectural representation as it has adapted itself to the structural requirement of late liberalist attention-capitalism. Architectural practices achieve parity, diversity, and social justice in representing self-made women and racialized people enjoying a Starbucks in the corner of commodified outdoor space with birds singing from the top of a green facade. Armed with an Instagram account or a top position on Archdaily, architectural practices produce high-resolution images that possess more pixels than the eye can see. Numerous architectural theorists and practitioners have sought to dismantle the pictorial danger of architectural images during the twentieth century. However, this attempt to escape the representational regime and protect architecture “against the arresting gaze of the modern subject”<sup>188</sup> is failing for the most celebrated practices.

This view on the architectural image as a representation, a fixed image, has been cultivated by the largely criticized ocular centrism of the profession and the discipline.<sup>189</sup> However, the architectural image was also developed as a paradigm for a materialist history in Walter Benjamin’s image-based epistemology: “because it not only defies the clear separation between visual, mental, and material image but, what is more, it is the manifestation of a de-subjectivizing vision and bodily perception. Existing independently of the subject, the architectural image gains its operative agency within the process of conveying and constructing what remains the inexplicable ‘architectural.’”<sup>190</sup> **Images exist autonomously and fail to be grasped entirely through concepts of representation.**

Their meanings and symbolism emerge from individual and collective experience, an assemblage that exceeds either individual or collective experience separately, experience of a transindividual milieu of images. Architectural images work in the same way, as virtualities opening up the **field of potentialities**, bringing about new relations, and existing beyond or beneath mere pictures.

Nevertheless, this view on architectural images still fails to encompass embodied forms of architectural knowledge and is still haunted by the externalized regimes of representations. An architectural image can also be mediated by embodied means, and the fundamental difference between these two types of architectural image is that a lasting item mediates one, while the other is transmitted (and mediated)<sup>191</sup> only body-to-body and through performance. Between the two, the difference is thus one of externalization. To define this texture of architectural image with precision, I use the term figuration, as opposed to the term representation. In using this term, I refer neither to the phenomenological approach to image nor archetypes or metaphors. Instead, **figuration refers to a set of spatial images that relates the body, perceptual systems, and diverse forms of memories, but that is beyond the level of the individual and collective; figurations are understood as spatial images that are produced by and through experience and practice, and that exceeds the limits of visibility and representation.**

188 Robbers, Lutz. “Without Pictorial Detour: Benjamin, Mies and the Architectural Image.” *FOOTPRINT*, April 18, 2016, 46.

189 See for example, the work of Juhani Pallasmaa in *The eyes of the skin*, or *The embodied image. Imagination and imagery in architecture*.

190 Robbers, Lutz. “Without Pictorial Detour: Benjamin, Mies and the Architectural Image.” 2016, 32.

191 It is important to note that here, I disagree with the arguments of Evans on the two architectural practices. Still transmitted body-to-body or working directly with physical matter, the image is mediated. The individuation of the work is in itself a mediation between the matter, its potential energy and molecular structure, with the body of the crafts-women and her set of images in the form of gestures.



To take the categories laid out by Diana Taylor, figurations belong to a repertoire while drawing—and other architectural images inscribed on externalized lasting **documents**—belong to the **archive**.<sup>192</sup> Figurations and drawings are in constant interaction, feeding into one another. One does not linearly follow the other, as societies went from illiterate to literate or archaic to modern. Instead, **they belong to two systems of knowing and transmitting knowledge which can operate in the very same physical way**. Figurations include various textures of images, from gestures to affects, symbolic and mental images, that articulate physical space and its human inhabitants in enacting performative spatialities. Figuration should be understood as an emergent system of embodied memories,<sup>193</sup> situated both socially and culturally.<sup>194</sup> Their presence is manifested through performance, only in a spatiotemporal entanglement, through which it reenacts relationships to the milieu in the form of a landscape of affordances.

This image texture has been discussed in non-representational and more-than-representational geography, emphasizing the non-representationality of thoughts and relations with the milieu.<sup>195</sup> In this approach, representation does not even exist as a possibility; this conceptual category of analysis is considered obsolete, as

“[i]n the taking-place of practices, things and events there is no room for hidden forces, no room for universal transcendentals or first principles. And so even representations become understood as presentations; as things and events they enact worlds, rather than being simple go-betweens tasked with representing some pre-existing order or force.”<sup>196</sup>

Language and discourse cannot embrace the totality of experience. Non-representational geography promises to offer tools to discuss the backgrounds, bodies, and performances in which meaning is located, “in the ‘manifold of actions and interactions’ rather than in a supplementary dimension such as that of discourse, ideology or symbolic order.”<sup>197</sup> The concept of figuration, as elaborated here, relies on this approach of image and thought. I understand figurations as affective images, or images-as-relations, in the dynamic interactions of bodies and spatialities which enact perceptions, making and meaning, transmitted through performance.

Nevertheless, I will not be as radical as the non-representational theory suggests concerning representation. In my perspective, figurations as representations are helpful concepts to grasp the various agency of non-human bodies in worlds. I consider the concept of representation in relation to the architectural image as largely insufficient and unsatisfactory, as it conceals certain forms of knowledge and memory. However, I do not assume that representation is a false concept in the understanding of causality and agency, while figuration is somehow more trustworthy. I believe figuration and representation to be a dialectical couple; figuration being the operatory and performative side of representation. **Figuration is considered as a conceptual category for the operatory historian or theorist, as much as an architectural image and mnemonic reserve reiterated through performances and belonging to the repertoire.**

In this attempt to address figurations as a particular texture of architectural image and knowledge, I consider embodiment “a starting point for analyzing human participation in a cultural world.”<sup>198</sup> The architectural image’s externalization in drawing through the Renaissance served the purpose of the emerging socio-professional category of the architect in legitimizing their bridge-position between crafts.women and patronage. With this shift, the knowledge and embodied images of crafts.women were devalued, creating new hierarchies on the construction site and within the building disciplines in general. Thus, certain classes of the population lost their legitimacy in speaking about building. Consequently, the meaning of architectural spaces and buildings moved to

192 Taylor, Diana. *The Archive and the Repertoire: Performing Cultural Memory in the Americas*. Durham: Duke University Press, 2003.

193 I will discuss the migration of figuration and its historicity in the last section of this chapter.

194 Which in return, corresponds to tacit social norms. The figurations are produced by the three diverse types of memory: the biological, the nervous and the epiphylogenetic or external memory.

195 “the root of action is to be conceived less in terms of willpower or cognitive deliberation and more via embodied and environmental affordances, dispositions and habits. This means that humans are envisioned in constant relations of modification and reciprocity with their environs, action being understood not as a one way street running from the actor to the acted upon, from the active to the passive or mind to matter, but as a relational phenomena incessantly looping back and regulating itself through feedback phenomena such as proprioception, resistance, balance, rhythm and tone; put simply, all action is interaction (Ingold 2000, see Gibson 1979; Clark 1997; Thrift 2008).” In Anderson, Ben, and Paul Harrison. “The Promise of Non-Representational Theories.” In *Taking-Place: Non-Representational Theories and Geography*, 7. Routledge, 2010.

196 Anderson, Ben, and Paul Harrison. “The Promise of Non-Representational Theories.” 2010:14.

197 Anderson, Ben, and Paul Harrison. “The Promise of Non-Representational Theories.” 2010:2.

198 Csordas, Thomas J. “Somatic Modes of Attention.” *Cultural Anthropology* 8, no. 2 (1993): 135.

199 Butterworth, George. "An Ecological Perspective on the Self and Its Development." *Exploring the Self. Philosophical and Psychopathological Perspectives on Self-Experience*, 2000, 19–38.

200 Csordas, Thomas J. "Somatic Modes of Attention." (1993): 135.

201 "il est précieux, car il suppose que les images mentales procèdent d'un certain pouvoir, expriment une activité qui les forme, et supposent peut-être l'existence d'une fonction qui les emploie. Par contre le terme 'imagination' peut induire en erreur, car il rattache les images au sujet qui les produit, et tend à exclure l'hypothèse d'une extériorité primitive des images par rapport au sujet." Simondon, Gilbert. *Imagination et invention: 1965-1966*. Edited by Nathalie Simondon. 1re édition. Paris: Presses Universitaires de France, 2014:7.

We will translate all the quotes from Simondon in this part, as they are numerous and require to be fully understood by the reader.

the abstract and bourgeois andromorphic architectural image, interpreted by architects. In reembodying the concepts and expanding the sensorium of architectural images and knowledge, I argue that one can more accurately analyze the insertion of the individual and the collective in social worlds. It would imply to locate meaning as emerging from practice and experience of spatialities and their performative social and cultural norms.

## Embodied cycles of imagination: the image as a driving force.

Numerous scholars in cognitive sciences and psychology acknowledge the development of the self in early infancy and the formation of reflexivity as produced by immersive proprioception into an environment.<sup>199</sup> Embodied perceptions, composed of proprioception (interoception) and external perceptions, are discussed as the origin of cognitive development and insertion in the world. The concept of image (and architectural image) and the process of imagination cannot be thought of without embodiment as its origin. As argued by Thomas Csordas:

"In current scholarship, imagination is discussed almost exclusively in terms of visual imagery, which is in turn readily thought of as 'mental' imagery. So ingrained is the concept of mental imagery that the term physical imagery strikes one almost as an oxymoron. Yet if we allow the other sensory modalities equal analytic status with the visual, an expanded concept of sensory imagery would allow us to avoid the arbitrary dichotomy [...]. We would then be taking a methodological step away from an empiricist conception of imagination as abstract representation to a phenomenological conception of imagination as a feature of the bodily synthesis, which Merleau-Ponty (1962) described as characteristic of a human consciousness that projects itself into a cultural world."<sup>200</sup>

To outline a process of imagination bounded to figurations thanks to an expanded concept of sensory imagery and as a bodily synthesis elaborated as a cultural and social performance, I propose to explore the cycle of imagination conceptualized by Gilbert Simondon in his course at l'Institut de Psychologie of the Sorbonne in 1965–1966. The content of the course *Imagination and invention* is firmly grounded on Merleau-Ponty's approach to image and perception. He relates this embodied perspective to (technical) invention to bring about a non-anthropocentric definition of image, techniques, and invention. He defines **invention as a texture/moment of the image, and as part of the cycle of imagination. The cycle possesses three other textures; the driving force/anticipation, hosting system/experience, and resonance and symbol/systematization**. For him, the word imagination:

"is valuable because it assumes that mental images proceed from certain power, express an activity that forms them, and perhaps assume the existence of a function that employs them. On the other hand, the term 'imagination' can be misleading, because it links the images to the subject who produces them, and tends to exclude the hypothesis of a primitive exteriority of the images in relation to the subject."<sup>201</sup>

In this hypothesis, images might be external to the subject, as in Benjamin's materialist interpretation of the image-based epistemology. They exist as virtualities independently from the subject/individual. They can have multiplicities of textures (physical or cognitive) and dwell in various types of repositories, from the physical environment to the **archives**, books, or repertoire. In this thesis, images make cultural continuity possible:

“Part of the reality of groups [of people] is made up of images, materialized in the form of drawings, statues, monuments, clothing, tools and machines, as well as turns of language, formulas such as proverbs, which are veritable verbal images (comparable to slogans): these images ensure the cultural continuity of these groups, and are perpetually intermediate between their past and their future: they are vehicles of experience and knowledge as well as definite modes of expectation.”<sup>202</sup>

In the same way as the technical and psychosocial in his thesis, images pertain to pre-individual reality charges. The coupling of the collective with these charges provokes affect and perception in the cognitive system of the individual and resonates in the collective; “the collective is, for the subject, the reciprocity of affectivity and perception, a reciprocity that unifies these two areas each in itself, giving them an extra dimension.”<sup>203</sup> In this sense, images are equally more-than-one. As the potential energy of a milieu, their re-experiencing always provokes a singular and unique (trans)individuation from which unexpected meanings and relations can emerge. For Simondon, images exist and dwell in, around, through, and between us;<sup>204</sup> we are surrounded by a fog of virtual images.<sup>205</sup>

“Can we not suppose, under these conditions, that mental images are like structural and functional subsets of this organized activity that is psychic activity? These subsets could thus possess a genetic dynamism analogous to that of an organ or a system of organs in the process of growth, and it would be possible to distinguish essentially three stages: firstly that of pure and spontaneous growth, prior to the experience of the object to which the functional activity pre-adapts; this would be, in case of the image, the embryonic equivalent of organic growth; each image, embryo of motor and perceptive activity, develops here for itself, as **an anticipation not controlled by external reference to the experience of the environment**, and in the free state, that is to say without close correlation with the other subsets of the psychic organization.

204 Before introducing the cycle of imagination itself, that is, the process that images go through when individuals and collective experience them, I will bring up three materialities of the image that Simondon discusses that offer a glimpse of the potential materialities of images.

—Object-image. “Almost all objects produced by humans are to some extent image-objects; they carry latent meanings, not only cognitive, but also co-native and affective-emotional; image-objects are almost organisms, or at least germs capable of reviving and developing in the subject. Even outside the subject, through the exchanges and activity of groups, they multiply, propagate and reproduce in a neotenic state until they find the opportunity to be reassumed and deployed up to the imaginal stage by finding themselves reincorporated into a new invention.” (‘Presque tous les objets produits par l’homme sont en quelque mesure des

objets-images ; ils sont porteurs de significations latentes, non pas seulement cognitives, mais aussi co-natives et affectivo-émotives ; les objets-images sont presque des organismes, ou tout au moins des germes capables de revivre et de se développer dans le sujet. Même en dehors du sujet, à travers les échanges et l’activité des groupes, ils se multiplient, se propagent et se reproduisent à l’état néoténique, jusqu’à ce qu’ils trouvent l’occasion d’être réassumés et déployés jusqu’au stade imaginal en se trouvant réincorporés à une invention nouvelle.’ Simondon, Gilbert. *Imagination et invention: 1965-1966*. 2014:13.) This tendency for the image to repeat itself in the object is thus an agency of the image itself, and not as it would be the case using a hylomorphic reading, mimesis of an original. The agency or force of the image is issued from its capacity to resonate in the affective-emotional field of the transindividual milieu. Example: chamber pot.

—Recollection-image. “The image-recollection wants to reincarnate and perpetuate itself, it brings with it the underlying basis of anticipation, and to a certain extent creates violence in the present in order to lead it to open up to a future of revival.” (‘l’image-souvenir veut se réincarner et se perpétuer, elle apporte avec elle la sous-jacence d’une anticipation, et fait en une certaine mesure violence au présent pour l’amener à s’ouvrir vers un avenir de reviviscence.’ Simondon, Gilbert. *Imagination et invention: 1965-1966*. 2014:16.) Recollection-image are buried and tacit images acting upon us as a vivid present absence. They act like ghosts, as an effective something that is *no longer* and/ or *not yet*. They are the irruption of the unexpected, the buried or unknown. Example: your old, now demolished, primary school.

—Anticipation-image. “In contrast, the image is the basis of anticipation, allowing the prefiguration of a near or distant

202 “Une part de la réalité des groupes est faite d’images, matérialisées sous forme de dessins, de statues, de monuments, de vêtements, d’outils et de machines, et aussi de tournures de langages, de formule comme les proverbes qui sont de véritables images verbales (comparable aux slogans) : ces images assurent la continuité culturelle des groupes, et sont perpétuellement intermédiaire entre leur passé et leur avenir : ils sont aussi bien des véhicules d’expérience et de savoir que des modes définis d’attente.” Simondon, Gilbert. *Imagination et invention: 1965-1966*. 2014:18.

203 ‘le collectif est, pour le sujet, la réciprocité de l’affectivité et de la perception, réciprocité qui unifie ces deux domaines chacun en lui-même en leur donnant une dimension de plus.’ Simondon, Gilbert. *L’individuation à la lumière des notions de forme et d’information*. 2005:248.

205 I make reference here to a sentence in Deleuze, Gilles, and Claire Parnet. *Dialogues*. Athlone Press London, 1987. Deleuze states: ‘Every actual is surrounded with a cloud of virtual images.’

future, and the symbolic testing of solutions to anticipated problems. The activity of anticipation is different, in its meaning and its mode of deployment, from the use of the image as memory.” (‘De manière opposée, l’image est la base de l’anticipation, permet la préfiguration d’un avenir proche ou lointain, et l’essai symbolique de solutions aux problèmes prévus. L’activité d’anticipation est différente, par son sens et son mode de déploiement, de l’emploi de l’image comme souvenir.’ Simondon, Gilbert. *Imagination et invention: 1965-1966*. 2014:16.) As the imprint of the incidence of perception and affect in a cognitive hosting system, the image not only allows for an embodied reenactment of past situations, but also a prefiguration of future situations. It is important to note that these images can also be externalized and are also relatively independent from subjects in the hypotheses of Simondon. Example: a “turn left” road sign.



206 “Ne peut-on supposer, dans ces conditions, que les images mentales sont comme des sous-ensembles structuraux et fonctionnels de cette activité organisée qu’est l’activité psychique ? Ces sous-ensembles pourraient ainsi posséder un dynamisme génétique analogue à celui d’un organe ou d’un système d’organes en voie de croissance, et il serait possible de distinguer essentiellement trois étapes : d’abord celle de la croissance pure et spontanée, antérieure à l’expérience de l’objet à laquelle l’activité fonctionnelle se préadapte ; ce serait, dans l’image, l’équivalent embryonnaires de la croissance organique ; chaque image, embryon d’activité motrice et perceptive, se développe ici pour elle-même, comme une anticipation non contrôlée par la référence externe à l’expérience du milieu, et à l’état libre, c’est-à-dire sans corrélation étroite avec les autres sous-ensembles de l’organisation psychique. Elle montre des pré-adaptations mais non des adaptations. Ensuite, l’image devient un mode d’accueil des informations venant du milieu et une source de schèmes de réponses à ces stimulations ; [...] Enfin, après cette étape d’interaction avec le milieu correspondant à un apprentissage, le retentissement affectivo-émotif achève l’organisation des images selon un mode systématique des liaisons, d’évocations et de communications ; il se fait un véritable monde mental ou se trouvent des régions, des domaines, des points-clefs qualitatifs par lesquels le sujet possède un analogue du milieu extérieur, ayant lui aussi ses contraintes, sa topologie, ses modes d’accès complexes. Autrement dit, les images subiraient des mutations successives qui modifieraient leurs relations mutuelles en les faisant passer d’un statut de relative indépendance mutuelle à une phase de d’interdépendance au moment de la rencontre de l’objet, puis à un état final de liaison systématique et nécessitante où les énergies primitivement cinétiques sont devenues des tensions d’un système. L’invention pourrait alors être considérée comme un changement d’organisation du système des images adultes ramenant, par un changement de niveau, l’activité mentale à un nouvel état d’images libres, permettant de recommencer une genèse : l’invention serait une renaissance du cycle des images [...] Autrement dit, l’invention opère un changement de niveau ; elle marque la fin d’un cycle, chaque cycle comportant trois phases : l’anticipation, l’expérience, la systématisation.” Simondon, Gilbert. *Imagination et invention: 1965-1966*. 2014:18-9.

207 It is important to note that in the process of imagination, Simondon tends to think of the image in terms of an internal image to the psyche, even if he assumes an exteriority. This is an unfortunately undeveloped dimension of his work; images a-priori are thought of as driving forces, but images in the milieu aren’t given full ontological status and are said to be information. However, what he calls information to dwell and inhabit spaces as potentials exists in a relatively independent manner from subjects. Relatively because it is the individuals, in their motor and perceptive activity, situated culturally and socially, who will singularly grasp the image, as a *pure event*, as one of the multiple ways light can cross a crystal. In reequilibrating this dichotomy induced by his essay, images would

It shows pre-adjustments but not adaptations. Then, the image becomes a mode of reception of information coming from the environment and a **source of response patterns to these stimuli**; [...] Finally, after this stage of interaction with the environment corresponding to learning, the **affective-emotional resonance** completes the organization of images according to a systematic mode of connections, evocations and communications; a real mental world is created where there are regions, domains, and qualitative key points through which the subject possesses an analogue of the external environment, which also has its constraints, its topology, and its complex modes of access. In other words, **images undergo successive mutations which modify their mutual relations by making them pass from a status of relative mutual independence to a phase of interdependence at the moment of the encounter with the object, then to a final state of systematic and demanding linkage where the primitively kinetic energies have become tensions of a system**. Invention could then be considered as a change in the organization of the system of adult images, bringing back, by a change of level, mental activity to a new state of free images, making it possible to start a new genesis: **invention is a rebirth of the cycle of images** [...] In other words, invention operates a change of level; it marks the end of a cycle, each cycle comprising three phases: anticipation, experience, systematization.”<sup>206</sup>

The cycle of imagination of Simondon proposes a reading of the textural transformation images are going through. For him, images are like organs, as are technical objects or tools.<sup>207</sup> The first texture of the image is the motor anticipation or driving force. The chapter describing this phase is named “Phylogenetical aspects: the development of motor function precedes sensoriality; virtualization.” He writes:

“[i]t is the meeting of two novelties that makes the perceptive relationship: to the beam of signals, an exogenous novelty, corresponds the local activity, the endogenous anticipation coming from the organism, and which is the first form of the a priori image, whose content is essentially motor.”<sup>208</sup>

possess an ontological status of being in the world. On the other side, mental images emerge through a process of individuation, of coupling with individual and collective with a milieu (populated by images, or beam of information in the word of Simondon). They constitute what remains of an embodied relation, and to know them, “we can only individuate, individuate ourselves and individuate in ourselves”, a parallel knowledge “which is a certain mode of communication.” In the end, the field of images is expanded by the process of imagination in itself, which loop is closed by the invention of new driving forces, new potential images afforded by sensory-motor activities, *virtual images becoming potentials afforded by the body*.

208 ‘C’est la rencontre de deux nouveautés qui fait la relation perceptive : au faisceau de signaux, nouveauté exogène, correspond l’activité locale, l’anticipation endogène venue de l’organisme, et qui est la première forme de l’image a priori, dont le contenu est essentiellement moteur.’ Simondon, Gilbert. *Imagination et invention: 1965-1966*. 2014:30.

On a purely phylogenetic basis, newborn organisms inherit images whose content is a driving force. Newborn humans can normally move their hands, feet, and fingers to a certain extent, their heads and eyes. They are capable of breathing, suckling from their mother, etc. These gestures/driving forces will participate in forming the cognitive system, the self and sensoriality. They are driving forces and bodily images inherited phylogenetically.

Driving forces then encounter a beam of signals or a milieu of potentialities. Through gestures or driving forces, the milieu affords affective-emotional resonances that will transform the texture of the image. As argued by Simondon:

“[t]o say that motor function precedes sensoriality is to affirm that the stimulus-response pattern is not absolutely primary and that it refers to a situation of current relationships between the organism and the environment that has already been prepared by an activity of the organism during its growth.”<sup>209</sup>

The classical scheme stimulus-response that structured most perception theories since the second half of the twentieth century is incomplete. It represents a particular case of perceptual relations with the environment in which sensory-motor activities had been inherited, incorporated, or learned beforehand. The phylogenetic aspect of the first phase of the image is of tremendous importance for Simondon. Thanks to this hypothesis, he can formulate a theory of images, imagination, and invention that is not anthropocentric, one of his main ambitions throughout his research. **Living bodies inherit a repertoire of images as driving forces or gestures that anticipate the presence of particular objects and bring about the encounter with the milieu and the formation of mental images.**<sup>210</sup>

The second textural transformation images go through is experience. The driving force brought about an encounter with a beam of signals that then enters the body in the form of an immediate image. Here, the use of the word immediate refers to temporal immediacy.<sup>211</sup> Driving driving forces are in part inherited phylogenetically but mostly learned or invented throughout life (as operatory chains or bodily techniques). Then, they enact a particular resonance of the image in the individual; images are immediate temporally but mediated culturally and socially. The immediate image is multi-sensorial and embodied. It possesses a wide array of sensory information that bodies sense but will not necessarily be perceived fully by consciousness when the image changes its texture again.

“The immediate image differs from the eidetic image by the fact that the immediate image, very close to sensation and perception, retains concrete characters devoid of meaning;

211 “The name immediate image is given to a more complex mode of persistence, accepting a longer delay than that of persistence or the repetition of an already structured data, therefore of a perception and not of a simple sensory data, as long as the distinction between sensation and perception can be adopted as designating in a practical way a peripheral activity of a more integrated central activity.” “On donne le nom d’image immédiate à un mode de persistance plus complexe, acceptant un délai plus grand que celui de la persistance ou la répétition d’une donnée déjà structurée, donc d’une

perception et non d’une simple donnée sensorielle, pour autant que la distinction entre sensation et perception puisse être adoptée comme désignant de manière pratique une activité périphérique d’une activité centrale plus intégrée.” Simondon, Gilbert. *Imagination et invention: 1965-1966*. 2014:104. My translation. In his account of persistence, time and duration, Simondon is mostly influenced by the work of Bergson, as it was the case for his thesis. In here, his work on memory. In *Matter and Memory*, has been of great importance for the formulation of Simondon’s thesis on imagination.

209 ‘Dire que la motricité précède la sensorialité, c’est affirmer que le schéma stimulus-réponse n’est pas absolument premier, et qu’il se réfère à une situation de rapport actuel entre l’organisme et le milieu qui a déjà été préparé par une activité de l’organisme au cours de sa croissance.’ Simondon, Gilbert. *Imagination et invention: 1965-1966*. 2014:29.

210 To inscribe his research into the corpus of existing ones, he introduces the concept of *Prägung* -translated as imprinting- issued from ethology, which described preadapted behaviors and movements in newborns or individuals deprived from certain objects (One known example is about the behaviors of birds that possesses a series of preadapted behavior in relation to their mother, even when they are deprived from their mothers.). The *Prägung* was popularized by Konrad Lorenz and his collaborators in studying the behavior of birds, and “its strength and speed show the role of the image as an essentially driving anticipation of situations, in the case of instinctive coordinations; a behavior is already virtually ready; it only requires an objective support.” (“sa force et sa rapidité montrent le rôle de l’image comme anticipation essentiellement motrice des situations, dans le cas des coordinations instinctives ; un comportement est déjà virtuellement prêt ; il demande seulement un support objectif.” Simondon, Gilbert. *Imagination et invention: 1965-1966*. 2014:35.) As one of the foundations of his theory of imagination, Simondon stated: “[t]hese discoveries are important for a search for the origin of motion images [driving forces], because they show that the organism possesses a reserve of complex patterns of conduct that can be activated endogenously, when the motivations are sufficient; there is therefore a real biological basis of the imagination, prior to the experience of the object. [...] The action, pre-adapted to the object, is a true practical anticipation of its presence and even its structure; it postulates the object. The modalities of the object corresponding to the triggering of instinctive activities.” ‘Ces découvertes sont importantes pour une recherche de l’origine des images de mouvement, car elles montrent que l’organisme possède une réserve de schémas complexes de conduite pouvant être activés de manière endogène, lorsque les motivations sont suffisantes ; il existe donc une véritable base biologique de l’imaginaire, antérieurement à l’expérience de l’objet. [...] Le mouvement, préadapté à l’objet, est une véritable anticipation pratique de sa présence et même de sa structure ; il postule l’objet. Les modalités de l’objet correspondant au déclenchement des activités instinctives.’ Simondon, Gilbert. *Imagination et invention: 1965-1966*. 2014:33. My translation.

212 “L’image immédiate se distingue de l’image eidétique par le fait que l’image immédiate, très proche de la sensation et de la perception, conserve des caractères concrets dépourvus de signification ; dans l’image eidétique, les caractères concrets, tout en restant concrets, sont déjà sélectionnés dans le sens de leur fonction typique et significative (absence des ombres et des détails de sculpture des différentes pièces dans le jeu d’échecs, mais conservation des déplacements, directions et des positions) ; les caractères conservés par l’image eidétique constituent comme autant de points de soudure entre le sujet et son entourage ; ces points de soudure réservent les voies d’accès ultérieures du sujet aux objets du milieu ; ils offrent aussi des éléments pour une activité combinatoire.” Simondon, Gilbert. *Imagination et invention: 1965-1966*. 2014:108-9.

213 ‘une espèce de pandémonium flottant entre la situation d’objet et celle de sujet, s’interposant entre le vivant et le milieu.’ Simondon, Gilbert. *Imagination et invention: 1965-1966*. 2014:137.

214 ‘L’évolution de l’image-souvenir vers l’état de symbole est un certain processus d’abstraction, au sens où abstraction signifie « extraction à partir de » ; mais il s’agit d’une extraction des éléments de manifestation à partir des situations complètes ; ces termes extrêmes des situations, sortes de points-clefs porteurs des forces, se concrétisent pendant que le souvenir des organismes porteurs et des circonstances particulières se fond et s’estompe. L’image-souvenir est devenue symbole quand l’orientation, la direction particulière de la manifestation a perdu son univocité originelle devant la dualité possible des orientations.’ Simondon, Gilbert. *Imagination et invention: 1965-1966*. 2014:13.

215 ‘Les symboles ne sont pas situés par rapport au moi, ce qui fait qu’ils ne peuvent adapter le sujet comme organisme agissant à son milieu, à son territoire ; ils traduisent aussi bien la force des choses que les virtualités d’action du sujet ; ils sont des pouvoirs sans support, sans sujet aussi bien que sans milieu extérieur pour les insérer.’ Simondon, Gilbert. *Imagination et invention: 1965-1966*. 2014:137.

in the eidetic image, the concrete characters, while remaining concrete, are already selected in the sense of their typical and significant function (absence of shadows and sculptural details of the different pieces in the chess game, but conservation of movements, directions, and positions); the characters conserved by the eidetic image constitute like so many welding points between the subject and his surroundings; these welding points reserve the subject’s later access routes to the objects of the environment; they also offer elements for a combinatorial activity.”<sup>212</sup>

After experience, the image is integrated into and in relation to diverse images’ textures. Object-image, recollection-image, anticipation-image, or eidetic image are just some of the textures and systems of thoughts that images enable. These images are welding points or technical instruments/organs that inform actions, navigation, **orientation**, and emotions. They situate the emerging images spatially and temporally and participate in the production of meaning. Eidetic images specifically interested Simondon as they involved the first stage of abstraction without becoming what he defines as symbols; they correspond to situated abstractions that allow a transclarity in time and space as it is the system of thought through which other times and spaces are co-present in the experience. These images are concrete but have been filtered according to what is *relevant or actionable* for the sensory-motor body in the environment in relation to several **temporalities** and **spatialities**. This example is also essential for Simondon. It is a highly imageable example that outlines how images allow individuals and collectives to relate with their milieu and create meaning through embodied operations.

Then the next phase is the symbolization of the image. Through a process of abstraction of anticipation and experience, the image enters a system of symbols that is “a kind of pandemonium floating between the situation of object and that of subject, interposing itself between the living and the environment.”<sup>213</sup>

“The evolution of the recollection-image towards the symbolic state is a certain process of abstraction, in the sense that abstraction means ‘extraction from’; but it is an extraction of the elements of manifestation from whole situations; these extreme terms of situations, somewhat crucial force-carrying points, become concrete while the memory of the host organisms and the particular circumstances melts and fades away. The image-remembrance has become a symbol when the orientation, the particular direction of the manifestation has lost its original univocity in the face of the possible duality of orientations.”<sup>214</sup>

Symbols are virtual images floating between living beings and the world. They are extracted from anticipation and experience and possess a particular instrumental value; they mediate. They are pure affect, as

“[s]ymbols are not situated in relation to the self, which means that they cannot adapt the subject as an organism acting to its environment, to its territory; they translate both the force of things and the virtualities of action of the subject; they are powers without support, without subject as well as without external environment to insert them.”<sup>215</sup>

The world of symbols functions as a filter between the milieu and living beings, **transforming the cycle of imagination (and thus perception) into a dynamic interaction between living beings and their surroundings, pasts and phylogenetic inheritance**. It is not clear if symbols are tacit or explicit conscious mediators in the theory of Simondon. However, in his work, consciousness is a question of gradation.



A vast number of living beings develop it. Thus, in his theory, abstraction and symbols are not only human images; they encompass the dynamism of relations and interactions that is perception, as in the work of the ecological psychologist J.J. Gibson in his theory of affordances. He wrote:

“[t]he affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill. The verb to afford is found in the dictionary, but the noun affordance is not. I have made it up. I mean by it something that refers to both the environment and the animal in a way that no existing term does. It implies the complementarity of the animal and the environment.”<sup>216</sup>

216 Gibson, James J. *The Ecological Approach to Visual Perception*. 17th pr. New York: Psychology Press, 2011, chapter 8.

Perception is a dynamic interaction between living beings and their milieu, as what they perceive is already mediated because it is precisely what the milieu afforded them.

The last phase of the image, which transforms the series of imagination phases into a cycle, is the invention. The theory of invention of Simondon is extremely rich and dense. He discusses invention mainly as a problem resolution that occurs as a mediation between two a-priori incompatible orders of magnitude. He argues that invention is a reorganization of the set of symbols that can be externalized in, and supported by, tools, instruments, or other mediators. In his thesis, non-human living beings are proved to use several instruments and invent in the same fashion as humans. What interests us most in this last phase of the cycle of imagination is that **invention ends in a new image as a driving force or gesture, a new embodied relationship with the milieu that solves the encountered problem and starts the cycle of imagination once more**. The floating pandemonium is rearranged, and virtualities that the milieu did not afford a priori are suddenly transformed into actionable potentialities, as potential gesture-images. As an attempt to connect with the concept of affordances presented above, invention occurs as a mediation between two orders of magnitude that seemed incompatible beforehand, thanks to the use of image-symbols; this use provokes a reorganization of the set of image-symbols in themselves, and brings about a new image as driving force or gesture. This new sensory-motor movement allows affordances to emerge from the environment, transforming the milieu's potentialities. **Virtual images that existed in a minor way in the milieu are made real as potentials and become driving forces**.

What is then the relationship between performative spatialities, figurations, architectural knowledge, and this theory of imagination? As I introduced, I understand figurations as a conceptual category for the operatory historian or theorist, as much as an architectural image and mnemonic reserve reiterated through performances. Figurations are a socially and culturally defined set of gestures, which are performative in the sense that they are continuously reiterated. **As an inherited, incorporated, or learned repertoire, figurations enact the perceptive relationship between an individual and her milieu; the gesture-images that are potentially within her reach bring about the landscape of affordances that will emerge in the milieu**. In this sense, figurations are architectural images that constitute the core of what is reiterated through performative spatialities. They allow the insertion of the individual in the milieu as meaningful and oriented; they outline the pandemonium floating between the situation of object and that of subject, interposing itself between the living and the environment, as a dialogical and embodied knowledge. Figurations are an operatory knowledge that enact the performance of spatialities by outlining the dialogical process of imagination in space, between the landscape's potential images and the individual's driving forces and gestures.

Nevertheless, like images, figurations are entirely part of the process of imagination in its whole cycle. When figurations act as driving forces or gesture-images, experience resonates in the individual and the collective and produces other image textures. Figurations can be supported or mediated by externalized symbols or abstracted mental images that can, in return, lead to invention and the emergence of new driving forces (and new figurations), as in the case of the drawing operations.

In this sense, one can also analyze architectural **documents** in relation to figuration, not for what they represent, but in exploring how they provoke new driving forces, new gestures and landscapes of affordances, performative spatialities and potential images. Architectural **documents** are thus considered not as representing a future state but as a non-human body in the world, with its own agencies, leading to invention and new gestures. In this perspective, gestures, words, and other embodied practices and performances can bring about new spatialities in the same way as other lasting architectural **documents**.

Figurations stress that some architectural and spatial knowledge is fully embodied and performative as more-than-visual architectural images. While these images enact our performative spatialities and thus our gestures, subjectivities and the affordances of our milieu, they are entirely part of our cultures, despite the complexity of their textures. They are constituted by performances—situated socially, culturally and subjectively—which activate the milieu and its potentialities. They are in constant evolution, as the realm of the embodied image is affected by subjectivities, techniques of navigation and medias. **Thanks to this architectural and spatial knowledge, the milieu is oriented and meaningful, and the virtual images surrounding us are afforded as potentials through gesture-images.** Conversely, the disappearance of figurations and gesture-images (disrupted transmission of specific bodily techniques/performances) can collapse a system of meaning and upset the dialogical process of perception and imagination.

Figurations and performative spatialities do not follow a linear evolution pattern; their historicity is one of a body-to-body transmission, folded and enriched by individual gestural language, in which embodiment is considered as “a starting point for analyzing human participation in a cultural world.”<sup>217</sup>

As a relevant example, I could have discussed the drawing at the beginning of this chapter, which figures a morning meeting in the Sahrawi refugee camp. This spatiality possesses a rich history, entrenched in cultural, embodied, and oral memories profoundly related to the repertoire and its spatialities. However, as an example of figurations—now discussed as an object of research—as an incorporated and reiterated architectural image that brings about a landscape of affordance, I can, among others, consider the eventual discussion and jury of this thesis.

A jury doesn't require a hyper-specific material environment, as the non-human bodies entering the play are pretty standard and don't play a critical role in the interactions. On opening the door, there will indeed be tables and chairs arranged following specific tacit rules -social norms- that I will try to negotiate to the extent possible in order to have a fruitful discussion. The fact that the discussion will take place in this room brings about a set of driving forces and gestures-images that may have already been incorporated; some figurations have already been incorporated in the repertoire. These figurations bring about the landscape of affordances that regulate relations between the human and non-human bodies in the room. This performative spatiality relies on figurations, understood as specific incorporated spatial knowledge, that modulate the dialogue we will construct with the bodies in the room. Thus, if an architectural and spatial history of Ph.D. defense rooms could be based on the way they are planned and drawn within

217 Csordas, Thomas J. “Somatic Modes of Attention.” *Cultural Anthropology* 8, no. 2 (1993): 135.

universities, on their material history, another **operatory side** could be built following figurations. In this history, the performative relations amongst human and non-human bodies—social space— and the spatialities they produce would be the focus, along with the transmission of between generations of this embodied knowledge—and social norms and subjectivities—as well as the minor inventions and re-con-figurations at the scale of gestures.

## Architecture and the repertoire. Body-to-body historicity and migration of spatialities.

In the preceding chapters and sections, I described how spatialities are brought about by human and non-human bodies. Through operations emerge architectures and spatialities—i.e., **architectures of operations**—as economies of human and non-human bodies in relation to one another that co-operate and co-individuate. The spatial knowledge that brings about these **architectures of operations** resides in the repertoire as embodied capacities of co-operations and dialogue. It leads us toward architectural images—and imagination—as driving forces or gesture-images, which I have coined figurations. This section will outline **how gestures and figurations migrate from one moving body to another**. This performative loop transforms one's embodiment and gestures. Thus, its historicity is not linear, progressive, or developmental, but circular, minor, altered, and situated.

The **temporalities** that constitute the temporal frame through which we can observe the migration of figuration—and in which we can find agency—are different from those of the historical discourse. Even if highly entangled, they reside in tiny and minor details, such as the evolution of how an individual walks. To conclude this chapter, which thus far has attempted to outline figurations as object of study and performative spatialities as the field or site of investigation, I will try to describe their historicity and its corresponding agencies.

### The architectural histories of the repertoire and their temporalities.

In most texts discussing performativity, enactment and **reenactment** in architecture, the temporality of Architectural History is addressed; architects quoting other architects or architects reproducing a specific typology. In his essay *Architecture as enactment*, Sam Jacob exposes this performative loop of architectural history. Architectural projects are restaging themselves, the **past**, and the **future** to participate in the broader narrative. From this perspective, architecture is perceived as an enactment and **reenactment** of a historical language:

“Through the unfolding of architectural history we see culturally, technologically or programmatically redundant fragments of architecture reenacted. In each case, this re-



enactment of a pre-existing image is a radical new iteration. Like Churchill's idea of history, architecture's re-enactment presents a partial and fictionalised narrative. What architecture chooses to reenact, as well as the manner of its re-enactment, constitutes an ideological statement."<sup>218</sup>

In this motion, architecture is also performing the **reenactment** of social norms, as engrained in the technologies of bodily control and the reproduction of social norms. From one building to the other, and from one (implicit or not, conscious or not) quotation to the other, both the long-term cycle of material and technological determination and the set of prescribed behavior and practices are reiterated.<sup>219</sup> Meaning, and precisely architectural meaning—or meaning for these architects—is produced in this endogenous performative process, excluding inhabitants and users from the definition of architectural meaning-making. This performative loop exists throughout every building and planning discipline and enacts and structures the logics of the dominant historical discourse.

Nevertheless, this temporality is misleading; when meaning-making in spatialities is situated in the hand of the external figure of the architect or planner, the **obscure zone** that conceals the energetic, embodied, and operatory dimensions of space-making are reenacted. In other words, in considering enactment and **reenactment** only through the loop of the external architect or planner, we fail to escape the unproductive dialectics of **hylomorphism**.<sup>220</sup> In considering “embodiment as a starting point for analyzing human participation in a cultural world,”<sup>221</sup> **the temporality and performative loops of embodied ways of inhabiting and performing spatialities can be acknowledged, with its forms of enactment -figurations- and reenactment —performative spatialities**. However, one performative loop is not exclusive to others; they are all deeply intermingled and affect one another.

The temporality of the embodied, whose materiality appears not to be lasting but ephemeral and vanishing, is one of the performances and the repertoire. During previous decades, a broad debate has been ongoing on what remains of performance—both in the performance as an art piece or as any type of event considered bounded in time and space—through the so-called Archival turn of the arts and the social sciences. Rebecca Scheider in ‘Performance remains’ introduces this debate in commenting on this event:

“A simple example may serve us well: in a panel discussion at a Columbia University conference in 1997 on ‘the document’, archivists Mary Edsall and Catherine Johnson descried the problems of preserving performance, declaring that the practices of ‘body to body transmission’, such as dance and gesture, meant that ‘you lose a lot of history’. Such statements assume that memory cannot be housed in a body and remain, and thus that oral storytelling, live recitation, repeated gesture, and ritual enactment are not practices of telling or writing history. Such practices disappear. By this logic, being housed always in the live, ‘body to body transmission’ disappears, is lost, and thus is no transmission at all.”<sup>222</sup>

The logic of the **archive** implies that what is not stored within it is almost lost to history. The **archive** stores the original **document** and what remains of an event. The rest is lost. In the dialectic presented in this conference, a clear divide is outlined between memory and history, the first being composed of “gestures and habits, in skills passed down by unspoken traditions, in the body’s inherent self-knowledge, in unstudied reflexes and ingrained memories.”<sup>223</sup> The second is articulated through the **document** that lasts, and which could constitute an objective trace of the event—clearly opposed to the subjectivity enacted through performance.

218 Jacob, Sam. *Make It Real - Architecture as Enactment*. First edition. Moscow: Strelka Press, 2012:5.

219 As argued by Katarina Bonnevier: ‘[s]ince architecture is produced culturally, performativity is built into all architecture. For example, architecture prescribes behavior; bodies and social situations are engaged with building elements, settings and scenes. By repeating the same principles for how we build homes over and over again, these principles are naturalized. In Bonnevier, Katarina. *Behind Straight Curtains: Towards a Queer Feminist Theory of Architecture*. Trita-ARK, 2007,1. Stockholm: Axl Books [u.a.], 2007:369.

220 See chapter A, ‘Architectural hylomorphism. Spatial (hi)stories of the brick molder’ especially the three first sections, in which the critique of the hylomorphic gaze on the fabrication of a brick, issued from the thesis of Gilbert Simondon, sheds light on how the relation slave/master is reenacted and justified by the philosophical categories.

221 Csordas, Thomas J. “Somatic Modes of Attention.” *Cultural Anthropology* 8, no. 2 (1993): 135.

222 Schneider, Rebecca. “Performance Remains.” *Performance Research* 6, no. 2 (January 2001): 101.

223 Nora, Pierre. “Between Memory and History: Les Lieux de Mémoire.” *Representations* 26 (1989): 13.

However, this dialectic seems unproductive for two main reasons. On the one hand, **memory and history do not follow one after the other as stages of evolution**. There is no divide between primitive societies transmitting knowledge and memory through body-to-body transmission, and modern societies where memory has been transformed into history through the mediation of the **archive** and the historian. The relationship between memory and history is much more complex than this divide between two imaginary forms of knowledge. This supposed evolution is to be scrutinized through the lens of power relations and discursive authority. On the other hand, “**nothing that has ever happened should be regarded as lost for history**”;<sup>224</sup> performance remains. If the temporality of the performance does not produce a lasting object/**document** following the logic of the **archive**, it does not mean that no lasting thing is produced. Traces remain, are transmitted, created, and what is produced is not less accurate or legitimate than the **archival documents**.

This dialectical opposition between memory and history, based on the simplistic opposition between enduring materials and the ephemeral materiality of the performance that fades immediately, is a constructed view. It is here necessary to deconstruct it in order to better understand the migration of figurations and embodied spatial knowledge. In a way, the repertoire of embodied knowledge transmitted through performance is already an **archive**. Nevertheless, this **archive** adopts a very different logic of transmission and conservation than the western **archive** of stored **documents**. Performance should be, in this perspective, regarded as another way of accessing history and knowledge transmission.

“Taken from this perspective, performance does not disappear though its remains are immaterial- the set of acts and spectral meanings which haunt material in constant collective interaction, in constellation.”<sup>225</sup>

Things that remain can have very different logics than the lasting **documents** or objects. In distancing ourselves from a definition of performance as something ephemeral and vanishing, but instead understanding it “as both the act of remaining and a means of reappearance,”<sup>226</sup> we can escape this dialectic that devaluates embodied forms of knowledge. In this process of unlearning the sources of architectural history lies the possibility of unveiling another temporality of architectural histories and another performative loop that structures the migration of figurations and, thus, of embodiment in performative spatialities.

## Body as archive, repertoire of figurations and migration

Where are figurations stored, how can they endure the passing of time, and, if lost or forgotten, by what means can they reappear? One answer among many—that are all ways of accessing these forms of knowledge and afterlives—is in the pandemonium floating between the situation of object and that of subject, interposing itself between the living and the environment. One way to access this pandemonium is to think, as suggested by the dance scholar André Lepecki, the body as **archive**. As discussed, figurations are more-than-visual images, with diverse textures, that bring about specific relations with the milieu—affordances—or even, that are these relations. This means that it is only through performance that figurations are rendered present.<sup>227</sup> One can locate, in time and space, figurations in the moving body itself. To analyze this more precisely, I will make a detour to the field of dance theory.

224 Benjamin, Walter, Hannah Arendt, et Harry Zohn. *Illuminations*. New York: Schocken Books, 1986:254.

225 Schneider, Rebecca. “Performance Remains.” *Performance Research* 6, no. 2 (January 2001): 104.

226 Schneider, Rebecca. “Performance Remains.” *Performance Research* 6, no. 2 (January 2001): 103.

227 In this perspective, figurations appear to embody the paradox of the virtual spectral agency. As Massumi wrote, “[t]he virtual that cannot be felt also cannot but be felt, in its effects. When expressions of its effects are multiplied, the virtual fleetingly appears. Its fleeting is in the cracks between and the surfaces around the images.” In Massumi, Brian. *Parables for the Virtual: Movement, Affect, Sensation*. Post-Contemporary Interventions. Durham, NC: Duke University Press, 2002:135.

228 Lepecki, André. "The Body as Archive: Will to Re-Enact and the Afterlives of Dances." *Dance Research Journal* 42, no. 2 (2010): 34.

229 Lepecki, André. "The Body as Archive: Will to Re-Enact and the Afterlives of Dances." (2010): 38.

230 Lepecki, André. "The Body as Archive: Will to Re-Enact and the Afterlives of Dances." (2010): 38.

231 Lepecki, André. "The Body as Archive: Will to Re-Enact and the Afterlives of Dances." (2010): 45.

232 Lepecki, André. "The Body as Archive: Will to Re-Enact and the Afterlives of Dances." (2010): 45.

233 Lepecki, André. "The Body as Archive: Will to Re-Enact and the Afterlives of Dances." (2010): 45.

234 As I will introduce in the last chapter, reenactment, as a historical methodology, allows for ambiguous, fuzzy, and new subjectivities that grant access to other repertoires of figurations. As a particular mode of accessing histories and memories, reenactment is deeply transformative for the subjectivities and objects at play and allows for minor performative loops to be analyzed, understood, and subverted.

235 Schneider, Rebecca. "Performance Remains." *Performance Research* 6, no. 2 (January 2001): 103.

236 These organic forms of knowledge—that can be articulated with non-organic forms of knowledge and much as non and more-than-humans—can also leave physical traces in the milieu of the performance that one could read or interpret (as it is the task of the archaeologist or anthropologist); a process that constitutes a critical methodology of the operatory architectural historian that I will investigate further.

237 Povinelli, E. A. "The Woman on the Other Side of the Wall: Archiving the Otherwise in Postcolonial Digital Archives." *Differences* 22, no. 1 (January 1, 2011): 152.

In his book, André Lepecki discusses the current—starting decades ago—move of contemporary dance and performance toward a will to **archive**. He made clear that this will is not a nostalgic act of trying to overcome the failure in cultural memory that results from our historically alienated condition, produced by the exclusionary nature of the **archive**. On the contrary, he hypothesizes that "a body may have always already been nothing other than an **archive**."<sup>228</sup> He foresees **archives** in a Foucauldian sense as a transformative border that modifies "our very experiences of time, presence, identity, alterity, body, memory, **past**, **future**, subjectivity."<sup>229</sup> **Archives**, in this sense, are a system of transformation of "statements into events, of things into words, and of virtual into **actuals** (and vice versa)."<sup>230</sup>

In looking at past performances, the dancers and choreographers Lepecki cites do not aim at copying an artwork fully, at reproducing it. Instead, **pasts** are seen as possibilities of opening a "field of inventiveness and creativity."<sup>231</sup> They are transforming their own body into **archives**—as a system of transformation of things—or more precisely, they assume their bodies as **archives** and take advantage of the inventiveness and vitality that can emerge out of it. As an actual invention, "any concrete **actualization** of an artwork is constitutively composed by the reality of the virtual cloud surrounding it."<sup>232</sup> Foreseeing their bodies as an **archive**, "the task of the re-enactor to pick up a work's virtual (yet very concrete and specific) forces and to **actualize** that work's always incomplete, yet always consistent, multiple, and heterogeneously singular plane of composition."<sup>233</sup> In these experiments, there is no more difference between what is an **archive** and what is a body. The body becomes the pivot between a common process of archiving and reenacting.<sup>234</sup>

**Our bodies, images and gestures are the locus of a productive tension between various temporalities, and the performances we take part in everyday, in our common world, are reenactments—however inventive—of knowledge—figurations—that are an "act of remaining and a means of reappearance."**<sup>235</sup> Our bodies possess the means to access a repertoire of figurations, as image-gestures, floating potentials and virtual images, that could be described as a repertoire of performances that bring about relations with the milieu. Equally, the performance is the means of its own migration from one body to the other. Our bodies are the locus of sedimentation, in which these virtual images accumulate and never disappear, remaining latent. This floating pandemonium or repertoire of figurations is what remains of performance and performative spatialities.<sup>236</sup>

A wonderfully rich "library of knowledge never migrates from its organic form (memory, bodily praxis) to a standard text form (book, audio, or video recording),"<sup>237</sup> and constitutes the multiplicities of the repertoire that our bodies support and reenact. These repertoires, highly discussed in fields working with indigenous, **subjugated**, or subaltern knowledge, constitute the mechanisms through which the architectural knowledge and image I am trying to get in **contact** with, remains and reappears. Through their logic, one can analyze the historicity of this **subjugated** architectural knowledge, migrating body-to-body.

The repertoire of figurations is a specific embodied cultural mnemonic system. Migration from the repertoire requires presence, and its embodiment allows for the production and reproduction of knowledge. Due to the specificity of embodiment, which the **archive** does not possess, performances of the repertoire might remain the same or individuate with differences, as is the case for meaning-making, thus allowing individual and collective agency. With migration from one body to the other, the subjectivities—as spatio-temporal realities—alter the very gestures of the performance. This transmission produces an unusual cohabitation of this knowledge floating between the object and the subject, more akin to be described as relations and/or operations than as objects.



Consequently, the historicity of these performances profoundly differs from the **documents** of the **archive**; migration implies the proliferation of source, the outlining of a constellation of virtual and potential images, contrary to any synthesis allowed by a stable **document**. In this movement, the linearity of historical time is replaced by the circularity or spirality of embodiment in the repertoire. It is in this spirality or performative loop of transmission in the repertoire that lies the historicity of the **versant opératoire** of architectural knowledge.



| Fig. B2 | Photography of a performance organized by Joanne Nussbaum, Nathan Voyame, and Todor Manev during the edition 2019 of the Atlas Poliphilo in Vernier, Geneva, an Unité d'enseignement of the ENAC at EPFL, proposed by Aurélie Dupuis, Julien Lafontaine Carboni and Dieter Dietz.

### Designing spatialities (from) the repertoire.

May 2019. After a series of 10 workshops as part of the Atlas Poliphilo, a third-year course at EPFL for persons studying architecture and civil and environmental engineering, the creatures we call students proposed a performance in Vernier, an industrial neighborhood in Geneva. The aim of the course may sometimes be fuzzy, but one objective is clearly stated: to open up possible and unexpected **futurities** through embodiment.

The spatialities they worked on navigate between the calm and pleasant banks of the Rhone, and a densely built territory—industrial (the location of Geneva's airport, gas holders fed from Marseille, a series of car dealerships, etc.) and partially inhabited by individual houses. Other spaces support marginal uses as squats or land for the travelling communities. These spaces are covered with asphalt. Cars occupy the large majority of public spaces, and the tiny footpaths that exist are uninhabited because they appear entirely hostile for every form of life. A few industrial workers are all that appear alongside

the background of the immense metal boxes. This hostility to non-mechanical bodies is, in a way, a generic condition in the margins of contemporary European cities. Each city possesses its own specificities, but the rationalist logic of planning, which tends to erase every layer of histories—human and non-human—has created uncanny landscapes of industrialized erasures by excavating, flattening, in-filling, etc. In these landscapes, what we are afforded is dramatically standardized. Our bodies are guided smoothly and performatively through the olfactive and auditive din of cars and industries. The repertoire of figurations, our embodied imagination, and the potentialities of relations and dialogues have dried up; without embodied potentialities, no inventive **futurities** are foreseeable. Without motions, no tactility, and without tactility, no image.

Getting off the bus, we are guided by a creature, silently. For one kilometer or more along the main road, we walked silently. To the left is the airport fence, to the right, dozens of gas holders. Finally, at an intersection, we are asked to cross over the road. A speaker is suddenly turned on. The sounds of an urban railway station invade the space that is left between the noise of the cars. Three creatures are seated on the other side of the road, on the ground, in a place that would not norma(tivel)ly offer such uses. Greenlight. Children's laugh.

Even if the concepts I have developed throughout this chapter weren't already in my vocabulary—or that of our laboratoire at EPFL—I, nonetheless, consider this experience one of the turning points of this research. Through it, we were affected by the scarcity of our repertoire in such situations, resulting from both a lack of embodied imagination and the landscape's industrial erasures. And if, at first sight, the scale of the gesture seemed helpless, it equally became clear to us all that the repertoire of spatialities we were able to perform was a field of struggle. And I am not speaking here of a withering of experience<sup>238</sup> as implied by scales and **temporalities** that overflow the contours of experience. In effect, we observed an exhaustion of our repertoire, of the potential manifestation of gesture-images or driving forces, as an incapacity to make **contact**, be affected and be touched in return by the performed gestures. **What was at stake was a concealment of embodied spatial knowledge, supported by an environment.** Enacting other spatialities and **temporalities** from the repertoire and at the scale of a gesture suddenly lessened the exhaustion of the repertoire is lessened. In the depth of a gesture, it opened up a landscape of affordances and its **fields of potentialities**.

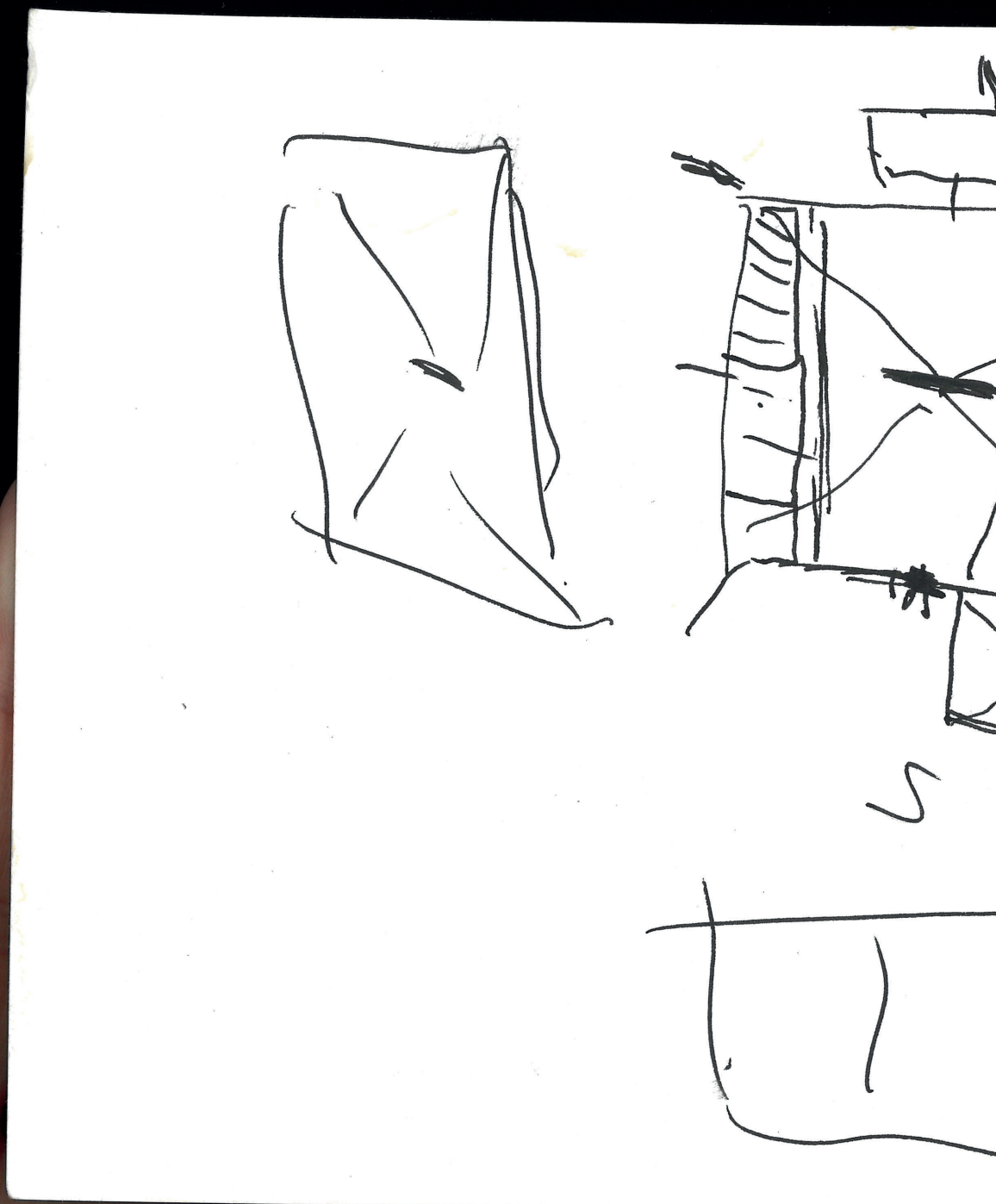
While it is still to be clarified what remains of these spatialities, the type of histories they build, the agency of human and non-human bodies in the enactment and **reenactment**, the relations of the architecture and the repertoire are hopefully laid out. An incredible array of architectural and spatial knowledge belongs to the repertoire, as embodied capacities of co-operating and individuating with and through a milieu, as an economy of human and non-human bodies. And **certain human bodies have inherited, learnt or incorporated a rich repertoire and possess forms of expertise that allow for embodied spatial and architectural imagination to expand dialogues with human and non-human bodies further**, as is the case for crafts.women and medieval masons.

In this chapter, I attempted to define the repertoire as a means of conservation, transmission, and migration of architectural and spatial knowledge, history, and imagination. As such, the **temporalities** of these architectural histories are of entirely different textures than the dominant architectural history discourse, as performance is “both the act of remaining and a means of reappearance”<sup>239</sup> of the figurations. The methodologies and relations between the researcher and the knowledge produced are profoundly troubled and demand further exploration. I aim to unravel these questions, and set out which kind of histories, migrations, spatial imagination and architecture it implies, in following a ghost in the Jaïma.

238 See the premise to chapter E, ‘Repertoire extractivism.’

239 Schneider, Rebecca. “Performance Remains.” *Performance Research* 6, no. 2 (January 2001): 103.

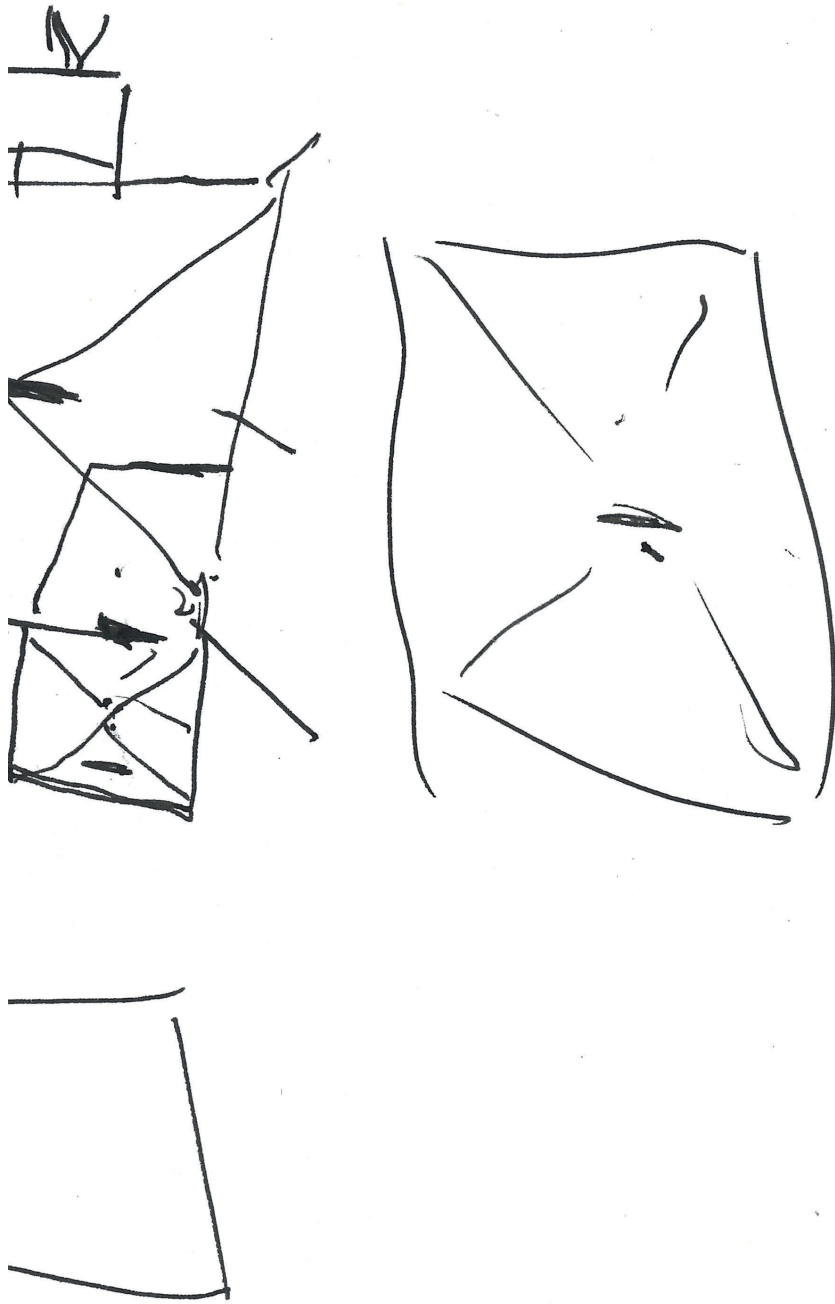




| Fig. C1 | The Jaïma. Disposition of the interior space and relations to other tents in the camp between 1980 and 1991. Diagram made with Lahsen Selki Sidi Buna during an interview with Gorba M. L. on the 8th of March 2020. We can see the women's object on the west side of the tent, the position of the kitchen on the East, with the fabric extension. Lahsen Selki Sidi Buna and Julien Lafontaine Carboni.



# CHAPTER C:



A ghost in the Jaïma.



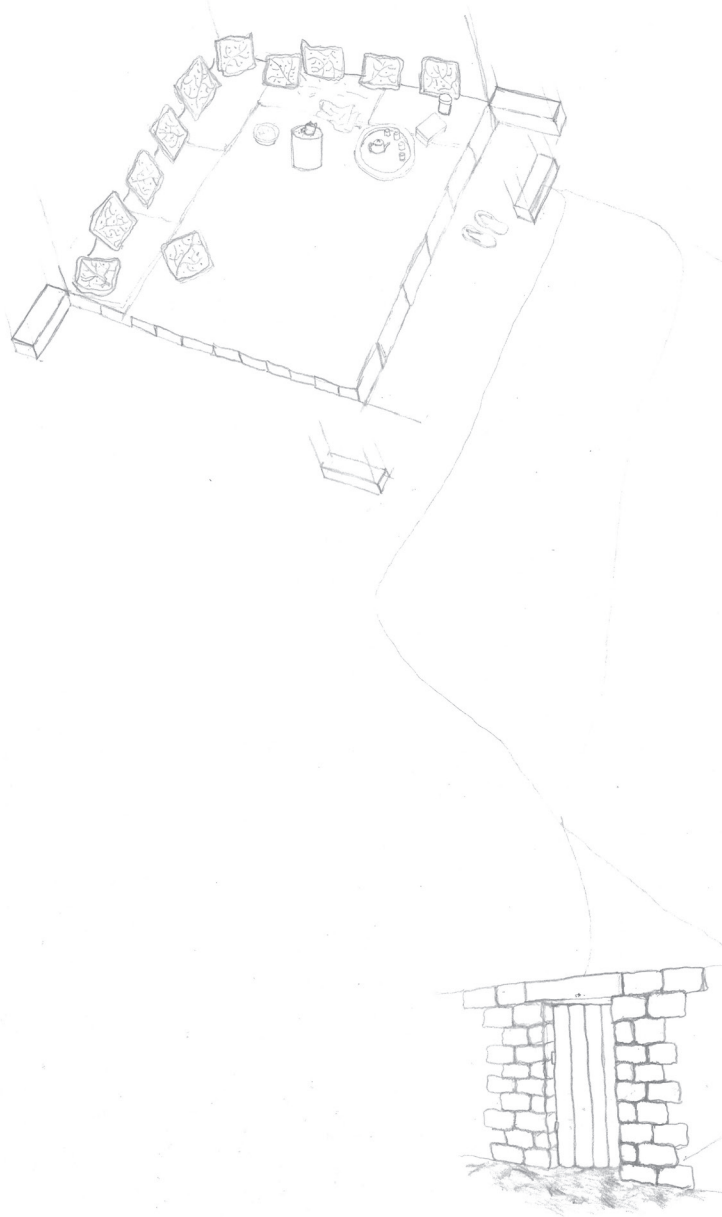
## A discussion with Gurba M. L.

It is around 6:30 pm when Lahsen Selki Sidi Buna and I leave the Jaïma of his wife, Zora; the place where she hosted me during my stay. We walk for some minutes through the barrio of Hausa, in the refugee camp of Smara, circulating between tents, sand constructions, and concrete cells. Some children are playing football outside; young men are shouting over a game of dominos—they play a Cuban version of the game, in teams of two, which requires a good deal of strategy and silent cooperation, and frequently provokes heated interactions between team members. The neighborhood is quiet, close to silent, and I feel how distant the camps are from the “public” infrastructure intended to host international visitors. Lahsen leads me for an informal discussion with Gurba M. L., a close friend of his mother. He decided to bring me to meet her after I complained that Mohamed Ali Laman, the director of the Oral Memory archiving project, chose to only interview men during the following days. Lahsen, perhaps the most precise researcher and interviewer I have ever met, decided that we would carry out a parallel set of discussion, during which he would introduce me to great women that marked his life and Sahrawi political activism. Most of the talks we had concerned life in the refugee camps between 1975 and 1991, when women were living there alone, organizing and building the Sahrawi state and its infrastructure. With Lahsen, we were interested in investigating the relations between the traditional nomadic Sahrawi encampment and the refugee camps. I was particularly interested in the extent to which the pastoralists’ knowledge was mobilized, transformed, and transmitted during this period of open war.<sup>240</sup> With Gurba M. L., the second person Lahsen invited me to speak with, we discussed the interior of the Jaïma and its relation with the other tents.

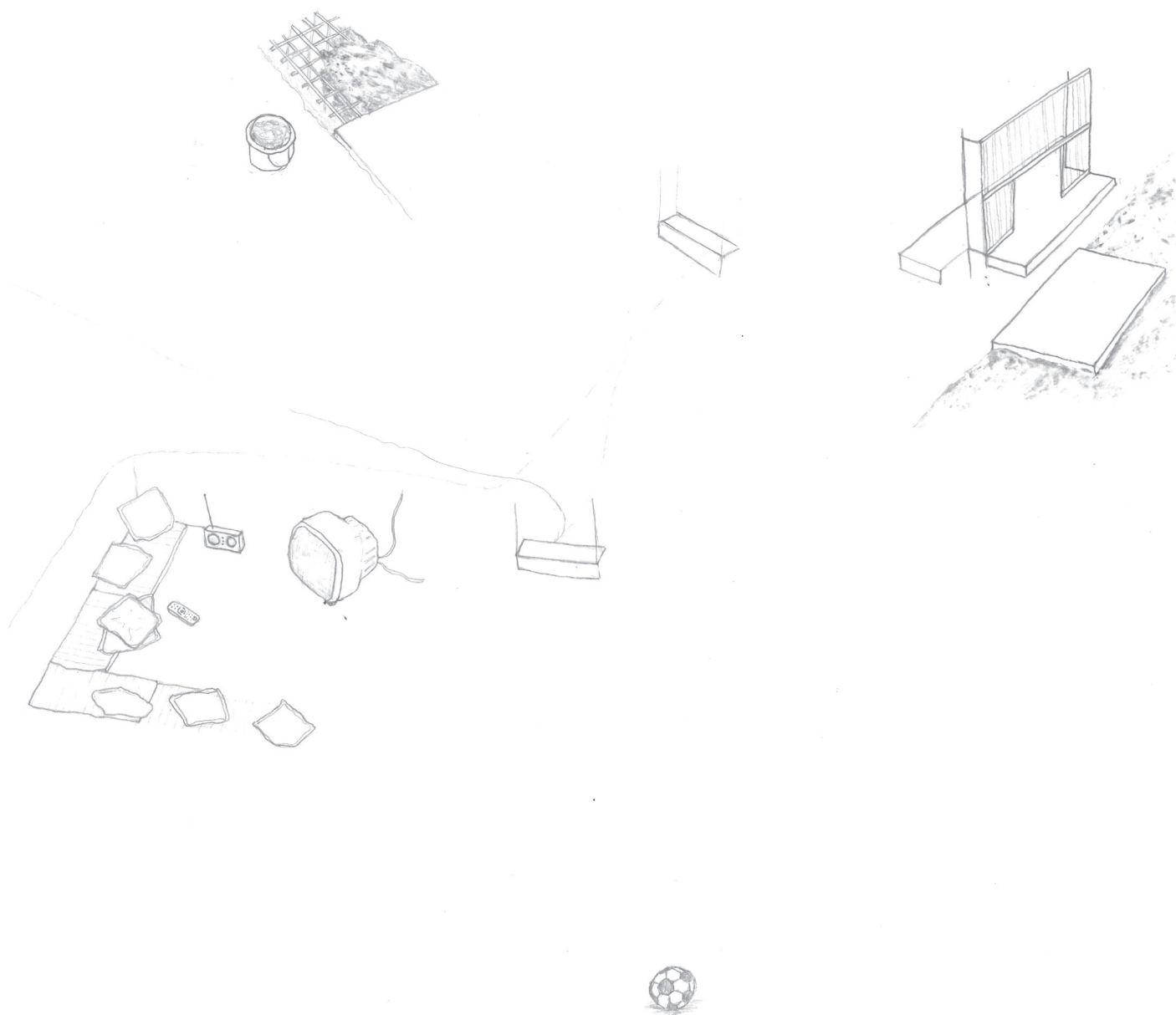
Some minutes before our walk through the Jaïmas of Hausa, Lahsen called Gurba to ask her if she would like to discuss with us. We are now entering the first courtyard of Gurba M. L.’s household. They seem to be a well-off family. A man is pouring a concrete slab at the back of the little family grocery store in the courtyard. Lahsen takes the occasion to describe the Sahrawi system of agreement that allows the exchange of services and avoids the use of money which is often overlooked to maintain good relationships in the community. The man pours the slab and, in exchange, Gurba’s family offer his family goods and cooking for several days.

240 I first got interested into this specific period as, at that time, the Sahrawis were called Ideal Refugees by various international institutions and NGOs. This status was built upon a highly organized self-administration of the refugee camps, democratic practices of election and political debates, a cultivated gender equality, the highest degree of literacy in the African Continent within an over-graduated population (in Cuba for most of the Sahrawis at this period, but also in Algeria, in Spain, France, Palestine), and, as argued by some scholars, the practice of a moderated form of Islam. See Fiddian-Qasmieh, Elena. *The Ideal Refugees: Gender, Islam, and the Sahrawi Politics of Survival*. First Edition. Gender, Culture, and Politics in the Middle East. Syracuse, New York: Syracuse University Press, 2014.





| Fig. C2 | Interview with Gurba  
M. L. Spatialities and materialities  
that supported our discussion.



The grocery store is one large room, with a door opening to the back courtyard and a window on the street, where people can order. Her shop is specific to residential neighborhoods and sells only complementary products to those which are sold in the market. Neighbors come here to buy one or two goods and to chat with Gurba and discuss news. On the other side of the courtyard is the main living unit. Built out of cinder blocks, which is a marker of wealth—even if poorly adapted to the climate—the interior is constituted of three rooms; one through which you enter and can access a second courtyard, and two others, distributed by the first, which are sleeping rooms (one for guests, and one for the family). The floor of the main room is subdivided into three zones, separated by small steps. We enter at the lower level. At this point we take off our shoes—which is unusual as typically, in Sahrawi Jāimas, the shoes are left outside of the house, so this part of the ground might be considered as an extended interior threshold. A step to the left of the room outlines a corridor toward the second courtyard. The corridors are covered with white tiles. The highest platform is covered with light-colored carpet and dozens of silver cushions. The room seems to be designed to impress the visitor with its elegance and fine details. The white tiles diffuse fresh air in the room while the darkness creates a calm and reposing atmosphere. The tray with things to prepare tea is already on the floor, beside the coal-fired stove. The positions of these items gently indicate where Gurba will sit and where we should stand. We enter alone, announcing our arrival by shouting out loud, “As-salam’Aleykoum,” Lahsen adding his family name. We sit here for five minutes before meeting Gurba.

When coming in, Gurba stops for several seconds at the entrance to welcome us. This welcome can take one or two minutes, as there is a series of questions that you ask the person several times to be sure that they are well, as well as their family, friends, etc. Gurba wears a large smile, an open and generous gaze, and is in good humor. During our discussion, she never ceases to share anecdotes to soften the harshness of her narrative, which cause her to laugh warmly. Gurba speaks a lot with *gestures*.<sup>241</sup> With hand movements, she describes places and the materiality and textures of tents, carpets, and other quotidian objects, using the objects in the room to describe their form and construction techniques. To talk about the hour or year, she does not employ the *international* nomenclature; she speaks of the sun’s position and the year’s name given by the *qabila* she originates from (the social organization before colonization, translated as *tribe*). She talks with ease and it is clear she finds pleasure in sharing her stories. Gurba was born in the year of Laras (1956), which means *the place where water is stored*. That year, the rain created thousands of temporary lakes in the Saharan dunes. She comes from the Southeast of Western Sahara, from Mijik, in the region of Tirik. She has lived as a nomad since 1970, the year of the Gshou—a camel with a white head and brown back, so named because the year was arid. During our discussion, she introduces us to the material conditions of life of the Sahrawi women and their families while in exile and their political organization.

In the traditional encampments of the Sahrawis, called *Frīq*, objects and bodies were arranged precisely according to the gendered division of labor. The men’s objects, related to war, politics, and large-scale economic exchanges, stood at the east of the tent. On the western side of the tent, all the women’s objects involved in domestic labor, the transformation of raw materials, craftswomanship, education and breeding of small livestock, and all the valuable objects, which pertain to women in traditional Sahrawi society. Along with these objects, the bodies of the inhabitants were also organized at the western and/or eastern side according to their gender. This economy of the non-human and human was deeply entrenched and supported the habits of the nomadic pastoralist population when living throughout the Western Sahara.

241 On embodied communication and gestures, see chapter B, ‘The architecture and the repertoire’, especially in the section ‘Figurations and the embodied architectural image.’



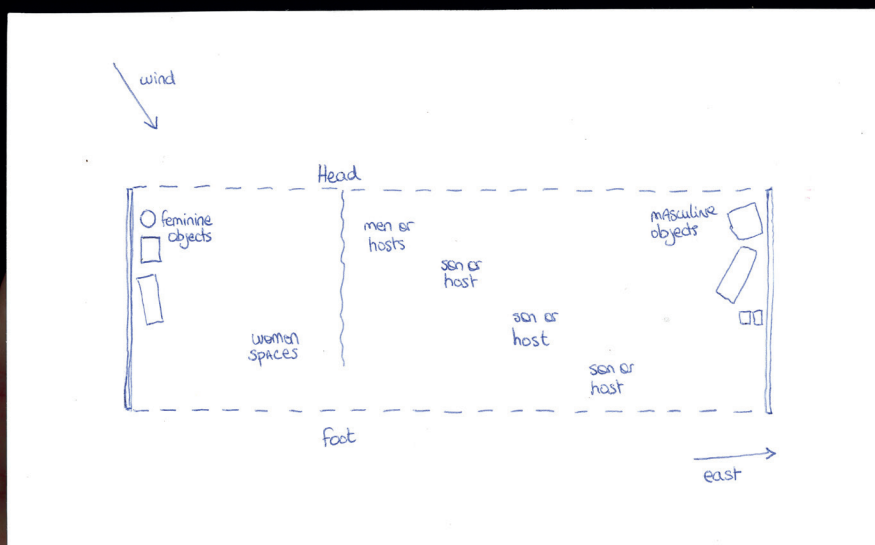


Fig. C3 | The Tent: Layout of the interior space. Diagram drawn by the author according to Sophie Caratini's anthropological studies of the Rgaybat, the main Qabila that constituted the Sahrawi population. We can see the feminine and masculine orientations of objects through the tent and the position of bodies. In Sophie Caratini. *Les Rgaybat: 1610 - 1934. 2: Territoire et société* (Paris: Éd. L'Harmattan, 1989). Julien Lafontaine Carboni.

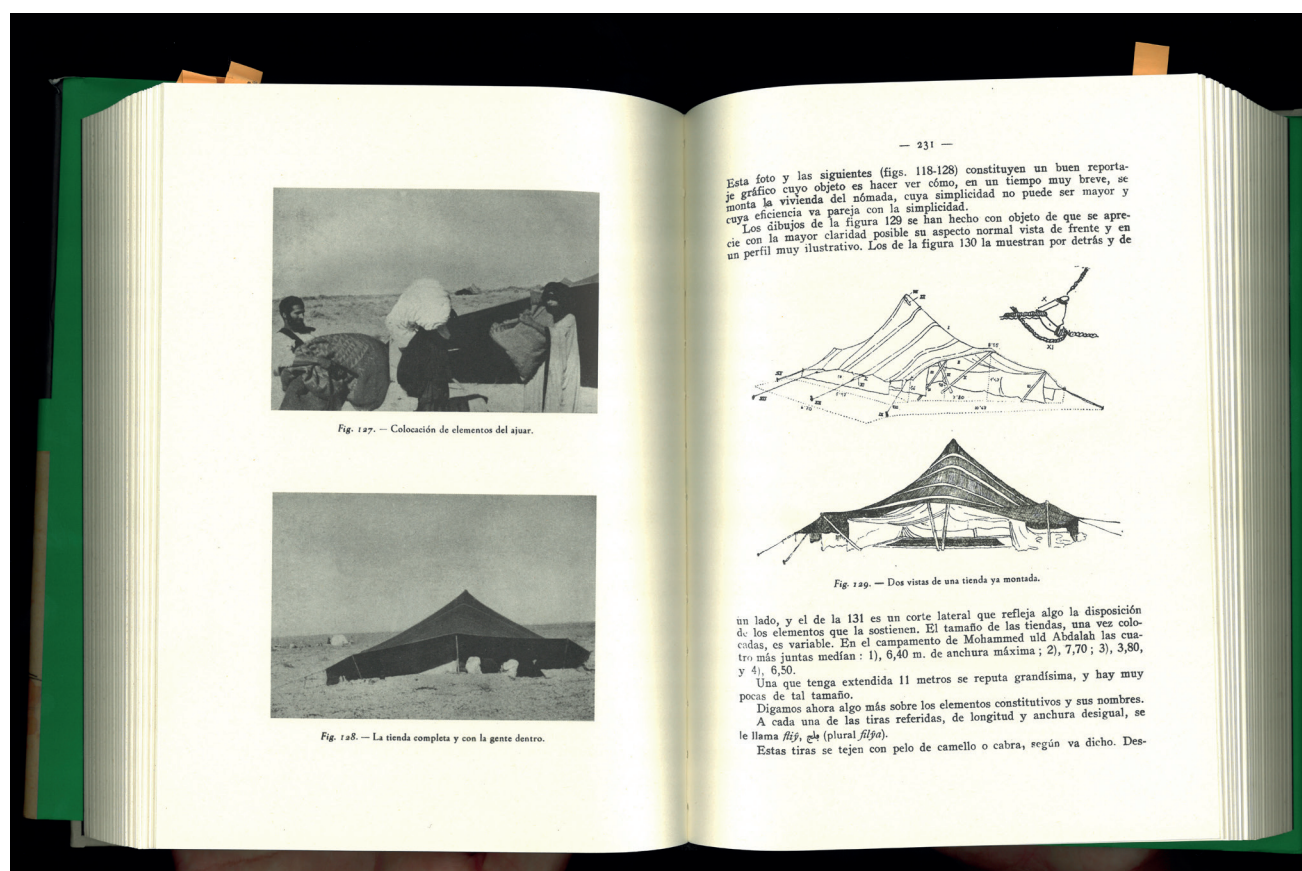


Fig. C4 | Partial view of a Frîq with two Jaïmas and other drawings and photography from Caro Baroja. Source: Baroja, J. C. (1955). *Estudios saharianos*. Instituto de Estudios Africanos.

Dislocated from their traditional encampments and arriving in the refugee camps, the material conditions of Sahrawi life shifted dramatically.<sup>242</sup> All the constraints that came with the status of refugees led to the abandonment of the traditional *Jaïma*, a structure made of goat and camel wool, for two main reasons. The first is material: through the exodus toward Algeria, the Sahrawis had to leave their herds behind to hide from the aerial attacks of the Moroccan and French army. Consequently, there were no herds in most refugee camps<sup>243</sup> and so no wool to manufacture the tents. Secondly, the social economy of support that permitted the new bride to weave their tent before a wedding required the work of several women for several months. The workload of women in the refugee camps (caring for family and injured people, teaching, building the camps, their infrastructures and indeed the Sahrawi state) did not permit the continuation of this tradition, which had previously enacted a network of solidarity between women within the *Qabila*.

242 For more information on the lives in the refugee camps between 1975 and 1995, see the introduction.

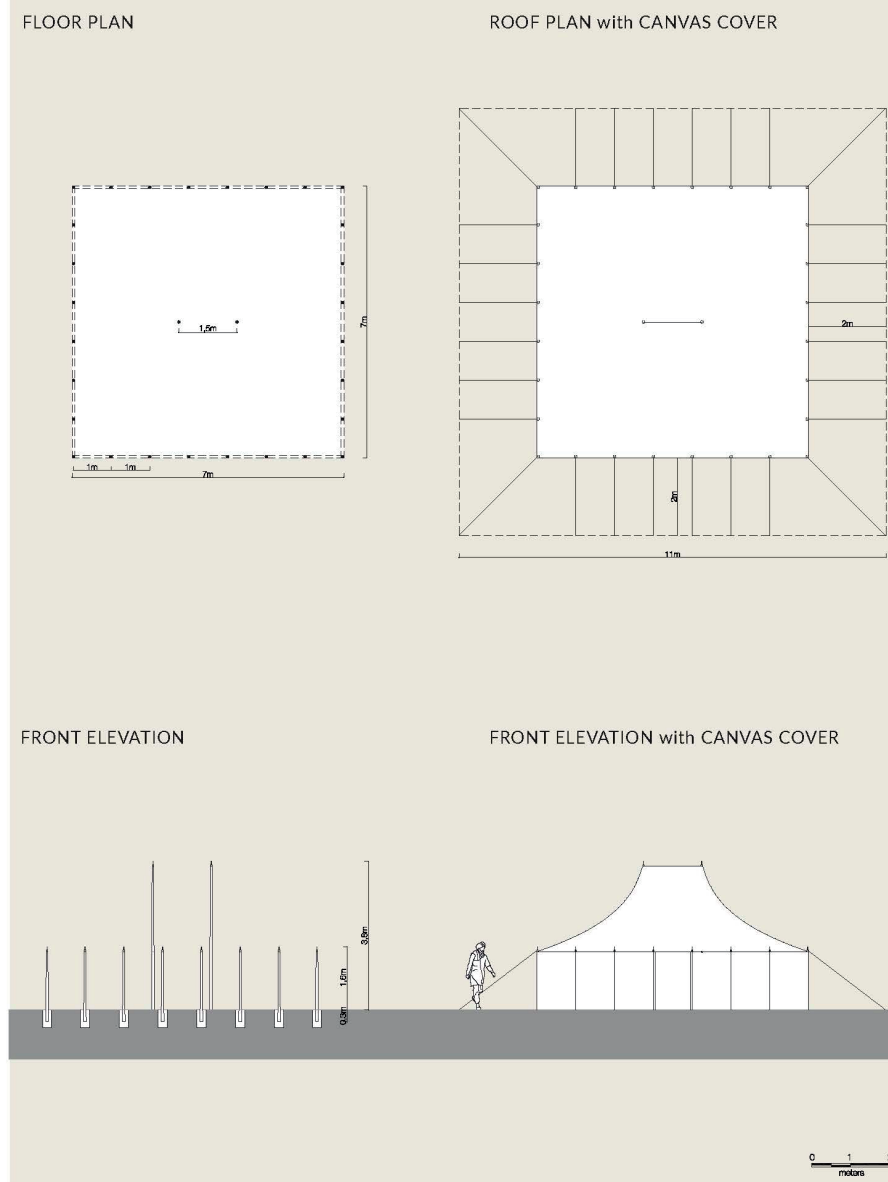
243 Except in Dajla, and other small encampments at the South-East of Tindouf, which hosted Sahrawi populations that were not in Western Sahara during the invasion, but moving in Mauritania, Mali, or Algeria.



| Fig. C5 | View of Dajla, where the tents of NGOs, sand-brick constructions and concrete block constructions are interwoven. We see a garden in the background, of mostly dates and tomatoes, and further, the ruins of one of the first sand-brick buildings of Dajla, built by women in the eighties. Photography by the author, March 2020.

Directly after settling near Tindouf, the Sahrawi people were provided with some tents from the UNHCR. However, as there were not nearly enough of them, they were mainly used to host temporary hospitals and schools. At this time, women were using their *Melfas* (Sahrawi veil) to temper the climate for their families and relatives. Some years later, in the beginning of 1980, all families (made up of a significant number of people; grandmother, sisters and aunts, and children) were given one tent, and these became the main domestic landscape of the Sahrawi in exile. The tents remain today, and for most families, serve as the main “living room,” especially for elders. They are now entirely lined with fabrics and carpets in the interior to lower the temperature and make it hospitable.

TECHNICAL DRAWINGS



| Fig. C6 | Official design documents of the “Tuareg Tent” produced by UNHCR Shelter and Settlement Section UNHCR, “Shelter Design Catalogue,” January 2016, <https://cms.emergency.unhcr.org/documents/11982/57181/Shelter+Design+Catalogue+January+2016/a891fdb2-4ef9-42d9-bf0f-c12002b3652e> .

When settling in these new tents, the women organized objects and bodies according to the same economy as the traditional Jaïmas. As we see on the diagram presented at the beginning of this chapter, their objects and tools were arranged on the western side, with their clothes and those of their children. At this moment, all men were absent from the camp as they had been mobilized due to the ongoing conflict. They only came back from time to time, if they ever came back at all. As Gurba told us, at this point, women refused to occupy the men’s side of the tent. Their absences were materialized by a void of objects and bodies at the eastern side of the NGO’s tents that we can also observe as a negative in the diagram. Despite the high risk of fire caused by the close proximity of the family’s objects and the cooking fire, the women refused to occupy the void and instead chose to maintain their everyday habits as a way of reclaiming their land and their husbands. And despite several dramatic fires that burnt what little they still possessed to ashes, they continued to shape the economy of their domestic landscape according to their entrenched nomadic habits.





| Fig. C7 | Women digging and mixing sand with water to prepare the making of bricks, probably early eighties. Source: Archive of the ministry of information of the SADR.

Until the eighties, the interior of the tents remained the same, until some of the women started to install fabric extensions on the south-east side of the tent (for better air circulation). The slight separation of the extension allowed for a drastic reduction in the number of fires. Nevertheless, these extensions allowed women to continue to avoid occupying the space left by the men's absence. Starting in 1985, by which time women already built several pieces of public infrastructure and possessed both the knowledge and the time (mostly at night, when the main tasks were finished) to manufacture sand bricks, the fabric extensions were replaced by the first domestic built element of the refugee camps. Tiny kitchens started to populate the landscape, and their position, south-east of the main living room, continues as a new norm for the organization of the camps. In this case, the absence of men had a significant agency on and through bodies and space.

In this chapter, I propose understanding these absences as ghosts, as something absent but which act in the present and the actual. My encounter with Gurba and her pasts allowed me to grasp how embodied knowledge and silent pasts remain, act through us, beyond and beneath language, and through non-human bodies and their *material speech acts*, and thus, can be understood as a form of spatial agency through the repertoire. With these gestures, she shared with me how figurations brought about architectures of operations, how they were transmitted body-to-body, and how she invented through embodied operations new economies of human and non-human bodies. Thus, I will try to frame this anachronistic spectral agency as a figure that addresses two temporalities of spatial and architectural agency, shaping performative spatialities and transforming building norms. First, ghosts inhabit and dwell around us and with us, in a common affective landscape and economy of the non-human and the human, in which absence comprises *acts of remaining and means of reappearance*.

Second, ghosts are a specific form of virtuality, a touch of pasts bound to traumatic experience and broken conditions. They emerge as a lack of understanding or oblivion through **contact** with a structure of knowledge that is no longer or not yet known. They inhabit in this temporal and epistemological breach, in the plural temporalities of hospitality that bodies can actualize.

In exploring this diagram, and remembering the words of Gurba, I consider the ghostly presence of the men as an occasion to reformulate the western academic conceptualization of time and duration in space. To understand their a/effective reappearance, they require another approach to afterlives of events. With this reformulation, I will ask why do ghosts appear and what are the structures that provoke this anachronistic agency? I will question how they haunt and act, by hypothesizing that they inhabit our broken relation with the worlds and thus that they are actualized through our **repertoire of figurations**. In order to go beyond a psychological understanding of pasts and sketch a non-anthropocentric theory of ghosts, I will investigate the more-than-human ecologies of memory and how non-humans are also affected by pasts, making non-human memories exerting forces in the present. An essential **ethical** question equally raises: why should we engage with ghosts, both in this precise context and in the architectural discipline and (hi)story? From Gurba's experience, I aim at creating the basis for one critical axiom of this research, that "nothing that has ever happened should be regarded as lost to history."<sup>244</sup> Making **contact** with ghostly presences demands hospitality. Hospitality means to welcome the touch of ghosts and their a/effect not as something to reject, but which offers access to an unknown, forgotten, or concealed dimension of pasts. Hospitality makes space for the temporalities of ghosts to be actualized. As a strategic spatial practice, hospitality constitutes a means to render corporeal futurities, countering their preemption and concealment by institutional violence. By entering into dialogue with ghosts and analyzing their agency, there is an opportunity to frame the agency of the **repertoire of figurations**, its temporal modalities, intergenerational dynamics, its lost futurities, and how this **repertoire** remains and dwells, in human and non-human affective landscapes, as echoes of their broken relations.

## Radical coexistence of pasts, futurities, past futurities, and future pasts. A/Effective pasts.

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Within a linear conception of time, ghosts cannot exist. “A traditional scholar does not believe in ghosts—nor in all that could be called the virtual space of spectrality.”<sup>245</sup> Within such a conception of time, what is present acts, and what is not, doesn’t. *To be or not to be* is the most “objective” reading that western episteme can produce. A traditional/mainstream—architectural—scholar maintains the divides between what is dead and what is alive, the field of reality and the field of fiction, the actual and the virtual, the past, the present, and the future. Ghosts pertain to children’s fantasy, Edgar Allan Poe’s novels, or esoteric beliefs. **Within this distant reading of a past past that articulates time and agency in terms of presence, how can we describe, analyze and theorize the void left in the Jaïmas for such a long period?** How can we explain this void, which seems to exceed the logic and rational of the traditional scholar? I argue that we need to escape these dialectics in order to approach another understanding of time and co-presence to frame the eeriness of this agency.

The figure of the ghost and its haunting, as a socio-spatial reality, will help us here to counter a traditional approach of time and the possible relations between pasts, futurities, and presents. While men are not physically present in the Jaïma, they can neither be said to be completely absent, enacting an a-priori paradoxical a/effective presence. This a/effective presence suggests that *past presents* were somehow made real and acted upon in the present. This agency cannot be explained if pasts are a/effectively passed over. Eeriness and ghosts emerge from this impossibility of being completely passed, the lack of explanation, the deficit of knowledge, on the threshold where logic is blurred. As proposed by Mark Fischer in his essay *The weird and the eerie*, eeriness “occurs either when there is something present where there should be nothing, or there is nothing present when there should be something.”<sup>246</sup> Eeriness is brought about by a human and non-human economy of knowledge and memory which exceeds the logics of what *should be* and the reality of what *is not*.

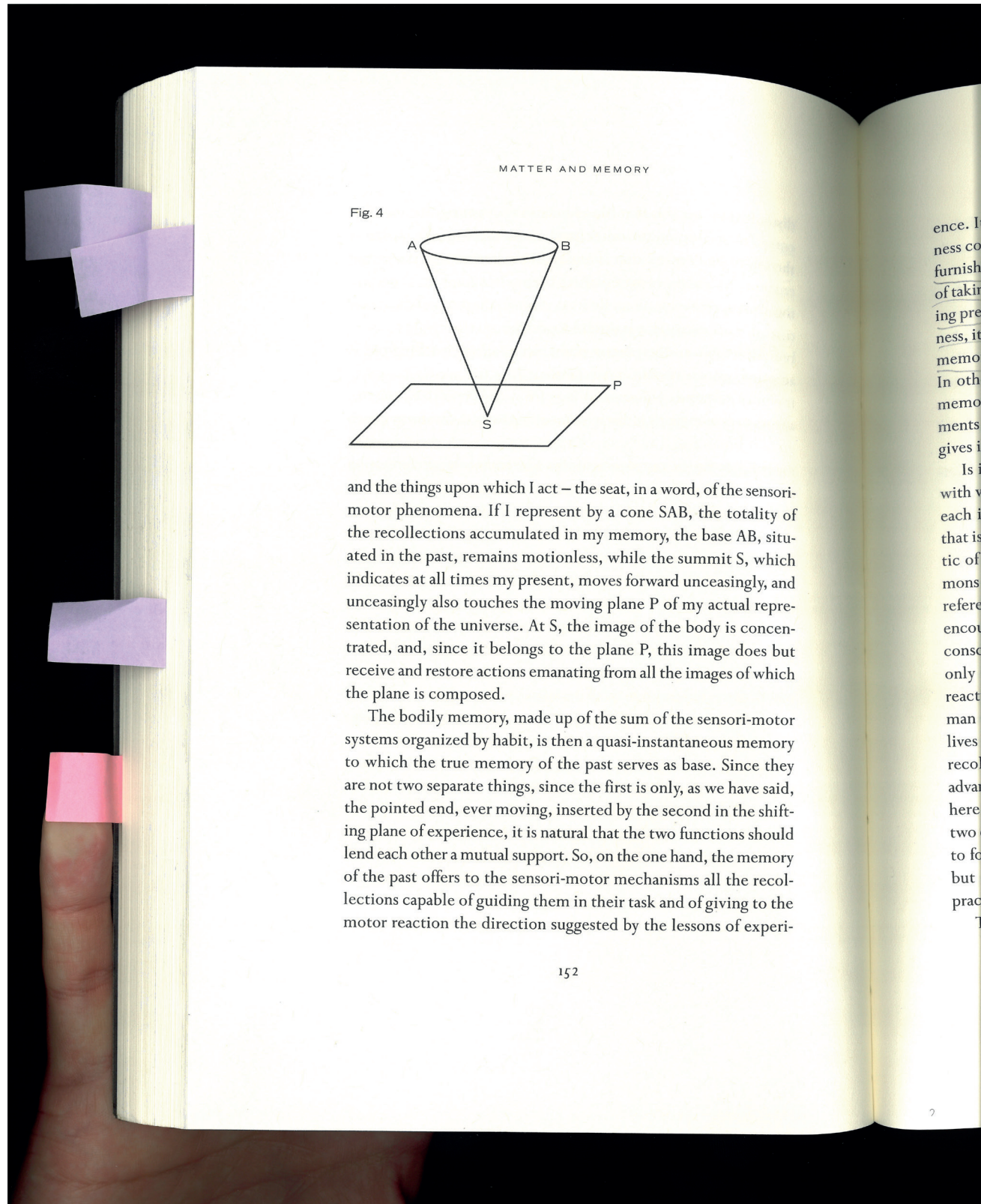
Henri Bergson outlined one possible model of understanding of these breaches in the relations between pasts, presents, and futurities, notably in his essay *Matter and Memory*. This essay attempts to counter the new conception of time that emerged during his life, based on psychoanalytical theories—mostly those of Freud—which reduced time to an anthropic and unconscious force, by proposing non-anthropocentric duration as a core of every ontology, whether graspable or not by the psychological realm. This work has been vital for the research and essays of some crucial references in this thesis, notably

<sup>245</sup> Derrida, Jacques. *Specters of Marx: The State of the Debt, the Work of Mourning, and the New International*. New York: Routledge, 1994:11.

<sup>246</sup> Fisher, Mark. *The Weird and the Eerie*. Third edition. London: Repeater Books, 2016:61.



Simondon and his ontology defined by a temporal consideration of individuation, and Deleuze and Guattari in their conceptualization of the actual and the virtual. For Bergson, the past and the present co-exist along with one another. **Pasts can't be passed over but always brought to a plane of latency alongside the current moment, which can affect us. Pasts enact the actual in offering it its condition of possibility.**



| Fig. C8 | Diagram figuring the actual plane of the actual P, the sensory-motor body S, and the cone of the pure memory, or the virtual. S is also a point in a spatio-temporal continuum that actualizes the virtual onto the plan of the actual. In Bergson, Henri. *Matter and Memory*. New York: Zone Books, 1988:162.

Pasts and presents are not considered as successive but as radically coextensive and co-existing. This radical coexistence is necessary. Otherwise, pasts could not be constituted from the present and the other way around. As written by Bergson:

“This amounts to saying that between the sensori-motor mechanisms figured by the point S and the totality of the memories disposed in AB there is room, as we indicated in the preceding chapter, for a thousand repetitions of our psychic life, figured by as many sections A'B', A “B”, etc., of the same cone.”<sup>247</sup>

P being the plane of the actual, or the present, and S being the sensory-motor apparatus,<sup>248</sup> or the body, this diagram articulates his spatio-temporal theory in placing the body as a threshold that weaves and threads together plural temporalities. The body, “sensor of change, is a transducer of the virtual,”<sup>249</sup> and allows for the entanglement of realities. Nevertheless, as the latent plane of the virtual, the cone AB cannot be fully transferred onto the plane of the actual. This plane is radically coexistent but completely exterior, differing in texture. The cuts in the cone (AB, A'B', A”B”...) can be folded on themselves, **reducing the distance** to S, but their transfer onto the plane of the actual is a translation. This distance created by the difference in texture is a productive tension, a force that allows for plural temporalities to emerge. This process has been named by Deleuze and Guattari as *actualization*; **the process of bringing virtualities into the actual, pasts into the present, and rendering unforeseen emergent realities a/effective through bodies**. Nevertheless, this entanglement of realities is not an aggregative process:

“it is not by a mechanical adjunction of more and more numerous elements which, while remaining unmoved, it attracts around it, but rather by an expansion of the entire consciousness which, spreading out over a larger area, discovers the fuller detail of its wealth. So a nebulous mass, seen through more and more powerful telescopes, resolves itself into an ever greater number of stars.”<sup>250</sup>

In other words, actualization **is not about adding more to the actual, but a matter of reducing the distance**—between the planes—to **reach** a more precise view of the grain of realities, to augment the surface of **contact** with worldly textures of pasts, and futurities. The body forms the basis, through a peculiar regime of attention, for a/effective virtualities and richer possible relations between pasts, presents, and futurities. These virtualities have always been here, and *actualization* is merely a question of perception, attention and access to pasts we are not affected by at the moment; “nothing that has ever happened should be regarded as lost for history.”<sup>251</sup>

This hypothesis of a radical coexistence of pasts, presents, and futurities has been set out to argue that the ghosts of men in the Jāīmas have always been there and that women translated their presence as a/effective in the actual. It is not important whether this actualization is unconscious, or if it is intentional; these concepts have been rendered obsolete in this configuration. **Our affective landscapes, human and non-human economies that support our everyday habits, are also populated by ghosts, virtual images, and minor existences that act upon and through us in the performative spatialities we build**. Here, the figure of the ghost creates the possibility of anachronism in these spatialities and their understanding. It sheds light on a failure of concealment of pasts to a *past* past, short-circuiting the obsolete conceptualizations of scholars of time and space. Every action, movement, **gesture** of our **repertoire** is haunted by pasts and sometimes, ghosts, as specific kinds of a/effective pasts. **Through these gestures, spectral agencies are rendered a/effective—agencies of bodies that are not anymore, or not yet, but that act in the present**.

247 And he continues: ‘We tend to scatter ourselves over AB in the measure that we detach ourselves from our sensory and motor state to live in the life of dreams; we tend to concentrate ourselves in S in the measure that we attach ourselves more firmly to the present reality, responding by motor reactions to sensory stimulation. In point of fact, the normal self never stays in either of these extreme positions; it moves between them, adopts in turn the positions corresponding to the intermediate sections, or, in other words, gives to its representations just enough image and just enough idea for them to be able to lend useful aid to the present action.’ Bergson, Henri. *Matter and Memory*. New York: Zone Books, 1988:162-3.

248 At this point in his essay, Bergson is still laying the ground of his theory from within an anthropic understanding of memory. Nevertheless, further, and as a trap designed for the psychoanalyst reader, he extends the ontology of the S to every form of duration, being it human, non-human, beyond the living, the animate and the biological to the silenced materialities of the universe.

249 Massumi, Brian. *Parables for the Virtual: Movement, Affect, Sensation*. Post-Contemporary Interventions. Durham, NC: Duke University Press, 2002:135.

250 Bergson, Henri. *Matter and Memory*. New York: Zone Books, 1988:165-6.

251 Benjamin, Walter, Hannah Arendt, et Harry Zohn. *Illuminations*. New York: Schocken Books, 1986:254.

252 On gestures as a spatio-temporal modalities of (architectural) knowledge conservation and circulation, see chapter B, 'The architecture and the repertoire', especially the section 'The repertoire, from techniques of the body to performative spatialities.'

From this perspective, ghosts are a way in which pasts-but also past futurities and future pasts—remain and reappear, our **gestures** being their acts of remaining and their means of reappearance, augmentation of the surface of **contact**, and entanglement of common futurities.<sup>252</sup> Understood as specific virtualities, using the words of Bergson, actualized through sensory-motor apparatus, ghosts advocate that pasts never pass away, but along. Through specific attentional regimes and operations of actualization, **repertoires** of practices and **figurations**, ghosts could potentially embody a methodology for historical research, enacting **contact** with the past through a/effect. In this way, agencies of plural temporalities are not rendered visible or *perceptible* but a/effective, radically questioning the researcher's position and their relation to pasts. In taking the stance that nothing should be regarded as lost, ghostly **contacts** stress the possibility of a history of material forces, in which the historian allows herself to make **contact** with silenced and buried pasts, to be affected by and enter into dialogue with them, while foreseeing their unnoticed, albeit real, agencies. Moreover, these ghostly **contacts** give agency to hospitality and reparation as strategic embodied spatial practices, making space for plural temporalities and concealed futurities.

Through these spectral agencies, pasts and ghosts enter into a play of **performative spatialities** through bodies of human and non-human agents. In this sense, they do not only affect the performative loop of the actual. In fact, their textures have agency on various temporal and performative loops. Due to the strategic hospitality of women in the case of the Jaïma and its kitchen, the men's ghosts did not only affect spatialities during the first years of the camp; they also critically affected the forces that shaped the norms of the current kitchen, more than forty years later, through a continued modification to the economy of objects and bodies that supports everyday life.

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## **"Surpassed by modern education." Afterlives of institutional violence.**

Discussing how pasts, futurities, and presents are radically co-existing alongside one another, on various planes and textures of reality has allowed us to understand how the past can affect the actual through entangled bodies. These agencies, through time, outline the figure of the ghost as one of the ways to tackle the eeriness of this **contact**. A critical question remains to be addressed: why? Why do ghosts, as one of the pressures of pasts in the present, appear and haunt? How are they produced, what are they the symptom of? In other words, what conditions bring about the production of ghosts? To situate these questions, in the context of the Jaïma, why is it that the absence of men can be understood as ghostly or as a form of haunting? And why is it that this ghost appears at this moment?

The first influential essay that addresses ghosts and haunting is *Das Unheimlich* by Freud, published in 1919. As highlighted by the architectural theorist Antony Vidler, *Unheimlich* is literally translated as unhomeliness; the unhomely emerges out of a condition that was once familiar and homely, but changes to an estranged and unhomely experience. This process of estrangement from the house or the city, as a "fundamental propensity of the familiar to turn on its owners, suddenly to become defamiliarized,



derealized, as if in a dream,”<sup>253</sup> is the cornerstone of the understanding of haunting and of ghosts until today. Widely translated in English as *The Uncanny*, the essay developed in a particularly accented environment of reflection in Europe. During the nineteenth century, a new realm of the real emerged, an entanglement of late romanticism and a science ambitioning to exhaust the real. The camera and the phonograph brought past performance into **contact** with the actual, and blurred the borders between the here, the now, the there and the before. In literature, a new genre emerged, as we see, for example, in the novels of Edgar Allan Poe, which permitted a bourgeois experience of terror. The literary genres analyzed by Freud propose a regular pattern of contrast between a secured interiority and the invasion or entry of an external entity, a stranger to this world. It was argued that this taste for the uncanny and fear within bourgeois experience came from, or at least correlate with, a deep insecurity concerning social organization. The Industrial Revolution in Europe brought about new class systems; neither the proletariat nor the bourgeois were at home in their new homes. These social transformations, class change, and urban exodus destroyed pre-modern spatial and social bonds, emphasized by the birth of a new information society. Individuals were, as developed by Marx in his essays on alienation, estranged from themselves, as their relations with their milieu shifted dramatically. Generalized in modern cities, modern anxiety and the uncanny extended beyond novels and fictions to the common world of the everyday, leaving behind the haunted house to create estranged urban settings. The development of modern metropolises in the nineteenth century was the backdrop of estrangement to oneself. This phenomenon was psychologized and pathologized throughout the century, understood through various phobias or neuroses. The *Unheimlich* became more and more associated with a sort of nostalgia of a pre-modern world, in which a sense of belonging and dwelling existed, as we find in the essays of Heidegger, Bachelard, or Benjamin. The inter- and post-war periods rapidly became aesthetic and historical categories to analyze, with all their fears of repetitions and unbearable traumas.

In his essay, Freud attempted to frame the uncanny as quality of feeling. According to him, it emerges as a frightening experience, blurring the limits between image and reality. The haunted individual is out of her depth and loses her sense of reality. For Freud, its origins are double. First, it is the return and revival of “repressed infantile complexes, from the castration complex, womb-phantasies, etc.”<sup>254</sup> These childish relations to the world, as immature logical systems, provide erroneous rationalities of explanation for specific situations, allowing for the uncanny to emerge. Freud does not have trouble explaining these kinds of psychological mechanisms, as he is used to infantile complexes such as Oedipus, and indeed as they are much less common than the second type. On the other hand, the uncanny feeling also appears with **contact** with primitive beliefs, “surpassed by modern education”:

“We—or our primitive forefathers—once believed that they actually happened. Nowadays we no longer believe in them, we have surmounted these modes of thoughts; but we do not feel quite sure of our new beliefs, and the old ones still exist within us ready to seize upon any confirmation.”<sup>255</sup>

In his theory, the unconscious exerts a return of that which has been repressed or surpassed/surmounted from the margins of our logic and forms of knowledge. The phenomenon is thus entirely psychological in infantile repression, provoked by the fictional pressure of another explanation system. On the other hand, surmounted primitive beliefs open a path to “the belief in its (material) reality”<sup>256</sup> [of the phenomenon], by being exterior to a merely psychological explanation. In certain situations, the uncanny feeling emerges as **contact** with another logic, repressed, silenced, buried, or surmounted by the rationale of modernity, that is, a worldly **contact** with another structure of knowledge. That

253 Vidler, Anthony. *The Architectural Uncanny: Essays in the Modern Unhomely*. Cambridge, Mass: MIT Press, 1992:7.

254 Freud, Sigmund. *The Standard Edition of the Complete Psychological Works of Sigmund Freud*. Edited by James Strachey. Repr. London: Hogarth Press, 1999:247.

255 Freud, Sigmund. *The Standard Edition of the Complete Psychological Works of Sigmund Freud*. Edited by James Strachey. Repr. London: Hogarth Press, 1999:247.

256 Freud, Sigmund. *The Standard Edition of the Complete Psychological Works of Sigmund Freud*. Edited by James Strachey. Repr. London: Hogarth Press, 1999:249.

257 Freud, Sigmund. *The Standard Edition of the Complete Psychological Works of Sigmund Freud*. Edited by James Strachey. Repr. London: Hogarth Press, 1999:248.

258 This quote appears in a note written as an appendix called ‘The theory of ghosts’, that is trying to confirm the viability of the Marxist concept of Haunting. Horkheimer, Max, Theodor W. Adorno, and Gunzelin Schmid Noerr. *Dialectic of Enlightenment: Philosophical Fragments*. Cultural Memory in the Present. Stanford, Calif: Stanford University Press, 2002:179.

259 Gordon, Avery. *Ghostly Matters: Haunting and the Sociological Imagination*. New University of Minnesota Press ed. Minneapolis: University of Minnesota Press, 2008:53.

260 See the work of Hartman, Saidiya. “Venus in Two Acts.” *Small Axe* 12, no. 2 (2008): 1–14, in which she analyses the traces left by two archival subjects, two women slaves in transatlantic trade, and what could be done to enact an ethical rewording.

261 See Foucault, Michel. *Il Faut Défendre La Société: Cours Au Collège de France, 1975-1976*. Hautes Études. Paris: Gallimard/Seuil, 1997.

262 Gordon, Avery. *Ghostly Matters: Haunting and the Sociological Imagination*. New University of Minnesota Press ed. Minneapolis: University of Minnesota Press, 2008:xix.

being said, Freud immediately conceals the possibility of this material reality of haunting to arrive at “reality-testing”; “The whole thing is purely an affair of ‘reality-testing’, a question of the material reality of the phenomena.”<sup>257</sup> In the return to an “objective” reality that is open to anyone who is able to “rid himself” of the primitive belief, ghosts, haunting, and the uncanny become mere superstitions deprived of any texture of reality and agency.

I argue that, from this point, **what Freud calls “a process of surpassing or surmounting through modern education” is evocative of a category of the repressed, buried, and silenced forms of knowledge. Symptomatic of systematic institutional violence, these knowledge are concealed notably by modern education, resulting in epistemic violence.** In this perspective, they are a general category gathering a multiplicity and a myriad of subaltern voices and existence, made invisible and marginal by scientific reasoning and disciplines. We have to deconstruct (or destroy) the depreciative approach to the primitive, the archaic and the savage to understand them as plural structures of knowledge. This subversion might offer us a critical occasion to reformulate haunting and ghosts as a symptom of institutionalized and systematic violence, and silenced forms of knowledge, whose existence nevertheless fails to be entirely concealed. In this scope, ghosts are produced when “Individuals are reduced to a mere succession of instantaneous presents, which leave behind no trace, or rather, the trace of which they hate as something irrational, superfluous, utterly obsolete.”<sup>258</sup> As argued by Avery Gordon in *Ghostly Matters*, “The ‘reality-testing’ that we might want to perform in the face of hauntings must, first of all, admit those hauntings as real.”<sup>259</sup> Ghosts are a sociological reality, collectively experienced and structuring a large part of our social lives and worlds of common reality. They are produced by systematic and institutional violence that we ourselves reproduce by internalized and performative repression.

I have so far laid out, with the help of the words and texts of Avery Gordon, Adorno and Horkheimer, Gabriele Schwab, Gorba M. L., as well as many others, three forms of institutional violence that produce ghosts, often intertwined and superimposed, notably in colonial contexts:

- Physical and material violence exerted upon a population. The open wounds produced by this violence, including the potential loss of loved ones, produce an a/ effective absence embodied by a physical suppression of forms of knowledge.
- Psychological, social, and symbolic violence. As introduced by Adorno and Horkheimer, this involves reducing individuals to mere numbers and instantaneous presents by means of imperial infrastructure and technologies of domination. For example, colonial **archives** erase certain relations within the world and short-circuit many forms of knowledge circulation, while producing many invisible and depreciated archival subjects.<sup>260</sup>
- Epistemic injustice and violence. Bounded to imperial technologies of domination, these forms of violence designate not only the erasures of people and their pasts but of their knowledge and futurities. This knowledge has been discussed using the term coined by Foucault of **subjugated** knowledge<sup>261</sup> and refers to “what official knowledge represses within its terms, institutions, and **archives**.” And, on the other hand, it also refers to “disqualified”, marginalized, fugitive knowledge from beneath and outside the institutions of official knowledge production.<sup>262</sup>

The imperial technologies of domination that produce these different forms of violence act iteratively and at every scale. In this sense, when Freud writes that primitive beliefs have been surmounted by modern education, he precisely identifies a transcalar (in time and space) continuum of violence. Imperial technologies act neither on the level of the

individual nor at the one of the collective, but as **a performative set of entangled devices that act within every level of societies, institutions, and knowledge structures, performing and reproducing this violence through unnoticeable and pervasive techniques.** As products of this repetitive violence, ghosts are nevertheless what remains, as a specific way in which the knowledge silenced by these processes stays in place. Thus, “Haunting recognition is a special way of knowing what has happened or is happening.”<sup>263</sup> Ghosts embody a general category of pasts and knowledge in which one can find a myriad of silenced and concealed individuals, memories, knowledge, and futurities, and a specific way in which they fail to be entirely concealed. The “quality of feeling” and the eeriness of the uncanny comes about from this worldly **contact** or touch with a structure of knowledge that has been performatively estranged to us, as an ongoing process of repression entrenched in our habits. The spatial disciplines—especially architecture—are not innocent in this systematic institutional violence. The underlying **hylomorphism** that structures its disciplinarization has disqualified and concealed a myriad of spatial practices considered primitive, archaic, or informal. Mostly, and beyond the mere concealment of spatial knowledge by the discipline, architecture-and urbanism—is itself one of these imperial technologies of domination, performatively reproducing this violence. This is made possible through processes of exclusion, segregation, enclosure, control under the name of rationalization, progress, hygiene, and innovation, that only spatial practices can produce in shaping the material flows, repossessing spaces for other temporalities by alienating them under the imperial regime of modernity.<sup>264</sup> The sand berm or the wall of shame as the Sahrawis called it, crossing from north to south Western Sahara is one example of this architectural violence, as is the development of cities in occupied Western Sahara, designed to constrain the movements of people and their possible survival as nomads.

Beginning with “Ein Gespenst geht um in Europa—das Gespenst des Kommunismus”<sup>265</sup>, or “A specter is haunting Europe—the specter of Communism”, the Manifesto of the Communist Party and the Marxist genealogy of haunting it launched also have a lot to teach us about the conditions required for the production ghosts. Derrida, reading Marx, proposed that the repression produced by these imperial technologies of domination is intentional and issued from the fear that the ghost embodies a future that *is to come*. In this sense, the forced relegation to the past is carried out “until to be sure that the future does not come back.”<sup>266</sup> These specters, concealed pasts and futurities, are to be thought of as “*the agency of the virtual*, with the specter understood not as anything supernatural, but as that which acts without (physically) existing.”<sup>267</sup> While being concealed through violence, **these specters are forced into the present and shape actual behaviors to maintain and reproduce performatively their concealment.** Thus I argue, along with many post-/de-colonial scholars, that the *past* past is an imperial and colonial invention that relegates futurities—understood as the possibility of difference, as virtuality—by destroying worlds and knowledge, all the while being doomed to fail in this enterprise. This failure, as an embodied and spatio-temporal breach in structures of knowledge, produces myriads of ghosts of institutional violence, which offer many ways to get to know *what has happened* or *what is happening*.

The primary questions are now slightly displaced to another field. *Why is there a ghost?* truly becomes a methodology of research. It allows us to investigate traces of a/effective sociological afterlives of violence, forces that we can follow to unearth the erasures that constituted us. To come back to the ghost in the Jaïma, the questions are now also decentered: *to whom does it appear?* Women have been through the physical and material violence. Gorba M. L.’s offered hospitality to her loved one’s disappearance, and did it as a strategy to maintain concealed futurities, as promises and weapons for return.

263 Gordon, Avery. *Ghostly Matters: Haunting and the Sociological Imagination*. New University of Minnesota Press ed. Minneapolis: University of Minnesota Press, 2008:63.

264 To explore the intrinsic violence and coloniality of the architectural discipline, and how it has been and is used to perpetuate colonialism and racial capitalism, see Lambert, Léopold. *Weaponized Architecture: The Impossibility of Innocence*. Barcelona: DPR-Barcelona, 2012. For more on the control of population through spatial dispositives, see Foucault, Michel, Michel Senellart, François Ewald, and Alessandro Fontana. *Sécurité, Territoire, Population: Cours Au Collège de France, 1977-1978*. Hautes Études. Paris: Seuil : Gallimard, 2004.

265 Marx, Karl, and Friedrich Engels. *Manifest der Kommunistischen Partei*. FISCHER Digital, 2015:61.

266 Derrida, Jacques. *Specters of Marx: The State of the Debt, the Work of Mourning, and the New International*. New York: Routledge, 1994:39.

267 Fisher, Mark. *Ghosts of My Life: Writings on Depression, Hauntology and Lost Futures*. Winchester, UK: Zero books, 2014:18.



Then, the fact that I perceived these disappearances as ghosts, might be because I came into **contact** with a structure of knowledge I do not fully understand. This ghost might appeared to me as such, while it is not for Gorba, then reproducing the infinite ballet of performative institutional violence.

## Reducing the distance. Bodily forces of pasts toward the actual.

I have introduced ghosts as the outcome of systematized institutional violence. This violence wavers and echoes in the present, it remains *unresolved* and acts continuously, exerting a force that is actualized. Following these encounters as active traces of, and thresholds toward, repressed knowledge and lives is a methodology for understanding *what has happened* and *what is happening*. While we have so far set out the conditions of production and logic of haunting, I now have to unearth their traces to outline the ways in which they haunt and act. How are these pressures of pasts materialized in the actual and by what means? This exercise might prove hazardous as there are myriads of ghosts and ghostly matters. Their common ground is in the operations of institutional violence they have experienced. Nevertheless, they remain heterogeneous and multiple, as minor forms of knowledge and existence. Nevertheless, can we see patterns emerge in the way their absence is rendered a/effective in the present?

This research is grounded on a paradoxical situation; ghostly encounters are **contacts** with estranged structures of knowledge, which means making **contact** with a structure of knowledge or a/effective logic that I/we am/are not able to understand fully yet, or anymore. In an attempt to find patterns and *rationalize* this ghostly **contact**, I/we might risk reproducing violence upon them while standardizing their agencies. And indeed, “when knowledge is achieved, the eerie disappears.”<sup>268</sup> I take this paradox and ambiguity as a productive space of conflict. Ghosts are a demanding form of **contact**:

“The ghost registers, and it incites, and that is why we have to talk to it graciously, why we have to learn how it speaks, why we have to grasp the fulness of its life world, its desires and its standpoint. When a ghost appears, it is making contact with you; all its forceful if perplexing enunciations are for you.”<sup>269</sup>

When you see the ghost, it is already too late. They seem to call out, going far beyond a mere question of communication. They encourage the repair of *broken relations* with worlds, knowledge, and lives. In this way, **the paradox remains but instructs us to explore the agency of this broken condition, as a shared condition inherited from modernities, lived and suffered with diverse intensities and diverse capacities of self-defense.**

From this position, I can return to the discussion with Gorba M. L. and her Jaïma to ask how the ghosts of her men exerted pressure. In what way did their absences act and materialize? Despite the degraded conditions of exile, the changing means, and the

268 Fisher, Mark. *The Weird and the Eerie*. Third edition. London: Repeater Books, 2016:68.

269 Gordon, Avery. *Ghostly Matters: Haunting and the Sociological Imagination*. New University of Minnesota Press ed. Minneapolis: University of Minnesota Press, 2008:207-8.

harshness of material life in the refugee camps and the domestic spaces, Gorba affirmed that women continued to offer hospitality in their tents. Hospitality is provided to the living, familiar or stranger, and those that are absent, dead or alive. Through the perpetuation of their habits and the maintenance of the economy of objects and bodies that constituted the traditional Jaïmas, as an entrenched nomadic knowledge, they maintained the void to the East of the tent. This void allowed for dialogues with the absence, both a past, a present, and pre-empted futurities. This strategic hospitality maintained the existence of plural temporalities as a promise and weapon for return. **Through the spatialities of the Jaïmas, with its own set of norms, habits, human and non-human bodies, the women's gestures allowed ghostly presences to become performative, to speak up, to act, by providing the conditions of their performativity.**<sup>270</sup> Through the **gestures** themselves, in the operations that reenact broken relations, the presence of the ghosts is actualized by providing them with hospitality. It could be understood that ghosts dwell in the broken relations between bodies (human and non-human, living and non-living) that populate our spatialities. Indeed, making space for their temporal corporeality is a minor gestural architectural practice. It enacts **architectures of operations** that host absences and actualizes their agencies.

If ghosts could be said to blur the limits between the living and the dead, the animate and the inanimate, and cause reality to waver, it might be because they inhabit the broken conditions of images, in the “pandemonium floating between the situation of object and that of subject, interposing itself between the living and the environment.”<sup>271</sup> As worldly **contact** with an estranged structure of knowledge splits the plane of the actual by eliciting another plane of possibilities, **figurations**—embodied architectural knowledge— split in the same way. Several **driving forces**, possibilities of operations, and relations with the other bodies emerge. Plural non-coherent **gestures-images** act through the haunted bodies, opening a breach in which co-exist several structures of knowledge.

As argued by Bergson, through *actualization*, the body is able to reduce the distance between the actual and the virtual, the presents, the pasts, and the futurities. In moving, by means of **gestures**, the distance can be further reduced, and the breaches opened up.

“The distance which separates our body from an object perceived really measures, therefore, the greater or less imminence of a danger, the nearer or more remote fulfillment of a promise. And, consequently, our perception of an object distinct from our body, separated from our body by an interval, never expresses anything but a virtual action. But the more distance decreases between this object and our body (the more, in other words, the danger becomes urgent or the promise immediate), the more does virtual action tend to pass into real action. Suppose the distance reduced to zero, that is to say that the object to be perceived coincides with our body, that is to say again, that our body is the object to be perceived. Then it is no longer virtual action, but real action, that this specialized perception will express, and this is exactly what affection is.”<sup>272</sup>

By reducing the distance and making **contact** with ghosts and virtualities, the ghosts materialize themselves in **gestures**, in bodies, expanding the spatio-temporal surface of the body. **Being touched by a ghost is then a capacity of bodily attention, of an expanded somatic experience.**<sup>273</sup> This attention can be used to make a breach in the actual, beyond the possible and the potential and toward what is not yet or not anymore, the forgotten or unknown virtualities. These breached images/broken relations populate our **repertoire** of **figurations** in every **gesture** and practice that enters into the play of

270 For an introduction to the notions of conditions of enunciation, see the speech act theory starting from Austin, John Langshaw, and James Opie Urmson. *How to Do Things with Words. The William James Lectures Delivered at Harvard University in 1955.* [Edited by James O. Urmson.]. Clarendon Press, 1962.

271 ‘une espèce de pandémonium flottant entre la situation d’objet et celle de sujet, s’interposant entre le vivant et le milieu.’ Simondon, Gilbert. *Imagination et invention: 1965-1966.* 2014:137.

272 Bergson, Henri. *Matter and Memory.* New York: Zone Books, 1988:56-7.

273 Csordas, Thomas J. “Somatic Modes of Attention.” *Cultural Anthropology* 8, no. 2 (1993): 135–56.

**performative spatialities.**<sup>274</sup> It is from this position that we might be able to cultivate this bodily attention to enable our **repertoire** to access these planes, through embodied reflexivity and understanding our inheritance.

However, the bodies on which absences and breaches are not only human bodies. Traumas and memories are not unique to humans, and I have to be careful not to reproduce what I just criticized in Freud's approach of the uncanny. The agency of time and multiple human and non-human bodies is not restricted to a psychological unconscious. The hypothesis of a radical coexistence of pasts, presents and futurities must be expanded toward a post-human understanding of ecologies and economies of memory. These ideas are guided by a postcolonial conception of *times*, allowing for plural temporalities to co-exist and be hospitable to one another. In this way, we might expand what has been thought of as a psychological duration and unconscious to a much more demanding and rich hypothesis of post-human memories, traumas, and plural temporalities of co-presence. By making **contact** with these various forms and structures of knowledge (human and non-human), traces and duration might be understood by means of the ghostly forces they exert.

In her research oriented toward forensics, Susan Schuppli develops the notion of *material witness* as a concept that invokes dialogue and **contact** with traumas and memories of material flows. She defines them as

“non-human entities and machinic ecologies that archive their complex interactions with the world, producing ontological transformations and informatic dispositions that can be forensically decoded and reassembled back into a history.”<sup>275</sup>

She argues that materialities and matters, as media, *register* their interactions with their environment, and specifically when violence is involved, in the expressivity of their own technical, material, or biological structures. The central question of her research is to render these materialities intelligible in order to extend the notion of a witness beyond the human; entering into dialogue and listening to their “material speech acts” so that they don't fall on “deaf ears.” To set out how these traces are theoretically inscribing into material flows, she develops on the *time-event* model of Deleuze and Guattari, which is itself a reinterpretation of the Bergsonian model. Events are foreseen as changing relations:

“the event for Deleuze is not a new occurrence that cuts its ties with the past, or a beginning that initiates a new story, but is, rather, a change in the intensities of relations between elements that creates a relay connecting the whole to its parts.”<sup>276</sup>

These changing, or perhaps broken relations in worlds leave traces by profoundly modifying the structure of material bodies. Broken relations become entrenched as absences at many other scales, transforming material flows in the structure of cells, molecules, or mineral expressions. Contrary to a hylomorphic understanding of matter as passive, matter is seen as a dynamic flow. This flow can be understood “toward an engagement with the expressive technicity of matter.”<sup>277</sup>

While following the material technical expressivity, there is an opportunity to listen to their material speech acts and testimonies. This listening allows tracking back until events in analyzing the breach that events produced.

Throughout his work, particularly in *Galb'Echaouf*, Abdessamad El Montassir developed artistic research on how non-human bodies, particularly plants and land, are affected by institutional violence in their molecular and cellular structure. Beyond mere affections

274 On the necessity of a varied and multiple repertoires, to maintain the innervation of the mental world and counter alienation, see the premise to chapter E, ‘Repertoire extractivism.’

275 Schuppli, Susan. *Material Witness: Media, Forensics, Evidence*. Leonardo. Cambridge, MA: The MIT Press, 2020:2.

276 Schuppli, Susan. *Material Witness: Media, Forensics, Evidence*. Leonardo. Cambridge, MA: The MIT Press, 2020:6.

277 Schuppli, Susan. *Material Witness: Media, Forensics, Evidence*. Leonardo. Cambridge, MA: The MIT Press, 2020:11.



from the past, these non-human traumas are hypothesized as exerting forces in the actual. In this film, he describes the silencing of inhabitants of Western Sahara, the *crypts*<sup>278</sup> of their language and bodies. The first interlocutor, a former nomad, says:

“I can’t talk about it anymore, the days when I used to speak are gone, those days are over.

What to say? Where to begin? What could I possibly say?”

278 On the crypts of language understood as meaning by absence, by the impossibility of saying or speaking of something, see Schwab, Gabriele. *Haunting Legacies: Violent Histories and Transgenerational Trauma*. New York: Columbia University Press, 2010:4.

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| Fig. C9 | Snapshots of  
El Montassir, Abdessamad.  
Galb' Echaouf, 2020.

279 <https://lecube-art.com/artiste/abdessamad-el-montassir/?lang=en>

280 See Mignolo, Walter. *Local Histories/Global Designs: Coloniality, Subaltern Knowledges, and Border Thinking*. Princeton Studies in Culture/Power/History. Princeton, N.J.; Woodstock: Princeton University Press, 2012.

281 A violence that we could describe as an epistemic violence toward material flows and their speech acts. By considering them as submissive, inert and passive, materialities are silenced and concealed to fall on deaf ears.

282 As the slave's master is blind to the constitutive operations of the bricks, and can see only a parallelepipedic form, he is deaf to the operations of extraction and the speech of the matter echoing the suffering and the conditions of its extractions, melting and transformation. To read more on neutralization of material flows in relation to capitalist extractivism, see the contributions of Rohit Jain in *Swiss Psychotropic Gold*. Schriftenreihe Des Institute for Contemporary Art Research (IFCAR), Zürcher Hochschule Der Künste (ZHdK), volume 23. Basel: Christoph Merian Verlag, 2020.

283 She develops her theory of the crypt along the research of Nicholas Abraham and Maria Torok's theories of psychic haunting, and Derrida's. It is important to note that her work focuses on intergenerational traumas from an anthropic perspective and from the field of psychoanalysis. From there, she also analysis the role of matter in the transmission of traumas, and also as a catalyst of the reemergence of crypts.

284 Schwab, Gabriele. *Haunting Legacies: Violent Histories and Transgenerational Trauma*. New York: Columbia University Press, 2010:4.

285 Schwab, Gabriele. *Haunting Legacies: Violent Histories and Transgenerational Trauma*. New York: Columbia University Press, 2010:4.

286 See Bollas, Christopher. *The Shadow of the Object: Psychoanalysis of the Unthought Known*. Columbia University Press, 1987.

287 There is no reparation without revolution and abolition of carceral, extractivist and racist capitalism.

Some minutes later, Khadija says:

"The land witnessed many atrocities which I can't describe. [...] Go and ask the ruins, the desert, its thorny plants, [...]. They saw and lived through everything, and have remained there. They can better tell of what happened than those of us now far away, we can't express it."

Abdessamad El Montassir went to ask the Daghmous, a plant that covers the surface of the Sahara. He tells us in the film that there is a legend about this plant that, at a certain point, they were "beautiful and always in flower, that its leaves were green all year around." And that one day "its leaves turned into spikes". The plants went through the same institutional violence as the people. They witnessed atrocities, and they speak. To get to know *what has happened* and *what is happening*, he listened to their material speech acts and the pressures of the pasts they are actualizing in the present as ghosts of broken relations. Their structure of knowledge is, as says Khadija, pertaining to "another temporality." Still, they cause the present to tremble, blurring the limits between the animate and the inanimate. Even if the means of conversing with these plants have been lost, in this context in which pastoralist nomadism and its knowledge struggles to exist through the perpetual violence, Abdessamad El Montassir argues that "an unknown part of us lives in this desert, and an unknown part of this desert lives in us." The ghosts of unresolved and perpetuated institutional violence dwell in these broken relations, inscribed in myriads of bodies, from the molecular structures of the *Daghmous* to the *crypt* of the Khadija language, maintaining their existence and spectral agency, refusing to be forgotten.

In a recent exhibition, *Al Amakine, une cartographie des vies invisibles*,<sup>279</sup> and in current research he develops with biological scientists, he investigates how cellular structures *remember*, as another way to make **contact** with their material speech acts. In between epistemologies, he creates spaces for border-thinking.<sup>280</sup> Dialogues with non-human bodies produces testimonies, but also evidence of broken relations which could play a role in the struggle of repair. From these in-between spaces, new forms of **contact** and possibilities of touch are outlined with the *crypts* he inherited, which he cannot describe. Through these poetics and aesthetics, matter escapes both the neutralization that of the **epistemic violence** of **hylomorphism**,<sup>281</sup> and that of capitalist extractivism.<sup>282</sup>

"But how can we understand something we have not experienced but of which we keep the traces deep inside ourselves" asks Abdessamad El Montassir in *Galb'Echaouf*. If first generations of bodies can make **contact** and reduce the distance to traumatic pasts and repressed forms of knowledge, what are the intergenerational dynamics of such repression, and what do bodies inherit from these? In her book *Haunting legacies: Violent Histories and Transgenerational Traumas*, Gabriele Schwab explores how bodies inherit *crypts* intergenerationally.<sup>283</sup> According to her research, *crypts* arise from "a traumatic designification of language to ward off intolerable pain,"<sup>284</sup> tracing back to a refused mourning. They are "Live burials of sorts, these crypts in the psyche and language contain the secrets of violent histories, the losses, violations, and atrocities that must be denied."<sup>285</sup> What is buried in the crypts by first generations comes back for the next generations in the form of *blind spots*, structuring the affects even when the events are apparently entirely unknown. This repressed knowledge tends to become "unthought knowledge,"<sup>286</sup> acting beneath and beyond language. These crypts are constitutive of our inheritance, somatic memories and attentions. And until hospitality is denied and reparation<sup>287</sup> not enacted, these crypts will be transmitted through the

infrastructures of inheritance,<sup>288</sup> threatening to come back in a “boomerang effect,”<sup>289</sup> repeating violent histories. These crypts in bodies are not specific to human language. **The technical expressivity—traces of events/operations in the structures of matter—is also transmitted from non-human bodies to others, albeit encrypted, making it harder for dialogue through intergenerational dynamics.**

In these research, non-human matter itself exerts forces on the present and actualizes the past into reality. Non-human bodies actualize ghostly matter and call for dialogue, while they don’t need humans to push pasts into the actual. From there, we have to (re)learn how to speak the language of these ghosts, to be touched by their plural temporalities and co-presence. Unearthing the crypts that lie around, along, with, and in us, might offer a common ground to dialogue with the ecologies of non-human memory. As a site to repair our relations with the world, it is indeed a way to open up our **imagination** to pre-empted/encrypted futurities. Whether through human or non-human bodies, (material) speech acts are fundamental actors in **performative spatialities** and remain as latent virtual images. In hypothesizing a radical coexistence of pasts, presents, futurities, future pasts and pasts futurities, “[t]out se passe comme si l’univers était une formidable Mémoire,”<sup>290</sup> of co-existing human and non-human bodily duration, beyond a Freudian idea of ghost and haunting, manifesting the material pressures of virtualities into the real.

288 Povinelli, Elizabeth A. *The Inheritance*. Durham: Duke University Press, 2021.

289 Césaire, Aimé. *Discours sur le colonialisme*. Nachdr. Paris: Présence Africaine, 2008.

290 Deleuze, Gilles. *Le bergsonisme*. 5e édition «Quadrige». Paris: Presses Univ. de France, 2014:76.

## Offering hospitality. Repairing broken relations and concealed futurities.

“nothing that has ever happened should be regarded as lost for history.”<sup>291</sup>

The axiom that I took as a point of departure of this chapter, as a way of introducing the possibility to make **contact** with spatial knowledge concealed by architectural **hylomorphism**, leads us to consider the forces exerted on the actual by pasts and through (human and non-human) bodies. I took a path through Bergson to base this proposal on a radical coexistence of pasts, presents, futurities, future pasts, and pasts futurities. This hypothesis enabled us to outline how an event, that is, a breach in relations, remains in place in various ways. When produced by institutional violence (in its many forms), some of these broken relations remain as ghosts. These hauntings and ghostly agencies in the actual can produce an uncanny feeling in the haunted subject, as they are the experience of this breach in the common world of the everyday. **They are worldly contacts with a structure of knowledge that has been estranged to us, that we do not fully understand yet or anymore, but which is buried deep in the crypts we inherit.**

291 Benjamin, Walter, Hannah Arendt, et Harry Zohn. *Illuminations*. New York: Schocken Books, 1986:254.



292 Horkheimer, Max, Theodor W. Adorno, and Gunzelin Schmid Noerr. *Dialectic of Enlightenment: Philosophical Fragments*. Cultural Memory in the Present. Stanford, Calif: Stanford University Press, 2002:179.

293 On the relations between repertoire and figurations, and how they allow to explore other forms of spatial practices, notably minor architectural practices, unsettling the traditional mode of transmitting and imagining architectures, see chapter B, 'The architecture and the repertoire', especially the section 'The architecture and the repertoire. Body-to-body historicity and migration of spatialities.'

294 On this working site, see chapter C, 'Archival pharmacology', especially in the section 'Ethics and paradoxes of 'archiving' the oral and the embodied.'

From this axiom, the main question became a methodological one. How might one be affected by, in **contact** with, touched by these pasts and structures of knowledge? It is critical to consider that we are not affected by the immense majority of individual, collective and material pasts, as much as many of them are affecting us without even noticing it. All bodies—human and non-human—are virtually inhabited by their pasts. These virtual images of pasts are constitutive of their durations and make up their ontology. Ghosts are a specific way in which these virtual images remain. They appear when forms of knowledge that could make understand these images have been repressed and concealed by institutional violence. Then, **ghosts constitute a situated a/effective historical methodology for framing the a/effects of pasts of this knowledge in the actual**. In this way, they enable to create **contacts** with *what has happened* and *what is happening*. Moreover, spatial practices and architectural disciplinarization have themselves produced myriads of ghosts while producing and reproducing institutional violence. Making space for ghostly agencies, their dwelling and forms of existence is an architectural and spatial practice that demands exploration.

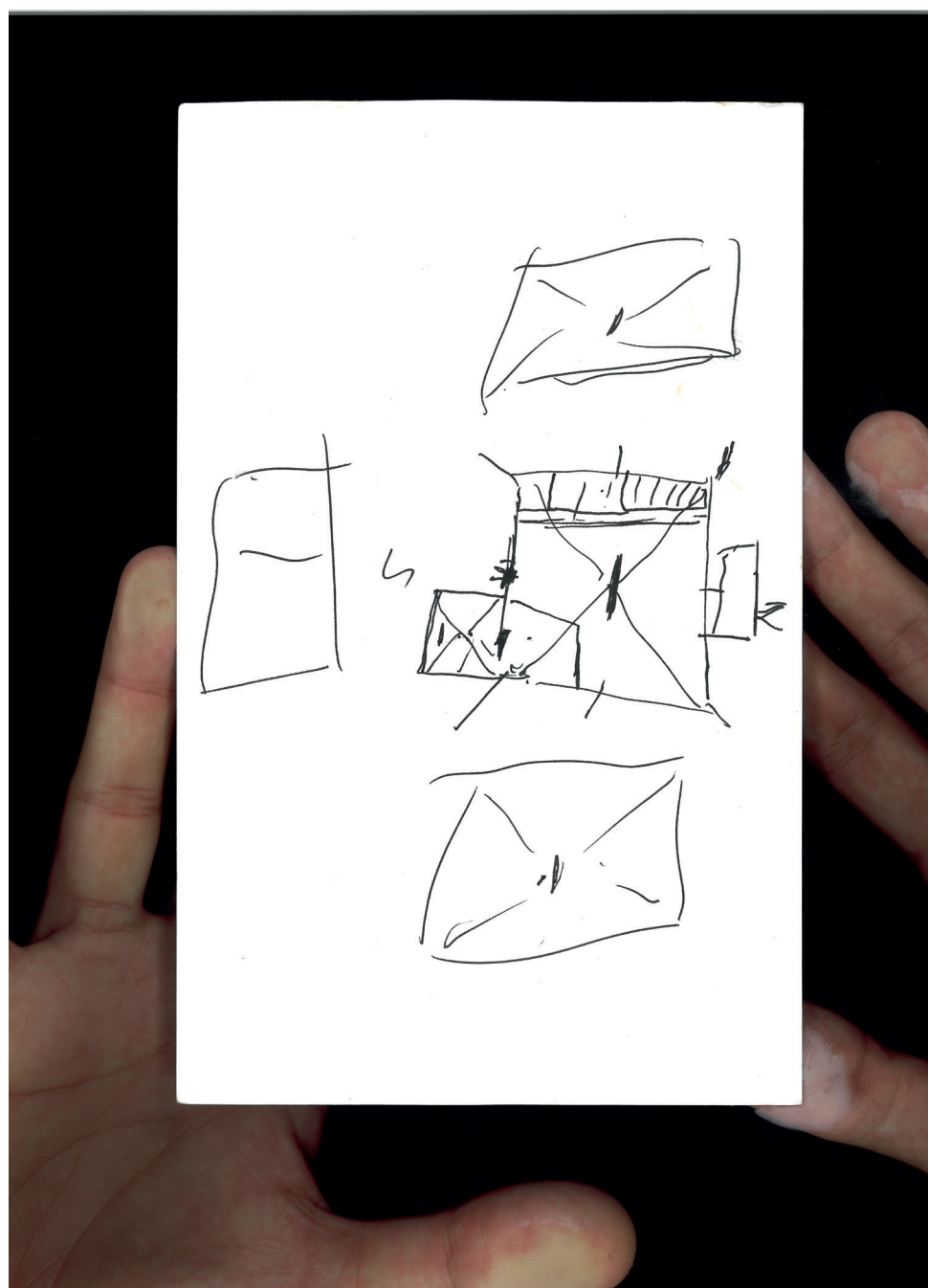
Architectural **hylomorphism** produced an **obscure zone** in which the architectural and spatial knowledge and lives of millions have been "reduced to a mere succession of instantaneous presents, which leave behind no trace."<sup>292</sup> In transforming this void into a zone of peaceful reconciliation, in getting in **contact** with it, lies an opportunity to offer hospitality to the mold of the **brick**, in following the **bricks'** material speech act, expressive of their changing relations in the operation of fabrication. From this perspective, we might anticipate the enactment of reparations. Nevertheless, in my position, as an architect in academia, it is not satisfying just to acknowledge and recognize the value of this oral and embodied knowledge, rendered ghostly by the architectural institutional violence of **hylomorphism**. For reconciliation, I must go beyond the limits of empathy and toward radical solidarity. In this perspective, repair is not considered a return to a past or a return to the state of relation before any breach. Reparation is foreseen as the restitution of pre-empted possibilities, potentialities, and virtualities, which is also restitution of lost futurities concealed by violence. **Reparation is understood as hospitality to other durations, as an inevitable condition for any futurities to emerge**. This reparation demands both a spatial practice and an active engagement in the institutions.

The first work site is to actively engage with these events and the ghosts of these repressed forms of architectural knowledge—as I tried to do with the ghost in the Jaïma. In following their material speech acts, their temporalities, and their futurities, we could **make contact with the repertoire of figurations** they propose.<sup>293</sup> Considering this oral and embodied knowledge in its multiplicities, I will analyze how it circulates and expands the understanding of intergenerational dynamics through bodies. From the threshold where I am situated, in academia and the realm of the architectural discipline, the aim will be to create spaces for peaceful reconciliation. To do so, I will have to consider from a critical perspective the poisons, and perhaps remedies, offered by the visibility that academia produces, and to what extent **contact** with this knowledge in the spaces of academia creates vulnerabilities. I will have to navigate the paradox that there can be no reparation without revolution, as argued both by Ruth Wilson Gilmore and Françoise Vergès while ensuring care and maintenance of the circulation of oral and embodied knowledge in a toxic system. I will thus have to consider the **ethical** questions implied by reparative and restitutive *preservation*—understood as a transformative practice.<sup>294</sup>

The second work site is to reclaim the spatio-temporal scale of analysis and projection of oral and embodied knowledge within the field of architecture, as a site of minor and counter practices, with their pasts, presents, futurities, future pasts and pasts futurities.

In this context, I will assume our bodies and our **repertoire** as being zones of conflict. Bodies are the site of multiplicities of traumas and *crypts* that we are performatively perpetuating through plural biopolitical devices and neoliberal behavioral design, forcing us to reproduce these crypts. In the spatial disciplines, these devices lead us to complete alienation from our **repertoire**, from our embodied capacities to negotiate with human and non-human bodies that inhabit the same spaces as ourselves. From the point of alienation, these scales of oral and embodied knowledge are then monopolized by a **repertoire extractivism** (both attentional and material) and racial capitalism (and its hierarchies and process of minorization of people and knowledge). By reclaiming this scale, we would have the opportunity to make **contact** with human and non-human bodies, their pasts and futurities, which is indeed the only way to recover pre-empted futurities. This involves **creating a field of (hi)stories that enables us to understand how minor knowledge (embodied and oral) is shaping the actual and the discipline. It equally assumes the need of practices as sites of spatiotemporal struggle for reparation and emancipation, countering the new forms of alienation produced by racial capitalism, extractivism, and neoliberalism.**<sup>295</sup>

<sup>295</sup> On this working site, see chapter E, 'Architectural reenactments.'



| Fig. C10 | The Jaïma.  
Disposition of the interior space and relations to other tents in the camp between 1980 and 1991. Diagram made with Lahsen Selki Sidi Buna during an interview with Gorba M. L. on the 8th of March 2020. We can see the women's object on the west side of the tent, the position of the kitchen on the East, with the fabric extension. Lahsen Selki Sidi Buna and Julien Lafontaine Carboni


Returning to the discussion in May 2020 in the barrio of Hausa, in the refugee camp of Smara, with Gorba M. L. and Lahsen Selki Sidi Buna and the ghost in the Jaïma, which affected me, I first wanted to take some space to be thankful to Gorba. Without her I would not have been able to understand the critical importance of hospitality to bodies and their pasts, as a capacity to be affected, to make **contact**, to be touched, and to provoke radical solidarity. Without Lahsen and Gorba, I would not have understood how ghosts are constituted, how they act through bodily forces, and the extent of their architectural agency. As an unresolved absence of men, welcomed in the domestic landscapes of the refugee camps, these ghosts had a significant role in the evolution of the camps. Through these discussions, I had the chance to engage with architectural history without the need for the **archive** or architectural documents. By sharing her knowledge and hospitality, Gorba offered me an opportunity to be affected by actual forces of pasts I was unable to be touched by beforehand. In this act, she also offered me an understanding of the historicities and temporalities of the **repertoire** and its **figurations**. Through architectural **gestures** of hospitality, she brought about landscapes of **affordances** reconfigured and perpetuated by embodied operations.

This opportunity to engage with these remaining knowledge and memories forged through this research a *combative optimism* in a struggle for decolonization and repair, and through the axiom that *nothing should be regarded as lost for history*. Despite our shared modern condition of broken relations with knowledge and worlds, despite coloniality and its perpetuation, still ongoing in so many places and so many forms, despite this permanent state of war within an international peace shaping every single of our relations, Gorba shared with me paths to remain hospitable to futurities before, beyond, and beneath these conditions. This combative optimism is becoming a call to expand our **repertoire** of practices, to be affected by other **repertoires** and by other **figurations**, as so many opportunities to make **contact** with ghosts that dwell in the breached virtual images that populate our pandemonium. In the interlude and coming chapters, I will discuss in depth the relations between the **archives** and the **repertoire** in the context of Sahrawi memory and knowledge conservation. It will engage in exploring therapeutic and strategic co-operations of preservation and transmission infrastructures of history, memory and knowledge.

During our discussion, Gorba told me that giving hospitality and space to the ghost of her man was a weapon to fight for return. In enacting this space and perpetuating her nomadic habits and knowledge, she maintained the futurities pre-empted by war and colonialism. These futurities have nothing to do with a progressive understanding of the future as framed in the western world. The futurities that she cared for and gave hospitality to are not a projected reality. They exist as a present corporeality, an affective dimension of the real, of which many bodies have forgotten the touch.

شكرا جزيلا لك





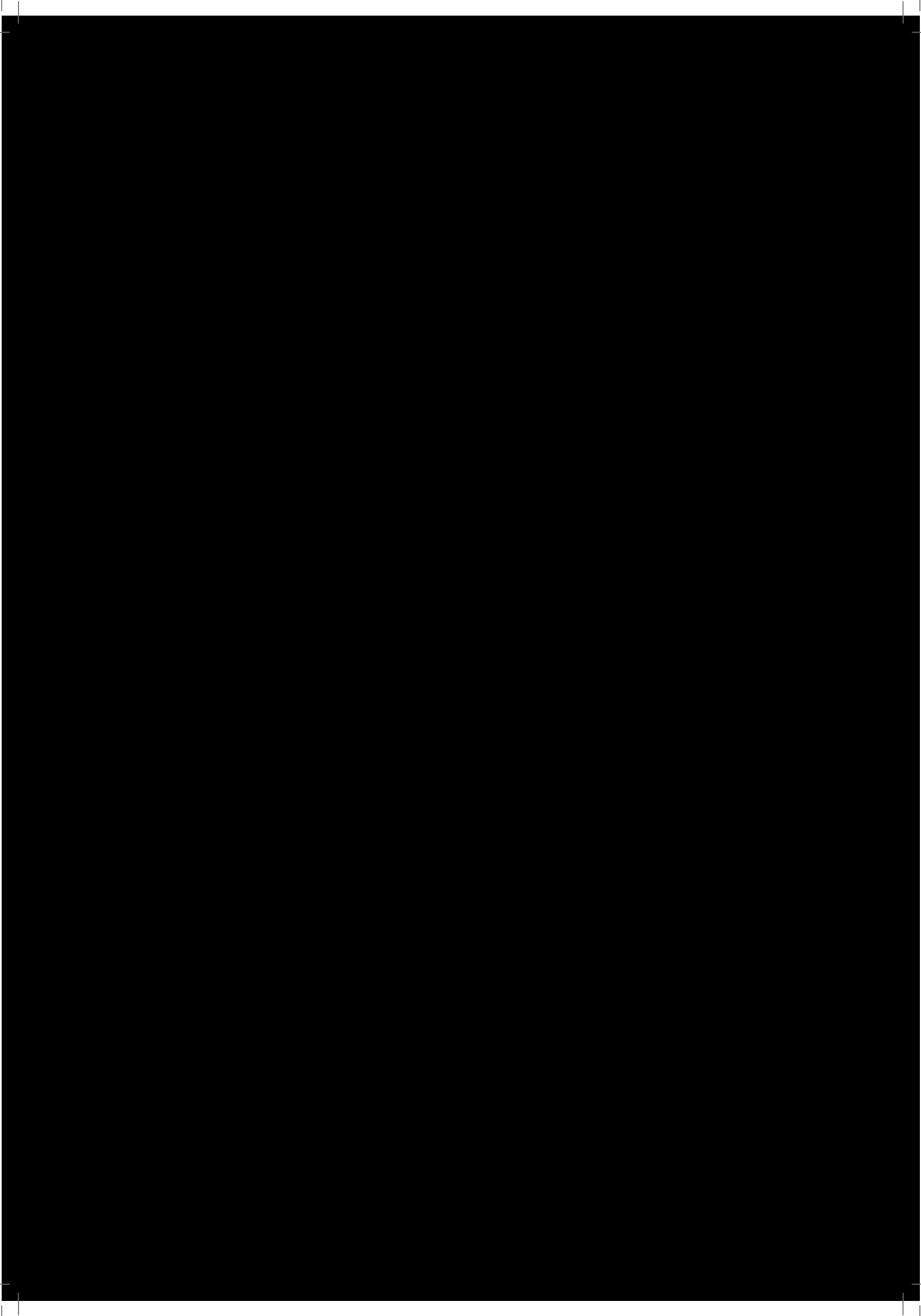
| Fig. 15 |  
Photograph of a sketch by Lahsen  
Selki Sidi Buna made during a walk  
in the camp of Dajla when discussing  
the original layout of the camps.  
The squares are figuring barrios  
arranged around a protocol-  
administrative building.



A close-up photograph of a dry, arid landscape. The ground is composed of fine, reddish-brown sand and soil, interspersed with numerous small, dark, angular rocks and pebbles. Faint, parallel lines from tire tracks are visible on the left side of the frame. The lighting is bright, casting soft shadows and highlighting the granular texture of the soil.

Interlude





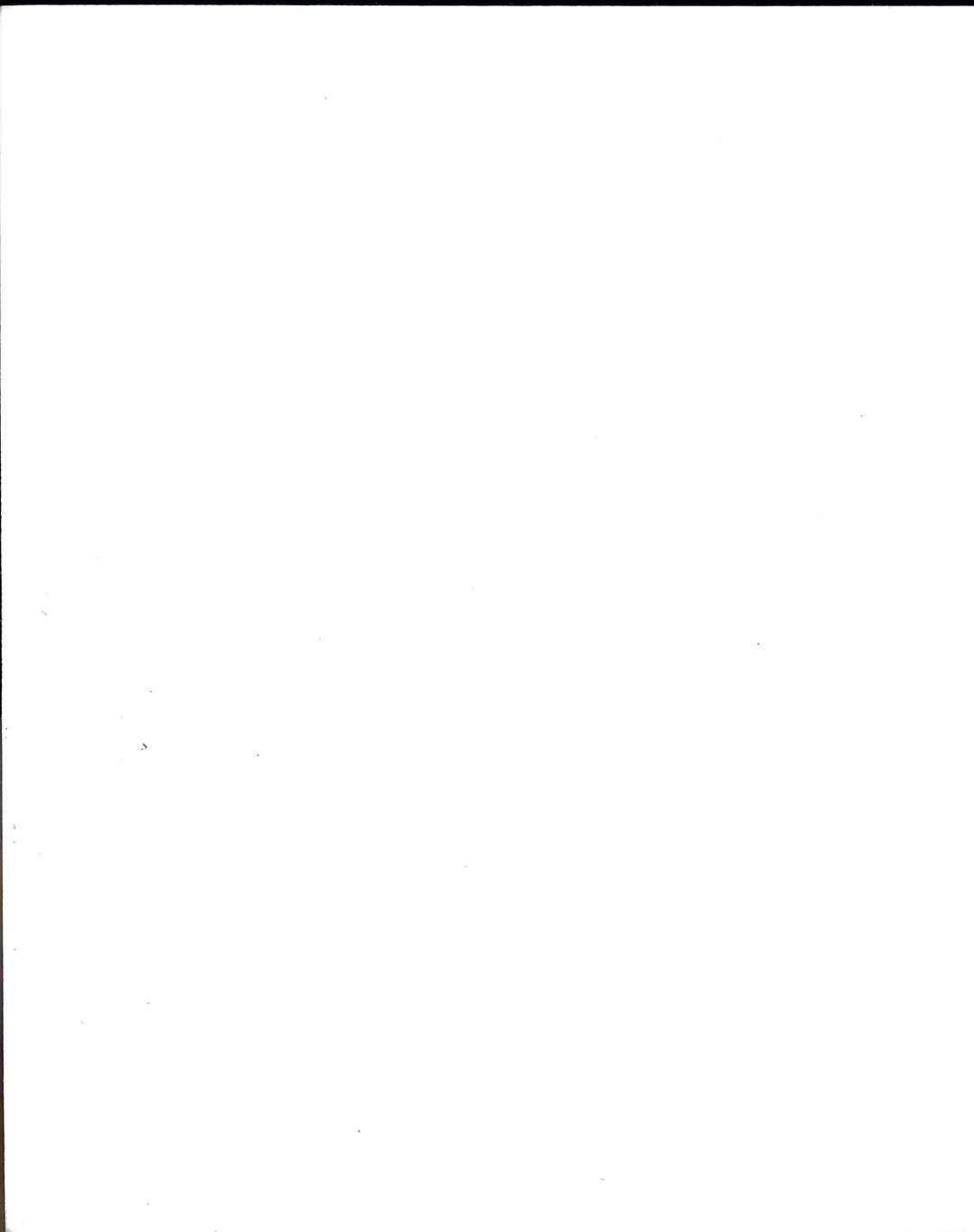


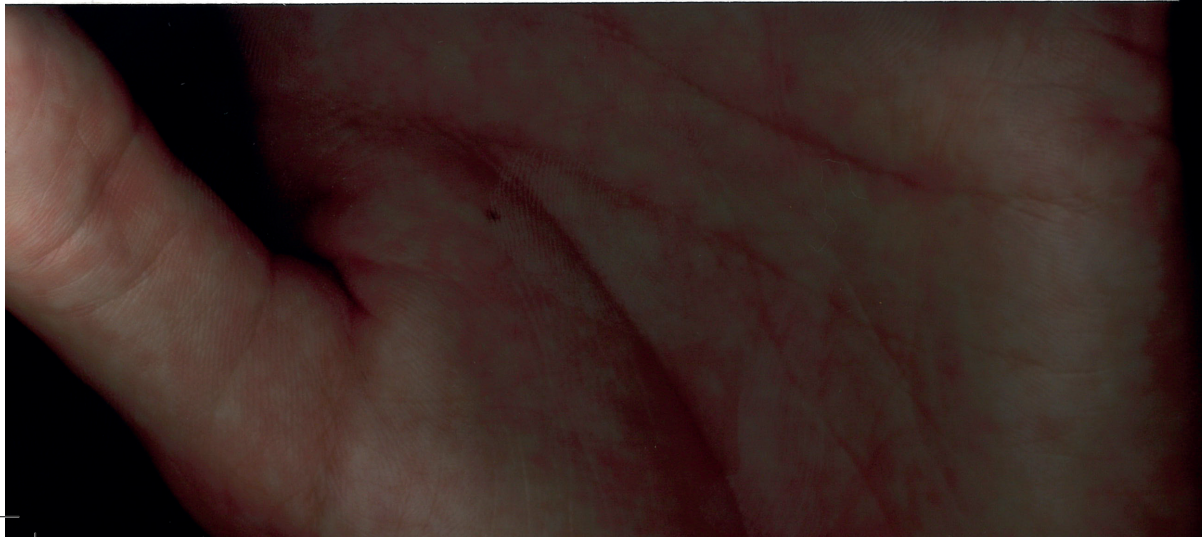
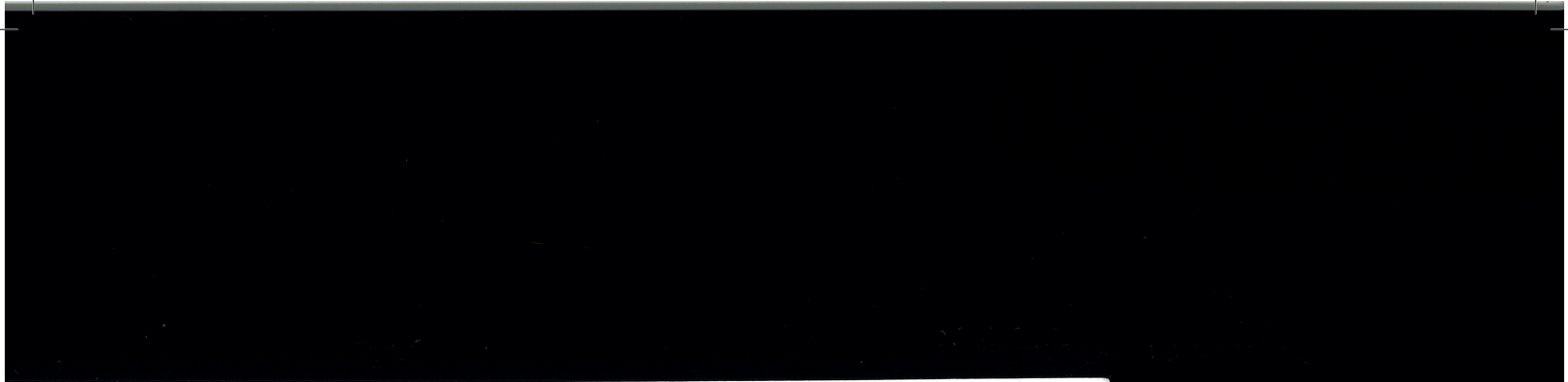
## **A speculative archive of Sahrawi figurations.**

An archive of figurations is a strategic tool and agent in the potential post-imperialist and post-colonial futurities of the Sahrawi people. Archives and practices of architectural reenactments reconstitute a space to the futurities of nomadic pastoralist knowledge and modes of living. By transmitting how one might enter into dialogue with the bodies of Western Sahara, with its pasts and its relations to other bodies, such archives and practices constitute a resource for new generations to live without war and outside capitalism. In inviting previous generations to perform knowledge and memories and in providing infrastructures to do so, new generations become able to relate to embodied pasts, reinterpret them, and have the potential to be affected by emancipatory futurities, embracing their corporeality. If the Sahrawi fighters repetitively won armed battles against the Moroccan army in the seventies and eighties, it is said to be due to their relationship with the territory and the support it gave them. By rebuilding, but mostly, by reinventing this relationship, the Sahrawi tactically prepare their next move toward self-determination.

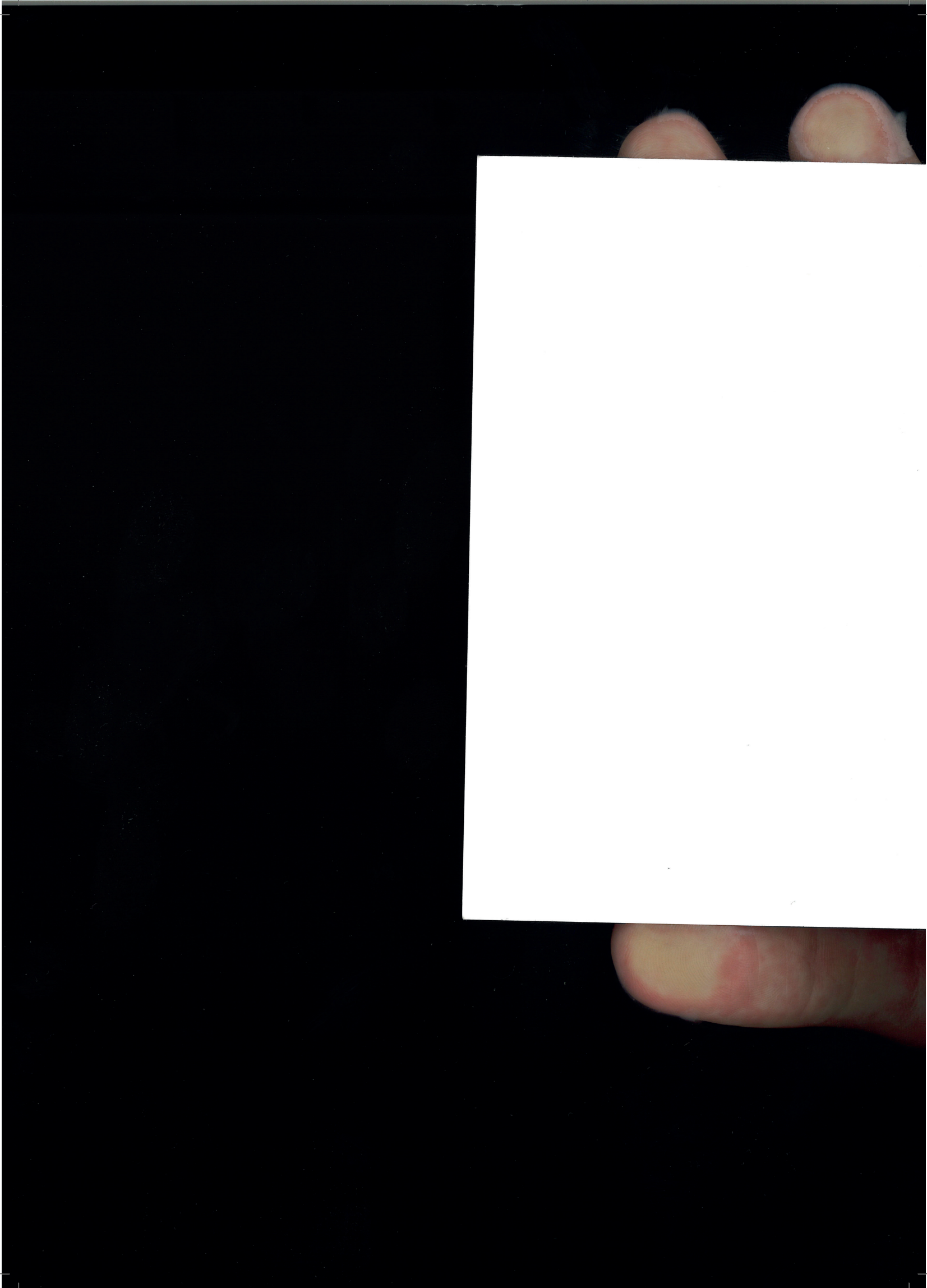
The Sahrawi tented-state, as a constellation of moving political powers, is defined by constant motion of fusion and fission, which in turn determines the political agencies and subjectivities within the state, as argued by Konstantina Isidoros. By continuing to circulate the pastoralists' oral and embodied knowledge, the capacity of the Sahrawi tents to coalesce is maintained. Strategically speaking, an archive of figurations and practices of reenactments provide a way to affectively and socially maintain the agency of political subjectivities, while potentially escaping the hazards created by the compulsory nation-building and historical expropriation.


| Fig. 16 | Herds of camels and goats of the archives of figurations. The herds are moving through the region of the refugee camps of Dajla, where one can find similar climatic conditions to several areas of Western Sahara, including underground streams, several oases, and a similar fauna and flora. They regularly move through these territories with the staff of the archives.





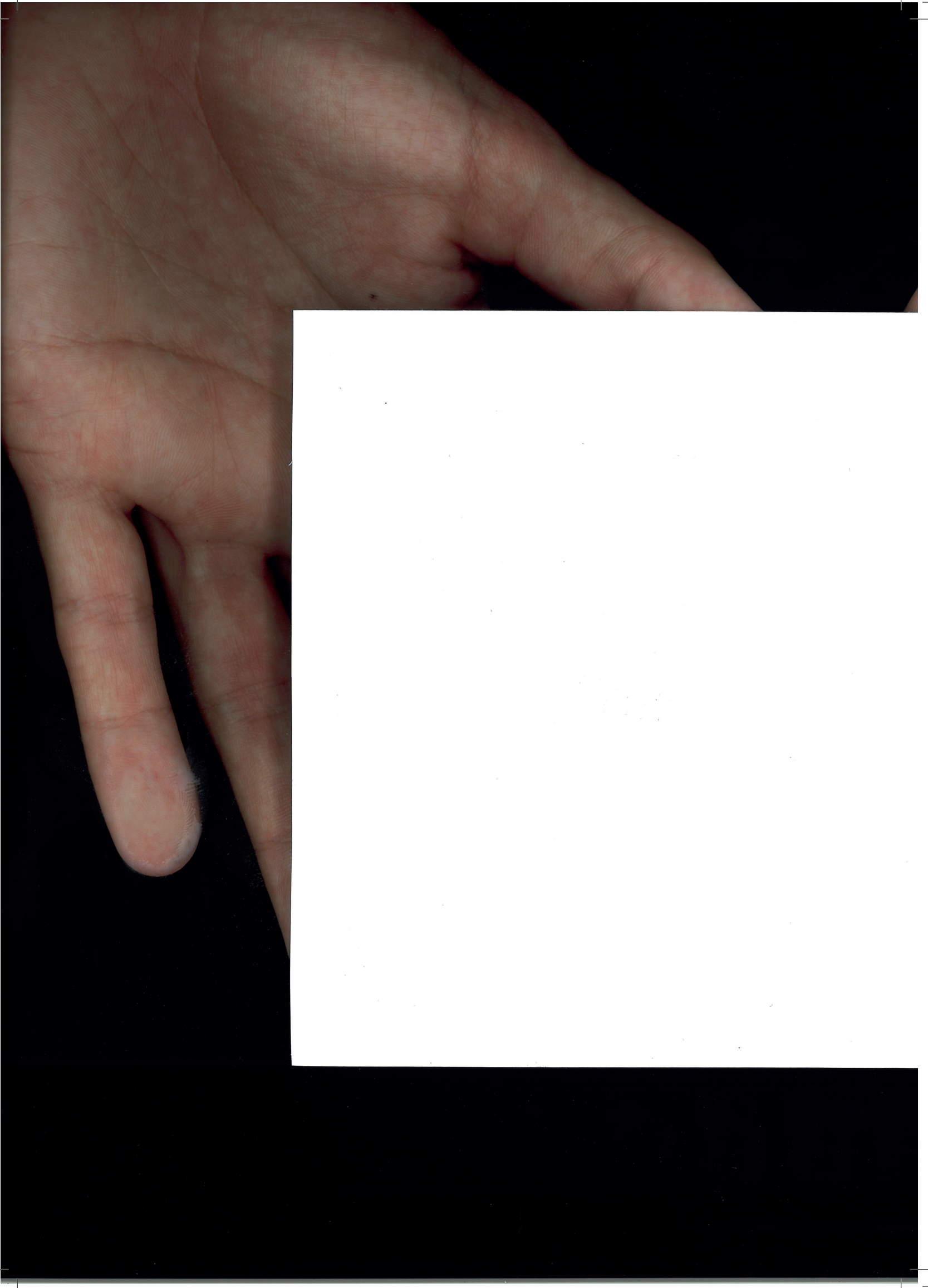






| Fig. 17 | Jaïmas' weaving workshop. The traditional Jaïmas were composed of several bands of Hessian assembled and sewed together. The weaving loom used by the Sahrawi is specific and requires at least two women working together. As the comb is in the middle, the fabric is woven from the two extremities to the center. A one-meter wide piece of fabric can take between one and three months to be spun and woven. To achieve this, the women work according to the tradition of the Etwiza, a form of collective work conducted by Sahrawi when several people are needed. In exchange for their work, a family provides food, drink, and shelter to the people helping. Through this social bond of collective work, the Sahrawi Qabilas built solidarity between families for several centuries (solidarity primarily supported by networks of women) and succeeded in creating thousands of wells and other infrastructures in Western Sahara.









| Fig. 18 | Sand-brick workshop. When arriving in the refugee camps, women used their nights to manufacture sand bricks and build hospitals, schools, and other public infrastructure, in reference to the Etwiza. Some sand buildings remain in ruins, notably in the refugee camp of Dajla. This workshop aims at reenacting the construction and the decision-making process developed during these moments of national construction, fostering solidarities between families and Qabilas during the harsh times of armed conflict.

## EL POEMA DE LA JAIMA

Traducción, Ebnú Mohamed Salem

*La jaima, es una de las obras maestras de la literatura, del pensamiento y la cultura que nos presenta el poeta, Zaím. A través del verso nos muestra las diferentes etapas y procesos por los que pasa la construcción de una jaima y los muebles y materiales que alberga. Es un poema épico del patrimonio y la cultura saharauí, que une el presente de las nuevas generaciones con su glorioso pasado. También es un homenaje y recuerdo para aquellos padres que vivieron gran parte de sus vidas en las auténticas jaimas saharauís y en los ambientes de grandeza, hospitalidad y generosidad, que las envolvía.*

### La jaima

Voy a definir cómo construyen  
sus jaimas los saharauís, hogares  
de nobleza, desde la esquila hasta  
fijar a los ribetes las asas de madera.

Después de esquila el ganado  
y limpiar de espinas la lana,  
es hora de golpear con el Matrag<sup>1</sup>  
la cantidad de lana adecuada.  
Se pasa entre las fauces de las cardas  
hasta que sea ideal para hilar, fuerte  
y sin asperezas, lisa y de calidad.  
Tras el hilado se juntan los negros ovillos  
donde cada dos madejas forman el Sag<sup>2</sup>,  
que envuelve el Mabram<sup>3</sup> de madera.  
El hilo torcido tarda semanas, para eliminar  
rugosidades, entre estacas extendido.

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Tras el tensado, el hilo forma los ovillos  
para constituir la urdimbre del telar.  
Se sitúan dos estacas frente a la entrada,  
y detrás de las estacas se coloca un palo  
y otro más al final de la jaima se asienta,  
donde se encuentra Zabluh<sup>4</sup>, del que parte  
el hilo que a él vuelve formando la urdimbre.  
Nayer<sup>5</sup> es el hilo de Nira<sup>6</sup> y el Hayer<sup>7</sup>  
se encuentra libre y a su hilo no tiene sujeción,  
debajo del hilo inferior pasa el hilo de nira  
y regresa, dando la vuelta por encima del palo,  
antes de llegar al hilo superior.  
El hilo del collar del Fliy<sup>8</sup> impide que entre  
los hilos de la urdimbre haya confusión.

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<sup>1</sup> Matrag: varita larga y delgada con que se golpea la lana.

<sup>2</sup> Sag: cantidad de hilo enrollado al mabram.

<sup>3</sup> Mabram: es el palo sobre el que enrollan los hilos torcidos.

<sup>4</sup> Zabluh: es el hilo grueso a través del cual se fijan los hilos de la urdimbre con los palos del principio y el final del telar.

<sup>5</sup> Nayer: es el hilo de Nira.

<sup>6</sup> Nira: es un hilo de color blanco que se va moviendo hacia delante a medida que avanza el proceso y sirve de guía para organizar los hilos permanentemente.

<sup>7</sup> Hayer: es un hilo que cae y está libre.

<sup>8</sup> Fliy: singular de alfelya, es la tira tejida de pelo y lana y que unida y cosida a otras tiras iguales forman la jaima tradicional.

## الخيمة وما تحمله من معاني الكرم والسخاء .

- عندي تعريف أنشو اخيام<sup>1</sup>
- من عند الزر إلى تنــــتام<sup>2</sup>
- عاكب زر الحية واكــــليــــع<sup>4</sup>
- اشعرها ووبرها تطــــويــــع
- يوظف فاغر شال التنــــويــــع
- صالح لغزيل املس رفــــيــــع
- وعاكب لغزيل ايجي تجمــــيــــع
- من كل اجمامين التــــايــــيــــع
- ويفوت لبريم اسايــــيــــع
- والمقصود بالمحيط انزيــــع
- عندي تعريف أنشو اخيام
- من عند الزر إلى تنــــتام
- من لمحيط اعود التكبــــاب<sup>12</sup>
- وتدين اجو كدام البــــاب<sup>14</sup>
- وكيفت ذاك مركب تركــــاب<sup>16</sup>
- فيه الزبلــــوح ومنوطــــاب<sup>17</sup>
- ناير خيط واحد منــــاب
- الخيط التحتاني ينــــجاب<sup>19</sup>
- من دون الفوكــــاني تــــكــــلاب
- وخيط كلاله لفليج احجــــاب<sup>21</sup>
- عندي تعريف أنشو اخيام
- من عند الزر إلى تنــــتام
- اقياس العرض إج بــــوزات<sup>22</sup>
- لوزة من عند اثلث طــــرحات
- مارة وإعود اعلــــى مــــولات
- من عد المارات وذافــــات
- أهل الصحرا عنوان الجــــود
- أعلى لجبار اخاب العــــود<sup>3</sup>
- الشوك ايجي دور اتشــــعشــــيــــع<sup>5</sup>
- بالمطرك لخبــــاط المــــريــــود<sup>6</sup>
- فم اغر شال اليــــن إــــعود<sup>7</sup>
- ماقيه اتحر كيصــــة مــــكــــرود<sup>8</sup>
- ذوك اجمامات الغزل الســــود<sup>9</sup>
- صاگ ابريم اعلــــى مــــيرم عــــود
- بين اوتاد فممحط مــــمــــدود<sup>10</sup>
- اتشكر يف الخيط ومقــــصــــود<sup>11</sup>
- أهل الصحرا عنوان الجــــود
- اعلى لجبار اخاب العــــود
- للسدوة واحد من لسبــــاب<sup>13</sup>
- أورا لوتاد يعود اعمــــود<sup>15</sup>
- امتين اعمود أواخر مــــعــــكــــود
- خيط السدوة شورو مــــردود
- حابر ماه مع النــــيرة كــــود<sup>18</sup>
- تحتو خيط النــــيرة وإلــــود<sup>20</sup>
- خيط النــــيرة من فوگ الســــعود
- حافظ من لخلــــاط الســــدود
- أهل الصحرا عنوان الجــــود
- أعلى لجبار اخاب العــــود
- وابلوزات اقياس المــــارات<sup>23</sup>
- وعشرة من ذاك العد اتعــــود
- لفليج اختيــــار المنــــشــــود
- ببه اقياس اخيام الجــــدود
- النشو اخيام : لبدایة صناعة الخيم التقليدية الصحراوية
- الزر : إجتثاث ویر الإبل وشعر الماعز . - تنتم : تثبت
- لجبار : حبال قوية تخاط عليها حواشي الخيمة التقليدية من اليمين ومن اليسار . -
- اخاب العود : هي شبه زوايا منفرجة تثبت في جانبي الخيمة الأيمن والأيسر من أجل أن تشدبها الحبال المثبتة في الوتاد
- عاکب : بعد - اكليع : نزع
- إجي : يأتي . - اتشعشيع : ضرب الوبر والشعر بالعصا ليختلط ويصبح المطرك : عصا طويلة ورقيفة تستعمل لضرب الوبر . - لخباط : كمية الشعر والوبر التي يمكن أن تضرب بالمطرك ( العصا ) دفعة واحدة . - المريود : المقصود - يوظف : يمرر ، ويمرر . - اغر شال : آلة يتم بها نقش الشعر والوبر حتى يصير ناعما . - قم اغر شال : الكمية التي يمكن أن تمرر من بين فكي اغر شال . - الين : حتى إعود : يصبح
- اتحر كيصه : مكان ناتئ من الغزيل عند ما يكون الغزيل غير متوازن الحجم به موضع غليظ وموضع رقيق فالموضع الغليظ منه يقال له امحر كص . ونفس الشيء اذا كان في الحبل - مكرود : قوي الغزل مقتول بإتقان
- اجمام : حمولة المغزل مرتين من الغزيل يمثل وينزع ما عليه تسمى اجمام . وكل اجمامين يمثل بهما مبرم ، وهو عود البرم الذي يبرم به الغزيل بعد غزله . ويسمى ما يحمله المبرم ب : الصاگ
- الممحط : بعد برم الغزيل بالمبرم يشد بين وتدين متباعدين لينتدجد جيدا ويصبح صالحا للسدوة
- اتشكر يف : انكماش
- التكبـاب : وضع البرم بعد تمده بالكبة وهي شكل كرة من الغزيل .
- السدوة : العملية الأولى للنسيج ؛ وضع الخيطان في وضعية النسيج
- وتدين اجو كدام الباب : وضع وتدين أمام الباب .
- اورا لوتاد اعود اعمود : ومن ورائهما يكون عمودا
- وكيفت ذاك امركب تركاب امتين اعمود اواخر : ومثل ذلك يثبت عمود آخر تثبتا قويا في مؤخرة الخيمة بداخها
- معكود فيه الزبلوح : مربوط به الزبلوح ؛ والزبلوح هو الخيط الخشن الذي تثبت به خيوط المسدى مع الأعمدة . - ومنوطاب خيط السدوة شور مردود : ومنه ينطلق خيط النسيج ويرد إليه
- ناير خيط : أحد الخيوط يؤخذ بخيط النيرة . - الآخر منساب حابر : محرر من النيرة وغير ممسوك بخيطها
- النيرة هي الخيط الأبيض المشبك امام العاملة بالنسيج قريبا منها دائما تزحفه أمامها قصد تنظيم الخيوط باستمرار
- بنجاب : يؤتى به ويمرر . أي أن خيط النير يمر من تحت الخيوط السفلية للمسدى وتترك الخيوط العلوية حرة
- إيلود . وهنا بمعنى ينقلب
- خيط اكلاط لفليج : الخيط الذي يفصل الخيوط العلوية عن السفلية . - ولفليج هي السريحة المنسوجة من الشعر أو الوبر لتجمع وتخاط مع مثيلاتها وتتكون منها الخيمة التقليدية
- اقياس العرض إجي بوزات : هي جمع أوزة وهي وحدة قياس للمسدى ومقدارها ثلاثة خيوط من العرض .
- المارة : وحدة قياس العرض هي الأخرى ومقدارها عشر أوزات أو ثلاثين خيطا من العرض



La anchura se mide por Auzat<sup>9</sup>  
y por las auzat se miden las Marat<sup>10</sup>.  
Una auza son tres Tarhat<sup>11</sup>  
y diez de esa medida forman una mara  
y es débito de la dueña del fliy escoger  
la cantidad de marat que pretende.  
Así, se midieron, desde los albores  
las jaimas de los abuelos y los enseres  
necesarios para el telar preparados:  
la Susia<sup>12</sup> para entretejer es de cinco  
pulgadas de ancho y la Midra<sup>13</sup> para apretar,  
que guía los hilos para prensar las Carrat<sup>14</sup>,  
unos hacia arriba y otros hacia abajo y el Meshaa<sup>15</sup>  
de Lahmet lefliy<sup>16</sup>, a esta lista de avíos, da fin.

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La costura comienza con el emparejado  
de Lemtaneb<sup>17</sup> y alfelya, estirando las  
cuerdas del yabr<sup>18</sup> y ajustando los remates  
de alfelya sobre ellas, como suele ser.  
Preparando la jaima para la ocasión,  
la tradicional Tuiza<sup>19</sup> sin escatimar en nada,  
ni en dinero, ni en tesón, desde los tiempos  
de la esquila hasta tender la jaima para coser.  
Con igual esfuerzo y entrega total, ayudar  
a levantar una jaima no tiene límites.

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Se montan las asas y Lahgab<sup>20</sup> enlazan las asas  
con las estacas y bonitas Trayeg<sup>21</sup> en Labuab<sup>22</sup>  
adornadas con borlas de belleza indescrutable  
y los ornamentos del Humar<sup>23</sup> se esparcen sobre  
Laasam<sup>24</sup> de una hermosura sin igual entre Rkayez<sup>25</sup>  
sin desperfectos y Kifya<sup>26</sup> y Bnayeg<sup>27</sup> de tela diseñados  
por manos de grupos de jóvenes y de ancianos  
y en el interior hay una cortina delante de Ashakab<sup>28</sup>  
y Arhal<sup>29</sup> detrás de un manto extendido.  
A su vera los utensilios de ordeño, Tazuwa<sup>30</sup>, odre  
y embudo de madera, Aslay<sup>31</sup> y Gadhat<sup>32</sup> para beber.  
Adres<sup>33</sup> y Ashguim<sup>34</sup> desbordante de espuma que  
resbala como espuma de Shnan<sup>35</sup>, la boca atada con  
un dogal y un Atbag<sup>36</sup> necesario para tapar la leche  
en el frescor, ya sea de palmera o de Azarán<sup>37</sup>  
de buena calidad, forrado de piel o fabricado de  
Smar<sup>38</sup>, selecto y apreciado, maduro y lleno de vigor.

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<sup>9</sup> Auzat: plural de auza, medida que equivale al ancho de tres hilos.

<sup>10</sup> Marat: plural de mara, medida que equivale al ancho de diez auzat o de treinta hilos

<sup>11</sup> Tarhat: plural de tarha, medida que equivale al ancho de un hilo.

<sup>12</sup> Susia: tabla de madera que mide cinco pulgadas de ancho y un metro de largo que se introduce entre los hilos de la urdimbre para golpear y comprimir los hilos de alimentación para que ocupen su lugar y se asientan.

<sup>13</sup> Midra: instrumento de metal con mango de madera y con una punta corva que se pasa sobre los hilos con una determinada técnica para fijar la trama.

<sup>14</sup> Carrat: plural de carra: cada avance hacia delante en la elaboración del tejido.

<sup>15</sup> Meshaa: es el palo sobre el que se ciñe el hilo de lahmet lefliy.

<sup>16</sup> Lahmet lefliy: es el hilo que se introduce entre los hilos de la urdimbre después de cada carra.

<sup>17</sup> Lemtaneb: plural de metneba, son las dos tiras finas de tejido que constituyen las terminaciones por delante y por detrás de la jaima.

<sup>18</sup> Yabr: orilla o ribete en que termina la jaima por la derecha y por la izquierda, donde se acoplan las asas a las que se atan los vientos que fijan la jaima.

<sup>19</sup> Tuiza: trabajo colectivo.

<sup>20</sup> Lahgab: cuerdas de lana que se usan como vientos para sujetar la jaima.

<sup>21</sup> Trayeg: cintas en las que predomina el color blanco, que cuelgan de los palos que levantan, por la izquierda y por la derecha, la parte delantera de la jaima.

<sup>22</sup> Labuab: palos que levantan la entrada de la jaima, uno a la izquierda y otro a la derecha.

<sup>23</sup> Humar: tira de tejido con flecos que descende desde el vértice que forma la unión de las vigas que levantan la jaima.

<sup>24</sup> Laasam: cuerda hecha de cuero que se ata entre las vigas que levantan la jaima, a veces se usa para colgar ropa.

<sup>25</sup> Rkayez: las vigas que levantan la jaima.

<sup>26</sup> Kifya: plural de Kfa, tela que rodea la jaima y que la une al suelo, en tiempos de calor, se levanta para refrescar la jaima.

<sup>27</sup> Bnayeg: trozos de tela, generalmente, de color blanco.

<sup>28</sup> Ashakab: llamado, también, Amshakab, montura que usan las mujeres saharauis para montar a camello.

<sup>29</sup> Arhal: especie de andamio de madera que se coloca en el lado izquierdo de la jaima y se usa para poner diferentes enseres.

<sup>30</sup> Tazuwa: cuenco grande de madera para la leche.

<sup>31</sup> Aslay: cuenco de madera menor que tazuwa y mayor que algadha.

<sup>32</sup> Gadhat: plural de algadha, cuenco de madera pequeño que se usa para beber leche, agua, etc.

<sup>33</sup> Adres: cuenco de madera con unas raras asas, mayor que algadha y menor que aslay

<sup>34</sup> Ashguim: cucharón grande de madera que se usa para sacar la leche de tazuwa para verterla en otros recipientes.

<sup>35</sup> Shnan: es el camello joven, durante los primeros días de la doma.

<sup>36</sup> Atbag: recipiente para poner, harinas, granos, etc. y que se suele usar para tapar otros recipientes.

<sup>37</sup> Azarán: arbusto que se usa para construir esteras, cuscuseras, etc.

24 - لالات : الآلات  
25 - صوصيت انزير اخمس ثومات فالعرظ : صوصية : لوح من الخشب مقدار مترا  
في الطول وموضع خمسة اصابع في العرض يتم ادخاله بين الخيوط بعد تمرير خيط  
اللحمة من بينها وضربه بالصوصية جيدا ليأخذ مكانه بقوة . - انزير نسيج  
26 - المدرة : وسيلة من الحديد لها مقبض خشبي ورأس معوج قليلا الى جهة المبيض تمرر  
على الخيوط بتقنية خاصة قصد إحكام شد النسيج . - الكز الشد بقوة . - اتكود : تقود  
الخيوط الى إحكام الشد والكراات هي خطوات النسيج كل خطوة الى الإمام في النسيج  
تسمى كرة  
27 - وميشع لحمة لفليج : الميشع هو العصا التي يلف عليها خيط اللحمة وهو الخيط الذي  
يمرر بين الخيوط الأساسية بعد كل كرة  
28 - لخياط : خياطة الخيمة وجمع أجزائها . - انتاظير الفلجة : نشر اجزاء الخيمة متوازية  
قصد الخياطة والتركيب النهائي  
29 - لمطانب ومفردها مطنية : وهي شريطا النسيج القصيفان في الخيمة من الأمام والخلف  
مشكلان حواشيها .  
- انتير : شد ويقوة .  
30 - احبال الجبر : شد الحبلين اللذين ستخاط عليهما نهايات قطع الخيمة من اليمين ومن  
اليسار . - وكز اكسير روس الفلجة : شد ثني رؤس الفلجة ( اشرطة النسيج المكونة  
للخيمة ) وخياطتها بعناية على الحبال  
31 - فلي معهود : فيما عهد . وجرت به العادة  
32 - للشل : للخياطة . لعكود : التقاليد والعادات  
33 - اتويزة : العمل الجماعي وهو السمة المألوفة لدى شعبنا ( التعاون الجماعي في كل  
عمل مضني).  
34 - مكود : متوازي ؛ ومتساوي  
35 - انتوثير : اغداق ؛ وعطاء بلا حساب  
36 - لحكاب : حبال تصنع من الوبر تشد بها الخيمة مع الأوتاد .  
37 - اطرايڭ : اشرطة مزركشة بالبياض تكون في مقمة الخيمة الى اليمين واليسار كل  
واحدة منها عند رأس أحد العمودين اللذين يرفعان الخيمة من امام على جانبيها وتندلى  
قطعة مهدبة من كل طرف الى أسفل .  
38 - اقلوباب : الأبواب هي العمودان اللذان يرفع بهما فم الخيمة من اليمين واليسار  
39 - اتكلمين إكود بيه الزين : اتكلمين أهداب جميلة تكون في أسفل اطرايڭ . أو غيرها  
كالخرانم ( الأزمة ) . - إكود : يصعب تشبيبه لروعة جماله  
39 - حمار : شريط من النسيج مهدب من طرفيه يكون في أعلى الركيزتين ويتدلى طرفاه  
نحو الأسفل بين الركيزتين . لعصام : حبل من الجلد مقنول بعناية فائقة يربط بين  
الركيزتين من أعلى تعلق فيه الملابس أحيانا  
40 - كفية : جمع اكفي : وهي اشرطة الأقمشة التي تثبت مع الخيمة من الأسفل قصد تدفنتها  
. وكانت في سابق عهدها من نسيج الشعر والوبر بدل القماش . - ابنايڭ من لينود :  
أشرطة من القماش الأبيض في أغلب حالاته  
41 - ساتر دون أشقاب : ساتر قماش يلف دون أشقاب . - أشقاب ويسمى أمشقب : هو  
الوسيلة المستعملة من طرف المرأة الصحراوية للركوب على الجمل  
42 - ارحل : مرفع خشبي يكون في الجهة الغربية من الخيمة ينظم عليه الأثاث . - حولي :  
قماش وتقال للشاب مابين سن الثانية عشر والرابعة عشر وتقال لجذع الماعز  
43 - احذاه : بالقرب منه . - اماعين التحلاب : الألوان المستعملة للحليب  
44 - تازوة : إبناء خشبي كبير يستعمل لحفظ اللبن أو الحليب  
45 - أسلاي : إبناء من الخشب اصغر من التازوة واكثر من الكدحة . - كدحات اشراب :  
أواني خشبية ليقة الحجم تستخدم للشرب كالحليب والماء وغيره  
46 - أدرس : إبناء من الخشب له حمالات من جسمه قريبة من حواشيه . وهو اكبر من  
الكدحة وأصغر من أسلاي . - أشيكيڭ : إبناء على شكل مغزف الطعام وهو مصنوع  
من الخشب وحجمه أكبر من حجم المغزف . يستعمل لغرف اللبن والحليب من التازوة  
وافراغه في الأواني الأخرى . - ازبود الرغبة : رغبة الحليب  
47 - يتكيب : تتساقط منه كومات الرغبة . أشنان : البعير في أول تعليمه الانقياد بالزمام  
والقيد وحمل الأثاث وركوب الراكب . - وتقال للشاب في أول حضوره مع الرجال في  
الأعمال التي تهمهم . - المزمود : مربوط حبل على فتحة فمه لتضيق التنفس عليه وقهره  
قصد ترويضه  
48 - ماينصاب : لا يستغنى عنه  
49 - أزران اشباب : نيات يصنع منه الحصير التقليدي والطبق التقليدي والكسكاس التقليدي.  
- اشباب ماض  
50 - مكفاه : جهته الخلفية  
51 - تم اطياب : بلغ نضجه وصلاح للإستعمال . - اسمار : نبتة : تستخدم في صنع الحصير  
التقليدي والطبق وغيره.

إعود مع السدوة موجــــود  
فالعرظ ومدرة كز اتكــــود<sup>26</sup>  
هذا محدود وذا مرفــــود  
لالات افذا العد المعــــودود  
أهل الصحرا عنوان الجــــود  
أعلى لجبار اخراب العــــود  
لمطانب والفلجة وتــــير<sup>29</sup>  
روس الفلجة فلي معــــود<sup>31</sup>  
الخيمة للشل فلعــــكــــود<sup>32</sup>  
لا فلمال ولا فلمجــــهــــود  
الخيمة تخــــيط مكــــودود<sup>34</sup>  
عون المتــــاع بلا حــــودود  
أهل الصحرا عنوان الجــــود  
أعلى لجبار اخراب العــــود  
اتوصل لوتــــاد بلخــــراب  
تركب بتكلمــــين اكــــود<sup>38</sup>  
حمار اعلى لعصام إجــــود<sup>39</sup>  
كفيا وبنــــايڭ من لينــــود<sup>40</sup>  
فالخيمة والشيب لكــــعــــود  
وارحل دونو حولي مشــــودود<sup>42</sup>  
تازوة شكوة محكن عــــود<sup>44</sup>  
أدرس أشكــــيم من ازبــــود<sup>46</sup>  
ازبود اشنان المزمــــود<sup>47</sup>  
ايغطي لحليب فــــودود  
اعلى مكفاه افراش اجــــود<sup>50</sup>  
اسمارو معروف ومــــورود<sup>51</sup>  
أهل الصحرا عنوان الجــــود

واللي ضروري من لالات<sup>24</sup>  
صوصيت انزير اخمس ثومات<sup>25</sup>  
لخيوط الى كز الكرات  
وميشع لحمة لفليج أوفــــات<sup>27</sup>  
عندي تعريف أنشو اخيــــام  
من عند الزز الى تنــــام  
يبدا لخياط امن انتاظــــير<sup>28</sup>  
احبال الجبر وكز اكــــير<sup>30</sup>  
اعلى حبل الجبر وتحضــــير  
باتويزة ما فيها تقصــــير<sup>33</sup>  
من وقت الزز البن انشــــير  
بذل الجهد ومد اتنــــوثير<sup>35</sup>  
عندي تعريف أنشو اخيــــام  
من عند الزز الى تنــــام  
تركب لخراب ولحــــاب<sup>36</sup>  
وطرايڭ زينــــات فلبواب<sup>37</sup>  
بيه الزين وتــــدليت اهداب  
بالزين اركــــائز ماتنــــعاب  
تفصل بين اجموع الشــــباب  
وفيها ساتر دون اشقــــاب<sup>41</sup>  
احذاه اماعين التحــــلاب<sup>43</sup>  
اسلاي وكدحــــات اشراب<sup>45</sup>  
الرغبة يتكيب تكبــــاب  
واطبيڭ عن دور ما ينصــــا<sup>48</sup>  
از عف وللا زران اشبــــاب<sup>49</sup>  
واللا من معدن تم اطــــياب  
عندي تعريف أنشو اخيــــام

En la jaima siempre hay una hermosa Zarbilla<sup>39</sup> o una Akarilla<sup>40</sup> y una Benia<sup>41</sup> encima de arhal, doblada, Faru<sup>42</sup>, Tiziyaten<sup>43</sup> de suma belleza, Jabia<sup>44</sup>, agujas y Asfud<sup>45</sup>. Almohadas de cuero y diferentes cuerdas para atar, Azerzef<sup>46</sup>, Ahray<sup>47</sup> y Ahwiya<sup>48</sup>, Leshfa<sup>49</sup>, Ayef<sup>50</sup>, molino de piedra y lo que carga un camello de Lemsaga<sup>51</sup>. Además de Gasaa<sup>52</sup>, Guidra<sup>53</sup> y un Musaad<sup>54</sup> de palmera, una Krara<sup>55</sup> recostada, mortero y pilón. Mi lengua no se olvida de Leabeidía<sup>56</sup>, Elebda<sup>57</sup>, Amsilak<sup>58</sup> y la hospitalidad, la Tasufra\* del hombre por la que se suceden las delegaciones y unas esteras lindas y limpias, su imagen: ¡Alabado sea, el Creador! No quiero que en el olvido queden los cucharones de madera, ni se oculte al Gshat<sup>59</sup>, ni Guerda<sup>60</sup> decorada, ni los enseres del té. Quiero que se hable de Shagafal<sup>61</sup> y de la bayoneta, del fusil y del estuche de la pólvora, Atarraza<sup>62</sup> y Albaldía<sup>63</sup>, Busilán<sup>64</sup> y las armas para defender los valores saharauis, de la generosidad, la amistad y la pureza.

Voy a definir cómo construyen sus jaimas los saharauis, hogares de nobleza, desde la esquila hasta fijar a los ribetes las asas de madera.

Es imprescindible tener una criba, el Mizwud<sup>65</sup> y Dabia<sup>66</sup>, diversos cajones, Terra<sup>67</sup> donde guardan las mujeres sus adornos. Eslij<sup>68</sup>, Aguert<sup>69</sup>, Akak<sup>70</sup>, Jilal<sup>71</sup>, Maruab<sup>72</sup>, Mirued<sup>73</sup> Kohl mirando hacia el estuche de las cardas y Asirmi<sup>74</sup> con los flecos colgantes.

Collares de seda que embellecen las riendas de los camellos, Iliwish<sup>75</sup>, para el hombre a la hora de montar a camello o para rezar, las riendas, las bridas y silla de montar y todos los arreos del caballo y todo lo que me falta por nombrar, como Maarad<sup>76</sup> y la concha para el recién nacido, la hoz, la esquiladora, y Akufal<sup>77</sup>, el cuchillo, la cuscusera y es limitada mi noción, pero me viene a la mente nombrar Ashdumín<sup>78</sup> y hasta este instante no había podido recordar Ashkal<sup>79</sup> cuerdas de cuero que sostiene las vigas de las jaimas y agradezco a Dios que el recordar Babein<sup>80</sup> y Mamsac<sup>81</sup> no sea un fastidio para mí y en el futuro los jóvenes, lo que digo, van a confirmar.

<sup>76</sup> Maarad: piedra redonda u ovoide que se puede agarrar firmemente con la mano que se usa como martillo.

<sup>77</sup> Akufal: un tipo de concha marina que usan las mujeres para poner aceites y cremas.

<sup>78</sup> Ashdumín: son dos palos que se colocan paralelamente sobre dos rhal y que sirven para poner alfombras y mantas dobladas. En algunas partes se le llama a labuab.

<sup>79</sup> Ashkal: son dos cuerdas cortas hechas de cuero que sujetan las vigas de la jaima sobre los camellos durante el traslado.

<sup>80</sup> Babein: labuab,

<sup>81</sup> Mamsac: palo que en algunas ocasiones se usa para levantar la parte delantera de la jaima por el centro.

<sup>38</sup> Smar: arbusto parecido a azarán usado para hacer esteras y otros utensilios para el hogar.

<sup>39</sup> Zarbilla: alfombra

<sup>40</sup> Akarilla: Alfombra siempre de color rojo y con los bordes de color negro.

<sup>41</sup> Benia: tela de las dimensiones de la jaima de color blanco que se suele instalar dentro de la jaima en épocas de frío.

<sup>42</sup> Farú: cobertor hecho de piel de cabra.

<sup>43</sup> Tiziyaten: plural de tazaya, bolsas de forma cuadrada, hechas de piel de camello donde las mujeres guardan sus objetos y durante los viajes se usan para equilibrar al ashakab sobre el camello.

<sup>44</sup> Jabia: pequeños recipientes pegados, hechos de madera que utilizan las mujeres para cosméticos, cuando se arreglan y peinan el pelo.

<sup>45</sup> Asfud: instrumento de metal con un mango de madera para perforar el cuero y otros usos.

<sup>46</sup> Azerzef: utensilio de costura con un mango de madera y en el que el ojo donde se inserta el hilo está en la punta.

<sup>47</sup> Ahray: mango donde se agarran las mujeres para subir al camello.

<sup>48</sup> Ahwiya: manta que se pone encima de los camellos que los protege de la carga.

<sup>49</sup> Leshfa: instrumento para coser piel y para hacer otros utensilios.

<sup>50</sup> Ayef: funda para el molino de piedra.

<sup>51</sup> Lemsaga: la carga que puede llevar un camello de reservas de agua.

<sup>52</sup> Gasaa: amplio recipiente de madera, donde se sirven platos tradicionales.

<sup>53</sup> Guidra: olla redonda.

<sup>54</sup> Musaad: palo usado para revolver Al-asid, comida tradicional.

<sup>55</sup> Krara: saco grande hecho de pelo de cabra y lana de camello para guardar granos.

<sup>56</sup> Leabeidía: Montura de camello para hombre de gran calidad.

<sup>57</sup> Elebda: mantilla de piel que protege al camello y sobre la que se coloca la montura.

<sup>58</sup> Amsilak: tela que se coloca debajo de elebda sobre el camello.

<sup>59</sup> Gshat: correa de piel muy fuerte.

<sup>60</sup> Guerda: tira tejida de pelo negro de cabra.

<sup>61</sup> Shagafal: caja hecha de piel de cabra para guardar el té.

<sup>62</sup> Atarraza: gorro de piel de antílope o de tela de color tierra que se usa para cazar.

<sup>63</sup> Albaldía: bala de fabricación casera.

<sup>64</sup> Busilán: cuchillo tradicional cuya hoja y mango son de una misma pieza de metal.

<sup>65</sup> Mizwud: especie de odre para guardar grasa animal.

<sup>66</sup> Dabia: saco de piel para guardar harina.

<sup>67</sup> Terra: cesta hecha de ramas de palmera o de otro material para guardar cosas.

<sup>68</sup> Eslij: odre donde se guarda la mantequilla durante una semana antes de ser procesada.

<sup>69</sup> Aguert: odre de piel de cabrito para guardar la grasa de uso diario.

<sup>70</sup> Akak: plural de Ika, odre de piel de cabra, para guardar la grasa durante un año.

<sup>71</sup> Jilal: plural de jilala, porciones de alambres que se usan para sujetar al kfa con la jaima.

<sup>72</sup> Maruab: odre para fermentar la leche.

<sup>73</sup> Mirued: lápiz de bronce para aplicar Kohl en los ojos.

<sup>74</sup> Asirmi: almoha de piel de cabra.

<sup>75</sup> Iliwish: felpudo de cuero de cordero blanco que se usa para rezar y para acomodarse los hombres en la montura de camello.



- من عند الزر الى تنتام
- فالخيممة توراً زربية
- وبنية فوگ ارحل مطبوية<sup>53</sup>
- الهم بالززين وخبوية<sup>55</sup>
- وساند من جلد الحية
- وازرزف واحرج واحوية<sup>58</sup>
- اجمل من لمساكة ويا<sup>60</sup>
- اجريد اغرارة متكبة<sup>62</sup>
- الساتي عن لعبيدية<sup>64</sup>
- تاسفرت الراجل هسي
- وحصاير زينات انكية<sup>67</sup>
- مانبغي تبكي منسية
- كشاط وغرطة مرفية<sup>69</sup>
- خير اشگفل والكمية<sup>70</sup>
- والترازة والبلدية<sup>72</sup>
- عن لخللاق الصحراوية
- عندي تعريف أنشو اخيام
- من عند الزر الى تنتام
- لابد من وجود اغربال
- امجر وترا وحتيال<sup>75</sup>
- اسليخ اكرط اعكك خلال<sup>77</sup>
- اعلى ملاحه لغرشال
- وشرك من لحرير التحفال<sup>80</sup>
- إلويش اخص الرجال<sup>82</sup>
- وحسكة والجام وسرج وحال
- واللي باگيلي من شي قال
- منجل ومززة واقوفال<sup>84</sup>
- عرفي غير اطرلي فبال
- من بالي گبل اطرلي اشكال<sup>86</sup>
- امري لله اللي تحجال<sup>87</sup>
- اعلياً وعلياً لجبال
- أعلى لجبار اخاب العود
- زينمة وللا عكارية<sup>52</sup>
- وفر وتيزياتن مشهود<sup>54</sup>
- مخيط ويباري وأسفود<sup>56</sup>
- ونسع إسفلان ولكيود<sup>57</sup>
- لشفة واجف ارحى وارفود<sup>59</sup>
- كصعة كدرة مصعاد إيعود<sup>61</sup>
- مهرارز امدكة مامعگود<sup>63</sup>
- واللبدة وامسلاق وجود<sup>65</sup>
- عليها تتوافد لاسفود<sup>66</sup>
- شوفتهم سبحان المعبود
- مرغايت عود ولا مجحود<sup>68</sup>
- واماعين اتاي ومردود
- والمدفع وملم البارود<sup>71</sup>
- وبوسيلان وسلاح الذود<sup>73</sup>
- كرم وعفاف وتودود
- أهل الصحرا عنوان الجود
- أعلى لجبار اخاب العود
- والمزود والطبيبة وأشكال<sup>74</sup>
- ماهو ذاك اخص بالغبود<sup>76</sup>
- مروب مروود كحلة مصدود<sup>78</sup>
- واصرمي تهدابو مهدود<sup>79</sup>
- لمراكيب اخزايم للگود<sup>81</sup>
- عند اركوب البل والسجود
- تجهيزات افرس واللا عود
- معرظ ومحارة للمولود<sup>83</sup>
- سكين اكسكاس ومحدود
- ذكر اشدومين ومفقود<sup>85</sup>
- اركايز لخيام ومحمود
- بابين ومسمك ماهو كود
- فلغد الدور اتعود اشهود
- العكارية : غطاء مثل الزربية ولكنه خال من الألوان البيضاء فهو كله ذو لون أحمر ماعدا حواشيه تكون سوداء من شعر الماعز الأسود
- بنية : قماش ابيض يبنى داخل الخيمة وأحياناً تطوى فوق الرحل مع الأثاث
- فرو : غطاء من جلد الغنم . تيزياتن : أكياس على شكل مربع مصنوعة من جلد الإبل تستعملها النساء لحفظ أثباتهن في المقام وحفظ توازن امشقب فوق الجمل أثناء الرحيل
- خبية : ايناء خشبيان ملتصقان ببعضهما صغيرا الحجم تستعملهن النساء للعبور عند ظفير شعرهن
- أسفود : وسيلة من الحديد لها مقبض من الخشب تستعمل لتقب الجلد الخشن وعلاج أخفاف الإبل ونزع الأضرار بالطرق التقليدية
- النسعة : حبل من الجلد يصنع بواسطة الضفير . إسفلان : حبال من الجلد تصنع بواسطة القتل
- أزرزف : وسيلة خياطة لها مقبض خشبي ؛ وعينها التي يدخل بها الخيط توجد براسها المعاكس للقبضة
- أحرج : الوسيلة التي تشدها المرأة قبل هودجها على الجمل لحفظ توازن اليهودج وتثبيتته . لحوية : وسيلة تشد على الإبل لحمل الأثقال والأثاث غير الراحلة وامشقب . وتكون مقدمتها من خشب أو حديد وفراشها ومؤخرتها من نسيج الشعر والوبر أو من الحلفاء وما شابهها
- لشفة : وسيلة لخياطة الجلد وصناعة الطبق والكساس . أجف : حمالة خاصة بالرحى تصنع من الحلفاء . ارفود : حمولة . جمل من لمساكة . حمولة جمل من وسائل حمل الماء . المسكية : الوسيلة التي تسقى وتحمل السقي أي الماء واللبن والحليب . ويا : مع . ( أداة عطف ) .
- القصة : القدر . مصعاد العود الذي تخط به العصيدة
- اجريد : عرش من نخيل . اغرارة : كيس من نسيج الشعر والوبر من نفس مكونات الخيمة . متكبة : ممتدة أو ممدودة .
- امدكة : خشبة تستعمل لدق وسحق الأشياء داخل المهراس بواسطة الضرب المتواصل . مامعگود الساتي : لساني ليس معقودا .
- لعبيدية : أجود أنواع الرواحل ( الراحلة ) وهي الوسيلة المستعملة من قبل الرجل الصحراوي في ركوب الجمل
- اللبدة : فراش من الجلد له حافة سمكة يفرش للراحلة بينها وظهر الجمل . اسلاق : فراش من القماش الملون يكون بين اللبدة وظهر الجمل . وجود : وكرم
- تاسوفرة الراجل : كيس من الجلد خاص بالرجل يحفظ فيه الأشياء المهمة والثمينة ويأتي به من السوق ملأ بفرحة الصغار والكبار . وهي اهم ما يتوافد الزوار عليه لأخذ الفرحة والهدايا
- انكية : نفية ونظيفة
- مرغايت إيناء خشبي على شكل المغرف يستخدم لتوزيع الأطعمة ونزعها من المراحل والقدر
- اكشاط وغرطة مرفية : اكشاط سير من الجلد قوي جدا . غرطة : شريط منسوج من الشعر الأسود جدا . مرفية مزخرفة
- أشكفل : كيس من جلد الماعز مزخرف بالصباغ يحفظ فيه الشاي وغيره من الأشياء الهامة . الكمية : حرية قتال ابيض لها غمد عادة ما يزرکش بالفضة أو النحاس . أو بهما معا
- المدفع : البندقية . ملم البارود : مخزن البارود
- الترازة : غطاء الرأس المصنوع من جلد وحش الفلاة . أو قماش يشبه لونه لون الأرض لتستعمل في الصيد البري . البلدية : الطلقة المعاد تصنيعها محليا
- بوسيلان : موس مصنوع محليا كان الحرفيون يصنعونه من الحديد وقبضته تكون منه دون إضافة لها أي تحسينات
- المزود : كيس من الجلد عادة تستعمله المرأة لحفظ الجلود التي تحفظ فيها الدسم والدهن وأحياناً يستعمل لحفظ دقيق الشعير . الظبية : كيس من الجلد أصغر حجماً من المزود يستعمل هو الآخر لحفظ دقيق وغيره
- امجر : صندوق خشبي تحفظ فيه أواني الشاي خصوصاً . ترة : حافظة تصنع من سعف النخيل أو السمار أو أزران تحفظ فيها أدوات الخياطة وهناك من يحفظ فيها أواني الشاي وتحفظ فيها النسوة حليهن أحياناً . احتيال : تجهيزات
- لعبود : النساء
- اسليخ : قد يكون جلد وقد يكون إيناء تحفظ فيه الزبدة لمدة أسبوع وهو موعد تنوبها واستخراج الدسم الخالص منها . أكرط : جلد رأس صغير من الغنم يحفظ فيه الدسم الخالص للإستعمال اليومي . اعكك : جمع عكة وهو جلد رأس كبير من الماعز أو من وحش الفلاة ( الأروي ) يحفظ فيه الدسم للإدخار طيلة العام
- خلال : جمع خلالة وهي المسامير التي يثبت بها القماش المستعمل لتدئة الخيمة مع هذه الأخيرة
- مروب : إيناء أو شكوة مخصص أو مخصصة لحفظ الحليب حتى يروب ليصبح جاهزاً للخض ونزع الزبدة منه . مروود كحلة : قلم من النحاس يستعمل لكحل العين . مصدود على ملاحه : ينظر الى ملاحه لغرشال وهي حمالة يحمل فيها اغرشال والمغزل والمبرم وتصنع من نسيج الشعر والوبر وقد تصنع من الحلفاء وأطاف أو سعف النخل وغيره ( أطاف ) نبات من فصيلة الحلفاء
- أصرمي : وسادة من جلد الغنم لها أهداب من السير تحفها من الخارج
- اشرك من لحرير التحفال : قلاند من الحرير وأحياناً إن لم يكن غالباً تكون من الشعر الحالك السواد لتجميل . لمراكيب : الجمال والخيل والفلاص
- اخزايم للکود : جمع خزامة وهي الزمام ؛ لإقتياد الجمال
- إلويش : فراش من جلد الضان الأبيض يستعمل كفراش للصلاة وكذلك فراش الراحلة عند ركوب الإبل
- معرظ : حجر قوي مكور الشكل أو بيضوي يمكن إمساكه بيد واحدة يحتفظ به عند كل عائلة لغرز الأوتاد في الأرض ولسحق الأدوية التقليدية ولتثبيت مدور الرحى فهو كثير الإستعمال ولا غنى عنه . امحارة : نوع من الأصداف البحرية مثل الملعقة يحتفظ به لضمان تغذية المولود قبل أن يقدر على تناول الطعام والشراب

## THE POEM OF THE JAIMA

Translation by Ebnū Mohamed Salem, to English by Julien Lafontaine Carboni

*The jaima is one of the masterpieces of literature, thought and culture presented to us by the poet, Zaïm. Through verse, he shows us the different stages and processes involved in the construction of a jaima and the furniture and materials it houses. It is an epic poem of the Saharawi heritage and culture, which unites the present of the new generations with its glorious past. It is also a tribute and remembrance for those parents who lived a great part of their lives in the authentic Saharawi jaimas and in the environments of greatness, hospitality and generosity that surrounded them.*

### **The jaima**

I am going to define how are built  
the jaimas of the Sahrawi, homes  
of nobility, from shearing to  
attaching the wooden handles to the trims.

After shearing the cattle  
and clean the wool of thorns,  
it's time to hit with the Matrag<sup>1</sup>  
the right quantity of wool.  
Passes between the jaws of the thistle  
until it is ideal for spinning, strong  
and without asperities, smooth and of quality.  
After spinning, the black balls of yarn are gathered  
where every two skeins form the Sag<sup>2</sup>,  
that surrounds the wooden Mabram<sup>3</sup>.  
Twisted yarn takes weeks, to remove  
asperities, between extended stakes.

I am going to define how are built  
the jaimas of the Sahrawi, homes  
of nobility, from shearing to  
attaching the wooden handles to the trims.

After tensioning, the yarn is formed into balls  
to form the warp of the loom.  
Two stakes are placed in front of the entrance,  
and a pole is placed behind the stakes.  
and another one at the end of the jaima is settled,  
where Zabluh<sup>4</sup> is located, from which it departs  
the thread that returns to it forming the warp.  
Nayer<sup>5</sup> is the thread of Nira<sup>6</sup> and the Hayer<sup>7</sup>  
is free and its thread is not attached to it,  
underneath the lower thread passes the nira thread  
and returns, turning around over the pole,  
before reaching the upper thread.  
The thread of the collar of the Fliy<sup>8</sup> prevents  
warp threads to be confused.

I am going to define how are built  
the jaimas of the Sahrawi, homes  
of nobility, from shearing to  
attaching the wooden handles to the trims.

<sup>1</sup> Matrag: long and thin wand with which wool is beaten.

<sup>2</sup> Sag: quantity of yarn wound on the mabram.

<sup>3</sup> Mabram: is the stick on which the twisted threads are wound.


<sup>4</sup> Zabluh: is the thick thread through which the warp threads are attached to the poles at the beginning and end of the loom.

<sup>5</sup> Nayer: is the thread of Nira.

<sup>6</sup> Nira: is a white thread that moves forward as the process progresses and serves as a guide to organize the threads permanently.

<sup>7</sup> Hayer: is a thread that falls and is free.

<sup>8</sup> Fliy: singular of alfelya, is the strip woven with hair and wool, which, united and sewn together with other similar strips, forms the traditional jaima.

A photograph showing a person's hands holding a large, blank white rectangular object, possibly a piece of paper or a small rug, against a dark background. The hands are positioned on the left and right sides of the white object, with fingers spread. The lighting is soft, highlighting the texture of the skin and the smooth surface of the white object.

| Fig. 19 | Carpet-weaving workshop. The weaving loom for carpets is different to that used for the Jaïma. They are vertical, similar to the ones used for tapestry or by Berber women. The Sahrawi art of carpet-weaving is both an art of cultivating solidarity and social bonds between women -traditionally, it is an activity forbidden to men—and a real figurative language to narrate Sahrawi history. As such, each carpet narrates histories and each fabrication is a social event.



Width is measured with *Auzat*<sup>9</sup> and with the auzat are measured the *Marat*<sup>10</sup>. One auza is three *Tarbat*<sup>11</sup> and ten of that size form a mara and the owner of the fliy is responsible to choose the amount of marat it requires. Thus, they were measured, from the dawn of the jaimas of the grandparents and the household goods necessary for the loom prepared: the *Susia*<sup>12</sup> for weaving is five inches wide and the *Midra*<sup>13</sup> to tighten, which guides the threads to press the *Carrat*<sup>14</sup>, some upwards and others downwards and the *Meshaa*<sup>15</sup> of *Lahmet lefliy*<sup>16</sup>, to this list of accessories, ends.

I am going to define how are built the jaimas of the Sahrawi, homes of nobility, from shearing to attaching the wooden handles to the trims.

Sewing begins with matching of *Lemtaneb*<sup>17</sup> and alfelya, stretching the strings of the *yabr*<sup>18</sup> and adjusting the end of alfelya on them, as it is usual. To prepare the jaima for the occasion, the traditional *Tuiza*<sup>19</sup> without skimping on anything, neither in money, nor in tenacity, since the times of the shearing until the jaima is set up for sewing. With equal effort and total dedication, to help to raise a jaima has no limits.

I am going to define how are built the jaimas of the Sahrawi, homes of nobility, from shearing to attaching the wooden handles to the trims.

The handles are assembled and the *Lahgab*<sup>20</sup> link the handles to the stakes and good *Trayeg*<sup>21</sup> in *Labuab*<sup>22</sup> adorned with tassels of indescribable beauty and the ornaments of the *Humar*<sup>23</sup> are scattered over *Laasam*<sup>24</sup> of unparalleled beauty among *Rkayez*<sup>25</sup> without imperfections and *Kifya*<sup>26</sup> and *Bnayeg*<sup>27</sup> made of fabric designed by groups of young and old people and in the interior there is a curtain in front of *Ashakab*<sup>28</sup> and *Arbal*<sup>29</sup> behind an outstretched cloak. At its side the milking equipments, *Tazuwa*<sup>30</sup>, goatskin and wooden funnel, *Aslay*<sup>31</sup> and *Gadhat*<sup>32</sup> for drinking. *Adres*<sup>33</sup> and *Ashguim*<sup>34</sup> overflowing with foam which slips like *Shnan*<sup>35</sup> foam, the mouth bound with a halter and an *Atbag*<sup>36</sup> necessary to cover the milk in the coolness, whether palm tree or *Azarán*<sup>37</sup> of good quality, lined with leather or made of *Smar*<sup>38</sup>, select and appreciated, mature and full of vigor.

I am going to define how are built the jaimas of the Sahrawi, homes of nobility, from shearing to attaching the wooden handles to the trims.

<sup>9</sup> Auzat: plural of auza, a measure equivalent to the width of three threads.

<sup>10</sup> Marat: plural of mara, a measure equal to the width of ten auzat or thirty threads.

<sup>11</sup> Tarhat: plural of tarha, measure equal to the width of a thread.

<sup>12</sup> Susia : wooden board measuring five inches wide and one meter long that is inserted between the warp threads to strike and compress the feeder threads to take their place and settle in

<sup>13</sup> Midra: metal instrument with a wooden handle and a bent tip that is passed over the threads with a certain technique to fix the weft.

<sup>14</sup> Carrat: plural de carra: each forward advance in the weaving process.

<sup>15</sup> Meshaa: is the stick on which the lahmet lefliy is tied.

<sup>16</sup> Lahmet lefliy: is the thread that is introduced between the warp threads after each warp carra.

<sup>17</sup> Lemtaneb: plural of metneba, are the two thin strips of fabric that constitute the front and back ends of the jaima.

<sup>18</sup> Yabr: edge or border where the jaima ends on the right and on the left, where the handles are attached to which the guy ropes that fix the jaima are tied.

<sup>19</sup> Tuiza: collective work.

<sup>20</sup> Lahgab: wool ropes that are used as guy ropes to hold the jaima.

<sup>21</sup> Trayeg : ribbons, predominantly white, hanging from the poles that raise, on the left and on the right, the front of the jaima.

<sup>22</sup> Labuab: poles that raise the entrance of the jaima, one on the left and one on the right.

<sup>23</sup> Humar: strip of fabric with fringe that descends from the apex that forms the junction of the beams that raise the jaima.

<sup>24</sup> Laasam: rope made of leather that is tied between the beams that raise the jaima, sometimes used to hang clothes.

<sup>25</sup> Rkayez: the beams that raise the jaima.

<sup>26</sup> Kifya: plural of Kfa, fabric that surrounds the jaima and that joins it to the ground, in times of heat, it is lifted to cool the jaima..

<sup>27</sup> Bnayeg: pieces of fabric, generally white in color.

<sup>28</sup> Ashakab: also called Amshakab, a saddle used by Saharawi women for camel riding.

<sup>29</sup> Arhal: a kind of wooden scaffolding that is placed on the left side of the jaima and is used to store different items.

<sup>30</sup> Tazuwa: large wooden bowl for milk.

<sup>31</sup> Aslay: wooden bowl smaller than tazuwa and larger than algadha.

<sup>32</sup> Gadhat: plural of algadha, small wooden bowl used for drinking milk, water, etc.

<sup>33</sup> Adres: wooden bowl with rare handles, larger than algadha and smaller than aslay

<sup>34</sup> Ashguim: large wooden spoon used to remove milk from tazuwa to pour it into other containers.

<sup>35</sup> Shnan: is the young camel, during the first days of dressage.

<sup>36</sup> Atbag: container for storing flours, grains, etc. and that is usually used to cover other containers.

<sup>37</sup> Azarán: bush used to build mats, baskets, etc..

<sup>38</sup> Smar: azaran-like bush used to make mats and other household utensils.





| Fig. 110 | Gardens of the archive in Dajla. These gardens are cultivated with two principal aims. The first one is that most of the Sahrawi families, notably the Rgaybat, possessed some land near river beds and went there from time to time when the rain fell. On these occasions, they settled for some time in order to cultivate seeds, burying some of them for the coming

years and bringing the rest with them. On the other hand, knowledge of flora is necessary for moving through Western Sahara, as it gives information on the presence (or absence) of water and its depths, the presence of salt (essential for camel breeding), and myriads of information necessary to travel safely and in abundance.



In the jaima there is always a beautiful *Zarbilla*<sup>39</sup> or an *Akarilla*<sup>40</sup> and a *Benia*<sup>41</sup> on top of arhal, folded *Faru*<sup>42</sup>, *Tiziyaten*<sup>43</sup> of great beauty, *Jabia*<sup>44</sup>, needles and *Asfud*<sup>45</sup>. Leather pillows and different ropes for tying, *Azerzef*<sup>46</sup>, *Ahray*<sup>47</sup> y *Abwiya*<sup>48</sup>, *Leshfa*<sup>49</sup>, *Ayef*<sup>50</sup>, mill of stone and what a camel from *Lemsaga*<sup>51</sup> carries. In addition to *Gasaa*<sup>52</sup>, *Guidra*<sup>53</sup> and a *Musaad*<sup>54</sup> of palm tree, a recumbent *Krara*<sup>55</sup>, mortar and pestle. My tongue does not forget *Leabeidia*<sup>56</sup>, *Elebda*<sup>57</sup>, *Amsilak*<sup>58</sup> and hospitality, the Tasufra\* of the man on which succeed each other the delegations and mats, beautiful and clean, his image: Praise be to you, the Creator! I don't want the wooden ladles to be forgotten, neither be hidden the *Gshat*<sup>59</sup>, nor decorated *Guerda*<sup>60</sup>, nor tea ware. I wish to hear about *Shagafal*<sup>61</sup> and the bayonet, of the rifle and the case of the gunpowder, *Atarraza*<sup>62</sup> and *Albaldia*<sup>63</sup>, *Busilán*<sup>64</sup> and weapons to defend the values of the Saharawis, of generosity, friendship and purity.

I am going to define how are built the jaimas of the Sahrawi, homes of nobility, from shearing to attaching the wooden handles to the trims.

It is essential to have a sieve, the *Mizwud*<sup>65</sup> and *Dabia*<sup>66</sup>, various drawers, *Terra*<sup>67</sup> where women keep their ornaments. *Eslif*<sup>68</sup>, *Aguert*<sup>69</sup>, *Akak*<sup>70</sup>, *Jilal*<sup>71</sup>, *Maruab*<sup>72</sup>, *Mirued*<sup>73</sup> Kohl gaze to the brush case and *Asirmi*<sup>74</sup> with the dangling bangs.

Silk collars that embellish the reins of camels, *Iliwish*<sup>75</sup>, for man to ride a camel or to pray, the reins, bridles and saddle and all the horse's harnesses and everything else I have yet to name, as *Maarad*<sup>76</sup> and the shell for the newborn, the sickle, the shearing machine, and *Akufal*<sup>77</sup>, the knife, the couscous maker and my understanding is limited, but it comes to my mind to name *Ashdumín*<sup>78</sup> and until this moment I had not been able to recall *Ashkal*<sup>79</sup> leather ropes supporting the beams of the jaimas and I thank God that recalling *Babein*<sup>80</sup> and *Mamsac*<sup>81</sup> is not a annoyance for me and in the future young people, what I say, they will confirm.

<sup>39</sup> Zarbilla: carpet

<sup>40</sup> Akarilla: Carpet always in the color red and with black borders.

<sup>41</sup> Benia: The white fabric of the dimensions of the jaima, which is usually installed inside the jaima in cold weather.

<sup>42</sup> Farú: cover made of goatskin.

<sup>43</sup> Tiziyaten: plural of tazaya, square-shaped bags, made of camel skin where women keep their objects and during travel are used to balance the ashakab on the camel.

<sup>44</sup> Jabia: small glued containers made of wood used by women for cosmetics, when fixing and combing their hair.

<sup>45</sup> Asfud: metal instrument with a wooden handle for piercing leather and other uses.

<sup>46</sup> Azerzef: sewing utensil with a wooden handle and in which the eye where the thread is inserted is at the tip.

<sup>47</sup> Ahray: handle where women grab to get on the camel.

<sup>48</sup> Ahwiya: blanket placed over the camels to protect them from the load.

<sup>49</sup> Leshfa: instrument for sewing leather and for making other utensils.

<sup>50</sup> Ayef: cover for the stone mill.

<sup>51</sup> Lemsaga: the load a camel can carry of water reserves.

<sup>52</sup> Gasaa: large wooden container, where traditional dishes are served.

<sup>53</sup> Guidra: round pot.

<sup>54</sup> Musaad: stick used for stirring Al-asid, traditional food.

<sup>55</sup> Krara: large sack made of goat hair and camel wool for storing grain.

<sup>56</sup> Leabeidia: High quality men's camel saddle.

<sup>57</sup> Elebda: leather blanket that protects the camel and on which the saddle is placed.

<sup>58</sup> Amsilak: fabric that is placed under elebda on the camel.

<sup>59</sup> Gshat: very strong leather strap.

<sup>60</sup> Guerda: woven strip of black goat hair.

<sup>61</sup> Shagafal: box made of goatskin to store tea.

<sup>62</sup> Atarraza: cap made of antelope skin or earth-colored cloth used for hunting.

<sup>63</sup> Albaldia: homemade bullet.

<sup>64</sup> Busilán: Traditional knife whose blade and handle are made of the same piece of metal.

<sup>65</sup> Mizwud: a kind of goatskin for storing animal fat.

<sup>66</sup> Dabia: leather sack for storing flour.

<sup>67</sup> Terra: basket made of palm branches or other material to store things.

<sup>68</sup> Eslif: goatskin in which butter is kept for a week before being processed.

<sup>69</sup> Aguert: goatskin for storing fat for daily use.

<sup>70</sup> Akak: plural of Ika, goatskin, to store fat for a year.

<sup>71</sup> Jilal: plural of jilala, portions of ropes used to fasten the Ika to the jaima.

<sup>72</sup> Maruab: a goatskin for fermenting the milk.

<sup>73</sup> Mirued: bronze pencil to apply Kohl's on the eyes.

<sup>74</sup> Asirmi: goatskin pillow.

<sup>75</sup> Iliwish: white lambskin mat used for prayer and to accommodate men in the camel saddle.

<sup>76</sup> Maarad: round or ovoid stone that can be firmly grasped with the hand; used as a hammer.

<sup>77</sup> Akufal: a type of seashell used by women to apply oils and creams.

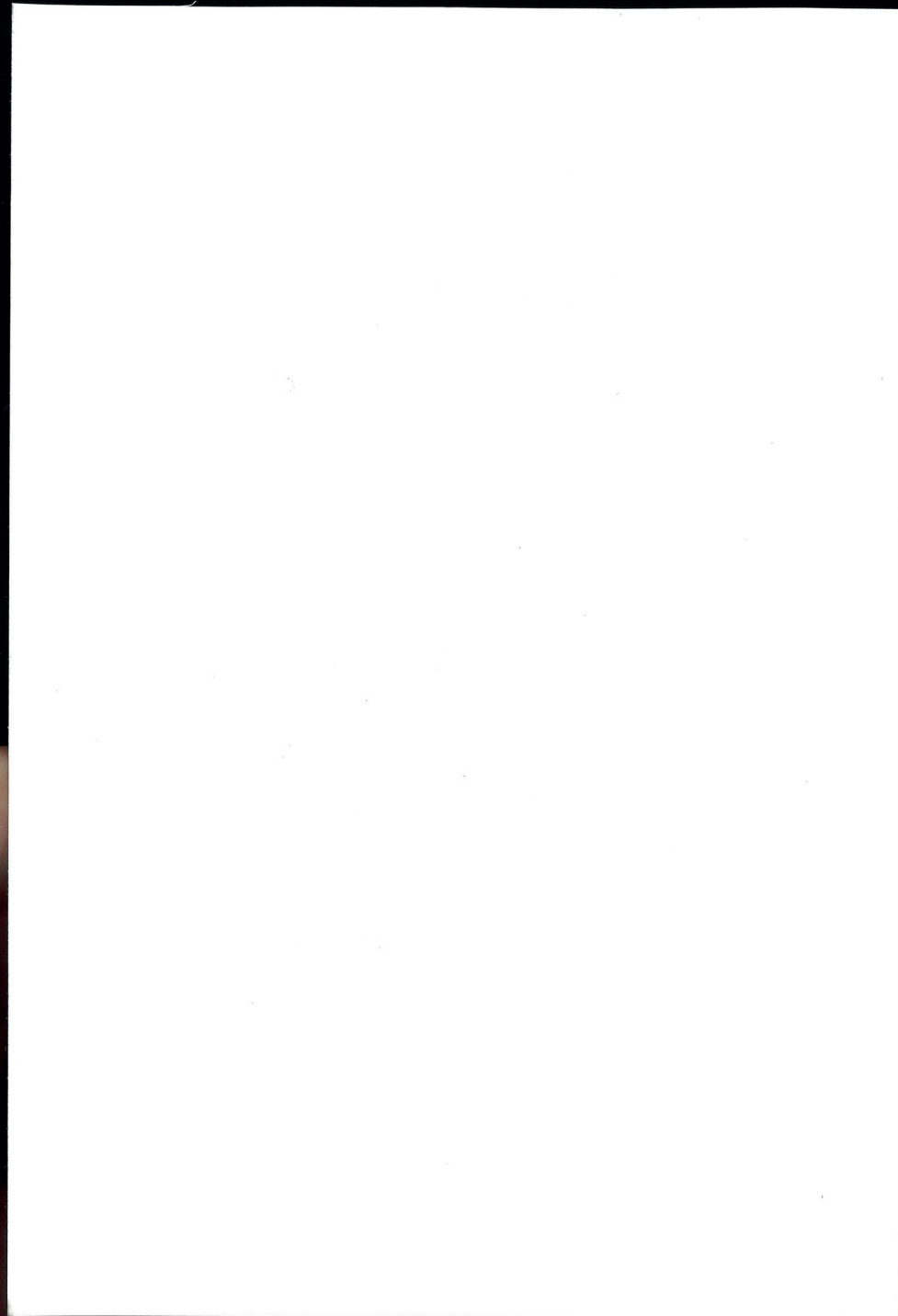
<sup>78</sup> Ashdumín: are two sticks that are placed parallel on two rhal and are used to store folded rugs and blankets. In some parts it is called labuab.

<sup>79</sup> Ashkal: are two short ropes made of leather that hold the jaima beams on the camels during transport.

<sup>80</sup> Babein: labuab

<sup>81</sup> Mamsac: a pole that is sometimes used to lift the front part of the jaima in the center.

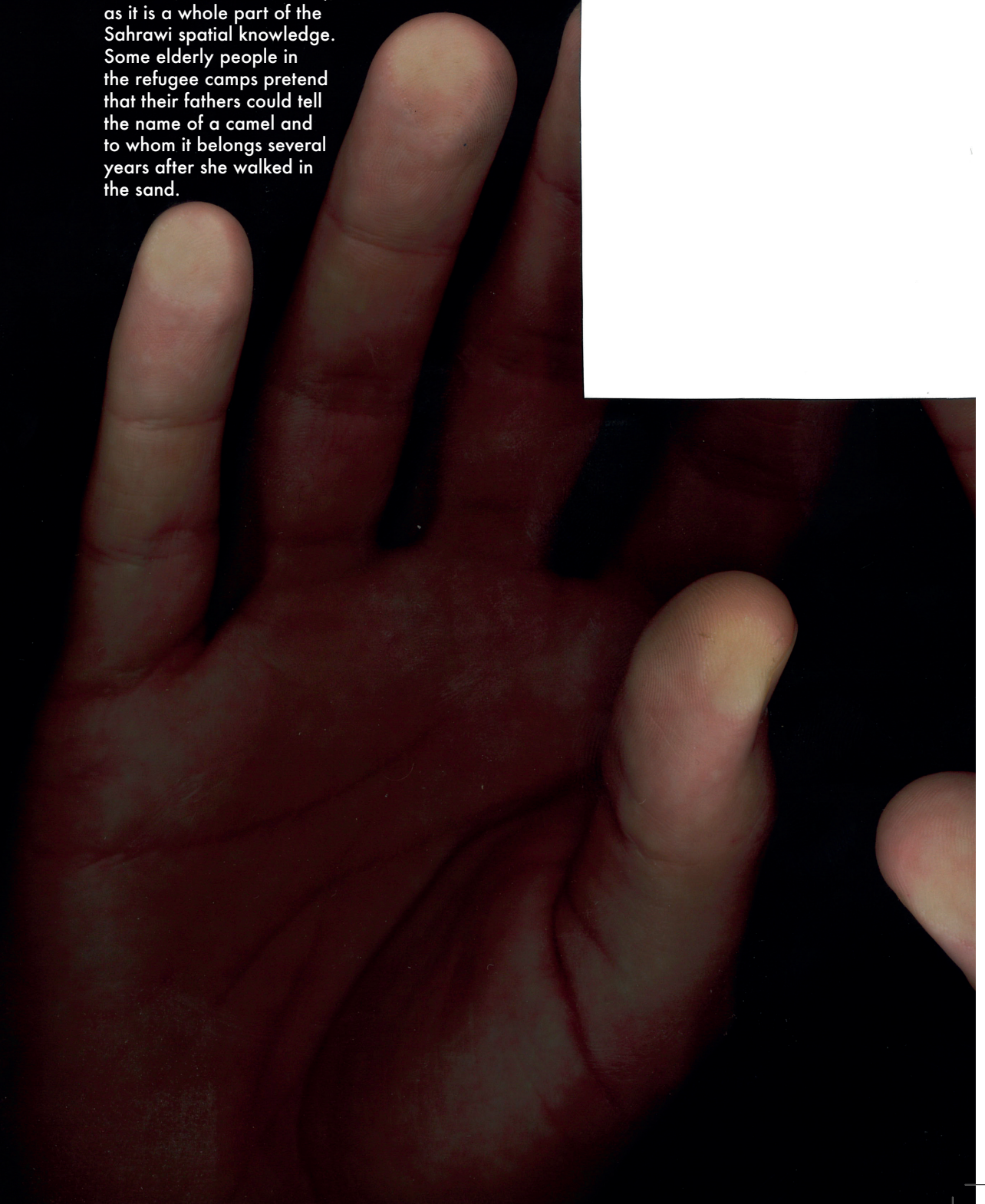




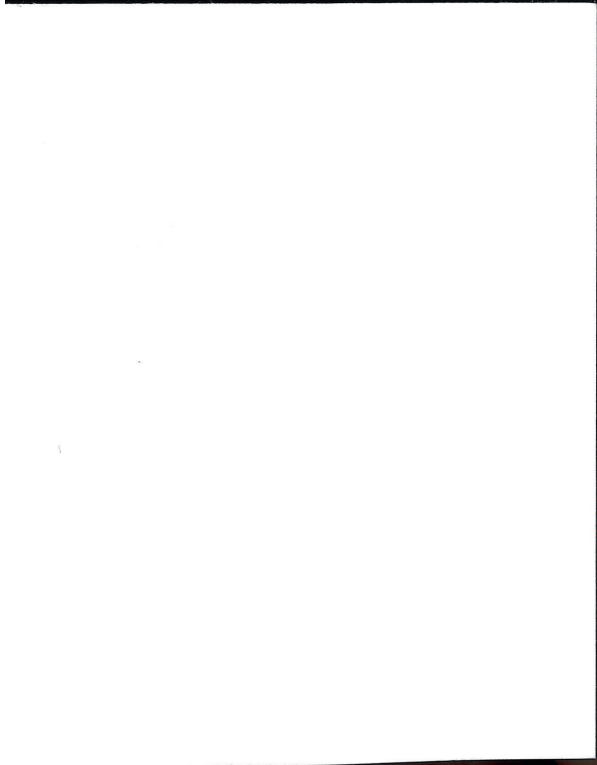
| Fig. 111 | Wool spinning workshop. To manufacture carpets and the Hessian of the Jaïmas, the Sahrawi craftswomen mix and spin goats and camels' hair. For the Hessian, the mix is about 30 percent of goats' hair and 70 percent of camels' hair. Spinning is a fundamentally collective enterprise as it is a long and challenging process to obtain a high-quality thread. Furthermore, these activities were primarily related to the preparation of a wedding, for which the bride must possess her own Jaïmas and carpets.



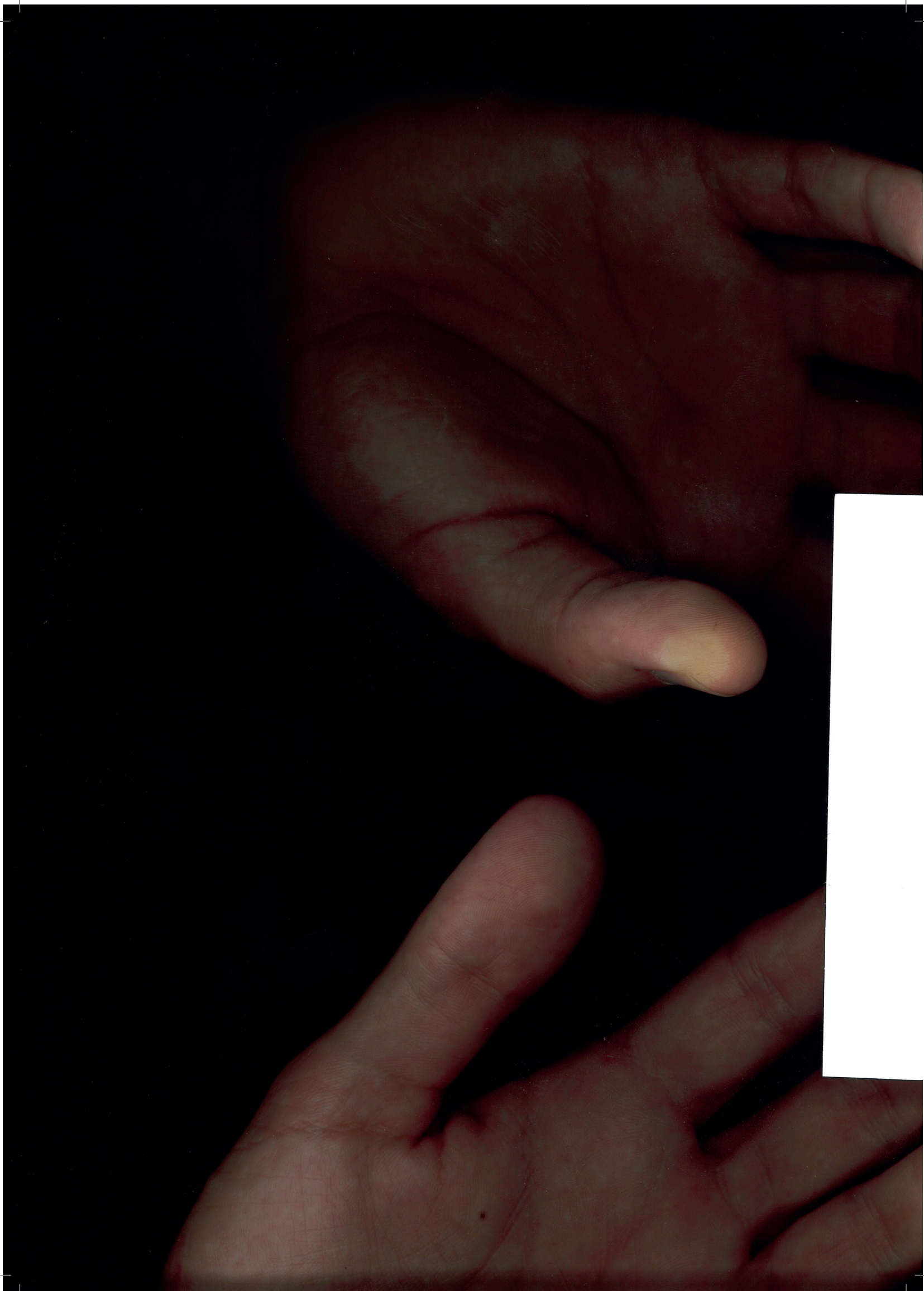
| Fig. 112 | Assembly of the Jaïma. This special event is always carried out with several Jaïmas, placing the emphasis once more on the constellation between the tents and their spatial relations. Their relative positions depend on the context (climatic, economic, familial, and political), which is a fundamental part of the discussion and event. The dismounting of the tents is also an opportunity to observe the traces left by former settlements (positions of stones, specific texture of the sand, and other traces), as it is a whole part of the Sahrawi spatial knowledge. Some elderly people in the refugee camps pretend that their fathers could tell the name of a camel and to whom it belongs several years after she walked in the sand.















| Fig. 113 | Ed Jal site. In between several sites of the archival network, Ed Jal became a privileged site for encounters and discussion about life in the refugee camps during the armed conflict and about the exodus from Western Sahara. Several Jaïmas are permanently installed there during the spring season.



| Fig. C'1 |  
Photograph taken during our visit to the site of Ed Jal, a former refugee camp abandoned at the beginning of the eighties after a flood carried away the riverbed. The shadow on the right belongs to Lahsen Selki Sidi Buna, and one on the left is mine. I took the photograph in February 2020.







# CHAPTER C'

## Archival pharmacology



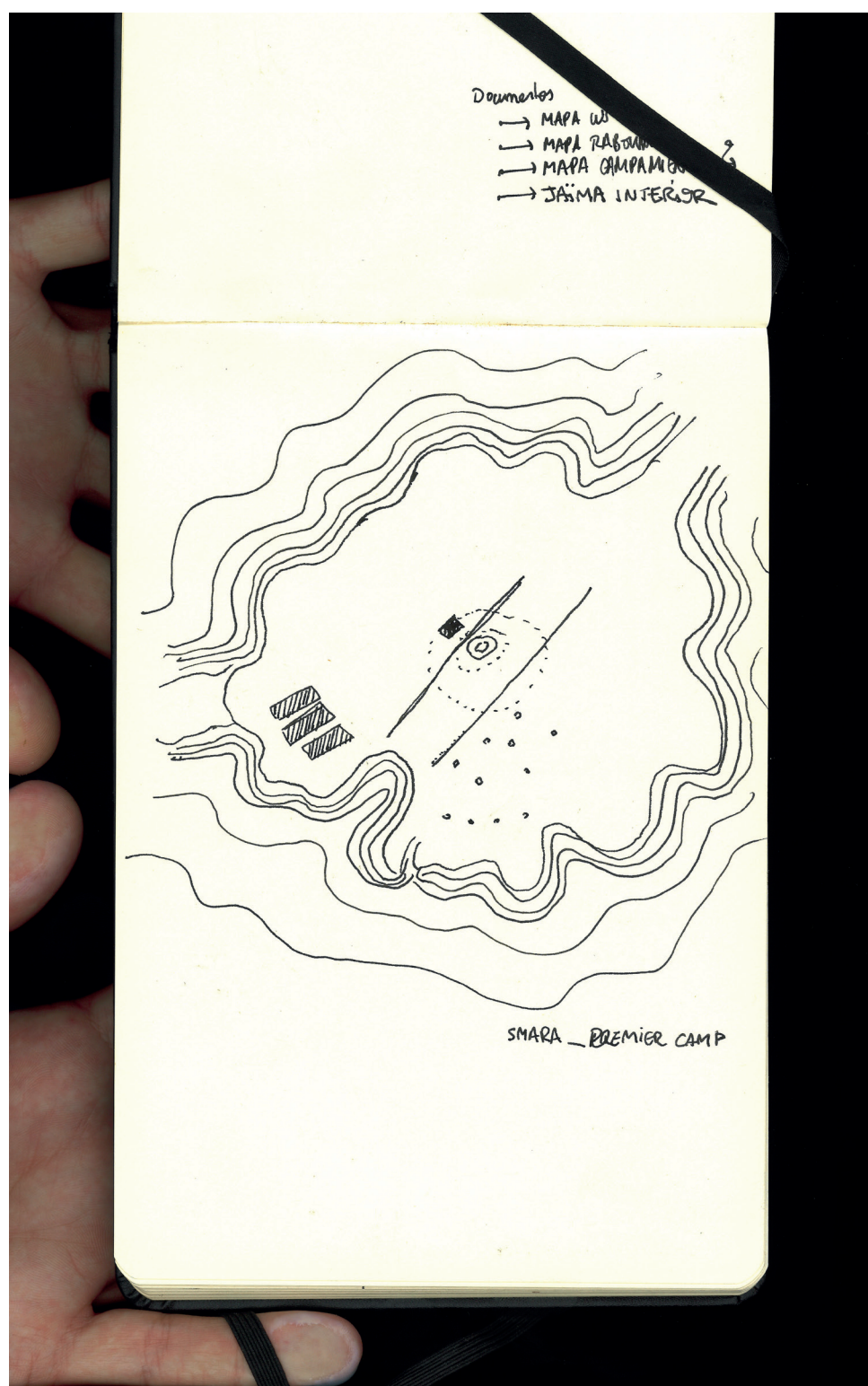


## Off the road to the archives.

In February 2020, when I had arrived in the refugee camps and settled in Zora's Jaïma in Smara, Lahsen advised me to visit the Archives of the Ministry of Information. We went there for several days (four if I remember correctly), during which we spent our time discussing. I asked him what he saw on the photographs we found, what he understood of the documents stored here and their former uses. This time in the archives gave us the chance to get to know each other. Each document raised new topics of discussion and, at the same time, allowed Lahsen to introduce his own familial and individual history in the stream of events evoked by the archive. After two days, he told me about the existence of former refugee camps installed in the region of Tindouf that I was not aware of previously. Quite organically, we started to plan some visits, as I thought they could be both sources to understand the lives in the refugee camps during the war and spaces of dialogues for future discussions. However, most of the sites were difficult to access; the vast majority are no longer protected by the army of the Polisario Front. To be able to visit them as a foreigner requires a lot of organization, special authorizations and a military escort, which led us to delay the visit to the end of the stay. Only one site was easily accessible. We decided to go there the following day, on the road to the archives.

In the morning, after leaving the Jaïma, we passed through the northern checkpoint of the Smara camp and entered the roundabout, but the driver (a friend of Lahsen I can't remember the name) did not turn left for Rabuni or right for El Aaiun, but went in between, leaving the asphalt road. He continued in a straight line over two hundred meters. Suddenly, the ground just ahead fell away and he made a U-turn before stopping. He left us here on the top of the cliff. This steep-sided valley is the riverbed of the Ouad Lhme. When it rains (which happens once every 4 to 5 years), it is filled by violent streams of water as the dry ground cannot absorb the rainfall. This site, formerly called Ed Jal, hosted two of the first barrios of the refugee camps in 1975. After a terrible flood, the Sahrawi refugees abandoned the camp, and the two barrios moved with their population to the camp of Enubke, some kilometers north of here, which will later bear the name of El Aaiun. Nowadays, only a poultry farm is left in the immense space. Hardly any traces of its former occupation were visible. A flag base in concrete, some sandpits, evidence of former sand-brick constructions, a line of stone of several dozens of meters, was previously laid out to define the administrative divisions of the barrio and inscribe the camps in space. Such camps were all situated in riverbeds, allowing the population to be invisible from a distance and thus protecting them from Moroccan attacks.





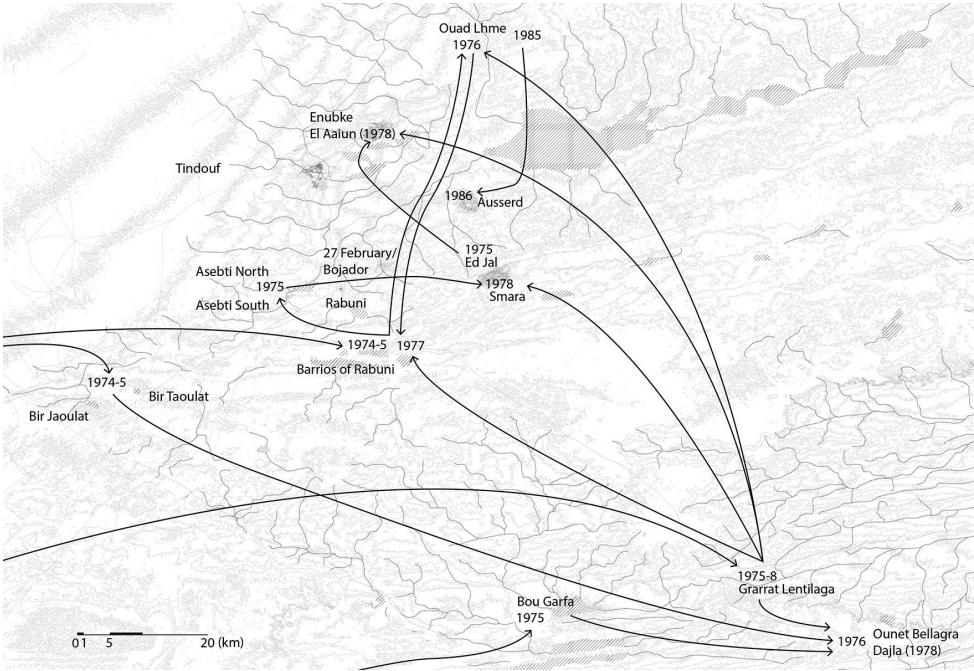
| Fig. C'2 | Sketch made on site of what I perceived from the center of the riverbed. At the south is the access ramp, at the west, the poultry farms, some sand pits are drawn, the lines in the sand, and the flag base.

In the archives, we found no mention of the camp of Ed Jal. Moreover, I never read about any of these former camps in the occidental literature on the refugee camps, whether written by anthropologists, members of NGOs, political scientists, or any other international visitors. The history of the refugee camps is much more complex than that which is presented in these sources. It has nothing to do with some Sahrawi settling in one place or another and gradually developing these sites, creating new barrios, and accumulating infrastructures. Instead, the populations moved several times looking for security, resources, or because of natural hazards. Some camps were built for new arrivals before they were given proper space in a barrio. Some military camps were abandoned, some camps organized around agricultural experimentation disappeared, as did others for families with herds. We looked for more information on these camps in the archives, but we did not find any records or documents mentioning their existence.





| Fig. C'3 | Photography of the map I used in the Sahrawi refugee camps, annotated with information of the different interviews. March 2020.



| Fig. C'4 | Map of some of the movements between camps and sites that I recorded after the discussions I had in the refugee camps. The map is neither exhaustive nor finished, as the pandemic cut short my research trip.

Sahrawi spatialities are characterized by their light materialities. The word *Jaïma* is translated as a *tent* but also, in Hassanyia, as *home* or *mother's womb*, and equally refers to a simple carpet laid on the ground. Most architectural and spatial bodies in Sahrawi nomadic culture are light-weight and easily moveable/dismountable, as their mobile mode of life needed an economy of human and non-human bodies that one could install and pack up rapidly. Thus, even in the refugee camps, the traces left by their occupation are hard to read to untrained eyes, and one needs to learn how to engage with these physical traces. For these reasons, beyond the institutional infrastructure left by the refugee camps (the flag base and the lines in stone), the landscape seemed at first sight empty to me. For Lahsen, on the contrary, Ed Jal was populated by thousands of material witnesses.<sup>296</sup>

Sahrawi architectural and spatial knowledge remains mostly unmediated through lasting documents and produces no records through its circulation. No drawings back up their installations/constructions. Hardly any writing concerning spatial practices or records for learning how to listen to the material speech acts exist. These knowledge and memories are transmitted through specific infrastructures that we have already discussed using the term coined by Diana Taylor, the *repertoire*.<sup>297</sup> *Repertoires* are counterparts and complementary to archives. Both constitute modes of conservation and transmission of cultural memory and knowledge through various modalities and *temporalities* in complementary ways. It is only with great difficulty that one would find documents or records allowing me to enter into dialogue with the traces of Ed Jal in the archives of the Ministry of Information.

When I entered the archive of the Ministry of Information for the first time, I was impressed by the number of documents. Along a corridor, I found a room to digitize audio and video material, a small office for the director and a storage room for the audio and video material. There was also a little room called the library, with journals from the national periodic, *Jeune Afrique*, and other publications. In this room, a set of books written on a wide range of topics concerning Sahrawi history, the war, and Western Sahara geography is stored. Finally, on the right side of the corridor, a room is used as an archive of the journals that include articles on the Sahrawis and the conflict with Morocco from 1976 to the present. “Todo lo que quiera appender sobre los Saharauis, lo encontrará aquí,” “All you wish to learn about the Sahrawis, you will find it here,” said Lahsen.

These archives were created for precise motives. Born out of the national radio, the archives were built around the necessity to testify to the existence of the SADR—Sahrawi Arab Democratic Republic—and a Sahrawi culture outside occupied Western Sahara. It answers to the soft fields of the war against the Moroccan regime. Since the sixties, every protagonist constructed their own narratives based on the historical relationship between Morocco, Mauritania, and the Qabilas of Western Sahara.<sup>298</sup> Since then, numerous events in occupied Western Sahara are organized to legitimate a long-term common history between the realm of Morocco and the Sahrawi Qabilas, reinterpreting and reappropriating the symbols and habits of the nomadic pastoralist culture. Facing these abuses, the Polisario Front and the SADR built a strategy to demonstrate their cultural autonomy, as this re-writing of history endangered their knowledge and memories. This threat drove them to develop an archival program in order to keep as many documents as possible as evidence of their autonomy using the same means as the Moroccan regime, the historical discourse and its system of proofs and truths. Patiently collecting and classifying every single journal article written in any journal around the world that speaks about the Sahrawis and organizing them, the archives of the Ministry

296 Schuppli, Susan. *Material Witness: Media, Forensics, Evidence*. Leonardo. Cambridge, MA: The MIT Press, 2020:2.

297 Cf Chapter B, ‘The architecture and the repertoire’, especially in the section ‘The architecture and the repertoire. Body-to-body historicity and migration of spatialities.’ I defined the repertoire of figurations ‘as specific embodied cultural mnemonic systems. [...] Our bodies possess a *repertoire* of figuration, as image-gesture, floating potential and virtual images, that could be described as a repertoire of performance that enacts relations with the milieu.’

298 Every protagonist claims a legitimacy over the territory due to historical relationships. The Moroccan regime claimed the existence of a former Great Morocco, and Mauritania claimed the ‘imaginary social space’ of the Trab-El-Bidan. See Campos-Serrano, Alicia, and José Antonio Rodríguez-Esteban. “Imagined Territories and Histories in Conflict during the Struggles for Western Sahara, 1956–1979.” *Journal of Historical Geography* 55 (January 2017): 44–59. <https://doi.org/10.1016/j.jhg.2016.11.009>.



of Information serve as a tool to prove the existence of the Sahrawi in exile. With the help of this archive, the SADR intends to build counter-narratives to those of Morocco and give weight to their claim of self-determination.

Nevertheless, the rewriting of history by the Moroccan regime is not the only threat that endangers Sahrawi knowledge and memories. The protracted conflict and the prolonged status of refugees result in a (partial) immobilization of the Sahrawi people. This immobilization, destroying the economy of human and non-human bodies that support their habits, and renders impossible the **reenactment** of the performance of the **repertoire**, which involves most of their knowledge and memories. Thus, the circulation of this **repertoire** is short-circuited while, at the same time, the older generations of the Sahrawi continue to age, day by day. Kept in their bodies as living archives, these nomadic **repertoires** are unable to migrate to new generations. The short-circuit jeopardizes their capacity to survive as pastoralists in the Sahara, and thus, the legitimacy of their cultural autonomy claim. Indeed, the demands of Sahrawi refugees and the Polisario Front are based on a necessary return to their land and self-determination. Their capacity to live in symbiosis and create wealth and life out of the Sahara is the basis of their autonomy. If they ever lose their knowledge, memories and abilities, the independence that defines and legitimizes their demands would be endangered. **The oral and embodied knowledge of the repertoire, while threatened by physical immobilization and historical rewriting, constitutes one of the urgent issues Sahrawi refugees face today and explains the necessity of archives and programs of oral memory preservation.**

Furthermore, this oral and embodied knowledge lies at the core of a highly specific political agency of Sahrawi traditional pastoralist nomadism, rooted in spatial practices. One persistent feature of nomadic encampments in the refugee camps is the capacity of tents to coalesce, a capacity of fusion and fission of groups of individuals, enacting a moving political constellation, a “tented-state.”<sup>299</sup> This aspect is supported by the fact that the *public spaces* of the camp are mainly a set of infrastructure created for international humanitarian programs that “echoes emptily”<sup>300</sup> when their workers and representatives leave in the summer. The political constellation of the tented-state is based on the perpetual motion of nomadic culture that implies one tent always moving toward another, this motion providing the basis for constantly emerging forms of political powers. These moving political spaces and their agency, enacted and offered by women’s tents and **hospitality**,<sup>301</sup> are central to understand the political forces that once shaped the Sahrawi Qabilas, and continue to shape the current SADR. This capacity of coalescence and the political subjectivities it allows are equally threatened by the short-circuiting of oral and embodied knowledge, which itself endeavors to preserve and circulate such qualities once again.

What we found in the archives of the Ministry of Information had hardly anything to do with this knowledge. We did not find any traces of the camps of Ed Jal or others. Most of the information, records, and documents narrated an institutional discourse of the SADR and the Polisario Front addressed to external international observers (to whom they seek to prove their autonomy). This selection of documents scarcely constituted a source that we could work with and on to discuss endangered oral and embodied knowledge. Even the photographs that I reprinted as material for use in discussions proved not to be reliable sources as photographs are not a common way to reduce the **distance** with specific memories for the Sahrawi elders.

As I previously mentioned, Sahrawi architectural and spatial practices and knowledge circulation barely produce any records or documents. Moreover, as we saw in the case of Ed Jal, a body untrained to listen to the Saharan material speech acts, such as mine

299 Isidoros, Konstantina. *Nomads and Nation-Building in the Western Sahara: Gender, Politics and the Sahrawi*. London: I.B. Tauris, 2018:235.

300 Isidoros, Konstantina. *Nomads and Nation-Building in the Western Sahara: Gender, Politics and the Sahrawi*. London: I.B. Tauris, 2018:214.

301 When using the term *hospitality*, I refer here to a spatial practice of caring at plural temporalities and their co-existence, allowing the touch of their present corporeality, and thus enacting other forms of political subjectivities and agency. See chapter C ‘A ghost in the Jaïma’, especially the section ‘Offering hospitality. Repairing broken relations and concealed futures.’

when I first arrived there, is unable to read the traces of occupation and reenact **past** events and relations. In this context emerge the questions that I will try to tackle in this chapter. How can one preserve oral and embodied knowledge and memory without disembodiment and thus destroying their relation with the world? How can the archival process maintain and archive them without creating exposure and vulnerability, avoiding the relegation to a **past past** and the standardization that might produce? Is it even possible to archive this knowledge and memory, and if not, what measures would counter-act the short-circuiting of their **migration**?

In order to reflect upon these urging questions and the preservation of this knowledge, I will try to outline what architectural archives and architectural documents are. In bringing in the debates and postcolonial/critical views on the archives, I will consider how architectural archival practices participated in the destruction, concealment, and silencing of knowledge and voices. By outlining the limits of the archive, it will appear as a poison and a remedy for the preservation and circulation of this knowledge. Finally, in dialogue with the **repertoire**, I will consider archival practices as a potential strategy, by enlarging the scope of what architectural records and documents choose to show. In doing so, I will focus on the role of archives in reparatory practices, notably in looking at archival **gestures** that could enact **hospitality** to plural **temporalities** and concealed relations with human and non-human bodies.

## Architectural archives, architectural documents.

Since the nineties, scholars within the humanities developed critiques of archives and archival practices through the *archival turn*, mainly thanks to the postcolonial lens. As one of the most influential essays that launched this bifurcation, Derrida's "Archive Fever"<sup>302</sup> offered an understanding of the archive not as a building or an institution but as a form of power. The *archontic* power is the place of command, the center of governance of the *archont*. From this place of centralizing and storing documents, records and memorial objects of a community, the archont creates a new form of power on the archival subject. By defining the access and the authority over some traces created in the **past**, the archontic power defines **temporalities** and the limits of the historical discourse. By positioning the here and now (and thus the there and **past**), the archive is a capacity to enact **futurities**, or at least to conceal some of them.

Derrida also developed the archives as issued from a Borgesian desire, a drive based on a permanent dissatisfaction with the actual archives. In search of traces of the real that remain unnoticed, the Borgesian archives would allow access to a final truth about some events or places. This archival drive leads to an attempt to truly and fully know what has happened, to capture completely the event and store it in its walls, producing the historical discourse. In rendering possible to make history only from within the archives, this process deprives communities of their authority to narrate and remember what has happened. In the perspective proposed by Derrida, **the archives are considered the sole legitimate mode of access to the past, denying other possible relations.**

302 Derrida, Jacques. *Archive Fever: A Freudian Impression*. Religion and Postmodernism. Chicago: University of Chicago Press, 1996.

303 See Stoler, Ann Laura. *Along the Archival Grain: Epistemic Anxieties and Colonial Common Sense*. Princeton, NJ: Princeton University Press, 2009, and, Stoler, Ann Laura. "Colonial Archives and the Arts of Governance." *Archival Science* 2 (2002): 87–109.

304 Povinelli, E. A. "The Woman on the Other Side of the Wall: Archiving the Otherwise in Postcolonial Digital Archives." *Differences* 22, no. 1 (January 1, 2011): 151. <https://doi.org/10.1215/10407391-1218274>.

305 In her article 'Colonial Archives and the Arts of Governance', Ann Laura Stoler writes: 'we are just now critically reflecting on the making of documents and how we choose to use them, on archives not as sites of knowledge retrieval but of knowledge production, as monuments of states as well as sites of state ethnography. This is not a rejection of colonial archives as sources of the past. Rather, it signals a more sustained engagement with those archives as cultural artifacts of fact production, of taxonomies in the making, and of disparate notions of what made up colonial authority.' In Stoler, Ann Laura. "Colonial Archives and the Arts of Governance." *Archival Science* 2 (2002): 90-91.

306 The notion of subjugated knowledge has been developed firstly by Michel Foucault. He writes: 'Donc, les « savoirs assujettis » ce sont ces blocs de savoirs historiques qui étaient présents et masqués à l'intérieur des ensembles fonctionnels et systématiques, et que la critique a pu faire réapparaître par les moyens, bien entendu, de l'érudition. [...] Deuxièmement, par « savoirs assujettis », je crois qu'il faut entendre autre chose et, en un sens, tout autre chose. Par « savoirs assujettis », j'entends également toute une série de savoirs qui se trouvaient disqualifiés comme savoirs non conceptuels, comme savoirs insuffisamment élaborés : savoirs naïfs, savoirs hiérarchiquement inférieurs, savoirs dessous du niveau de la connaissance ou de la scientificité requise. [...] ce savoir que j'appellerais, si vous voulez, le « savoir des gens » (et qui n'est pas du tout un savoir commun, un bon sens, mais au contraire, un savoir particulier, un savoir local, régional, un savoir différentiel, incapable d'unanimité et qui ne doit sa force qu'au tranchant qu'il oppose à tous ceux qui l'entourent)- c'est par la réapparition de ces savoirs locaux des gens, de ces savoirs disqualifiés que s'est faite la critique.' In Foucault, Michel. *Il Faut Défendre La Société: Cours Au Collège de France, 1975-1976*. Hautes Études. Paris: Gallimard/Seuil, 1997:8-9.

This reading opened the way to a move from an archive-as-sources to an archive-as-subject of research, as argued by Ann Stoler.<sup>303</sup> From this point, they are in themselves, together with the practices that constituted them, the subject of study and no longer merely the place where source documents on history are stored and retrieved. Archives are understood as an imperial technology "monuments of states, colonies and empire,"<sup>304</sup> building the dominant narrative and silencing others, while subjugating other forms of knowledge and lives to their power of relegation. **Thus, archives are not a place of storage, but a place of knowledge production, and can even be considered as producers of the documents and records they contain.**<sup>305</sup>

Archives are now commonly understood to be full of gaps and absences, populated by **subjugated** knowledge<sup>306</sup> and lives reduced to numbers and insignificance. These very gaps are, however, seen as productive spaces of conflict for building counter-narratives, drawing on the unspeakable and the unknown lines, exceeding the "fantasies that constitute the archive and determine what can be said about the past."<sup>307</sup> These practices do not intend to "to give voice to the slave [Hartman tries to rebuild the possible lives of two women reported as numbers on documents from the transatlantic slave trade], but rather to imagine what cannot be verified, a realm of experience which is situated between two zones of death—social and corporeal death."<sup>308</sup> Through building alternative narratives to that of the archive, the critique also sheds light on the limit of the sayable and the knowable in historical discourse. However, the limits of the alternative call for tools, methodologies, and other relations with memory and knowledge that could escape the dialectics of the dominant and the **subjugated** constitutive of the archive<sup>309</sup> and its imperial grammar.

The archive's emergence as a centralized and imperial institutional technology, a "law of what can be said"<sup>310</sup> and system of enunciability of any events, has been subjugating other systems of enunciability and memory/history transmission. Nevertheless, archival **gestures** are not confined to imperialist archival practices. Myriads of archival relations with objects exist outside the scope of coloniality and imperialism. Such archives are not solely "about preserving the past but about modes of sharing the common."<sup>311</sup> These archival modes of sharing the commons require a **refusal of the past as past, and for the presence of pasts to not only be seen from within the archive**, "thus viewing those dispossessed by the archive solely through their presence in the documents inside it."<sup>312</sup> Finding or building those relations with archival objects, between the **repertoire** and the archives, constitutes the mode of transmission and conservation of cultural memory and knowledge, while advancing potential reparative and emancipatory archival practices.<sup>313</sup>

309 For a detailed critique of the *alternative* as perpetuating the exclusionary and imperial nature of the historical discourse, of the archives and of the modern episteme, see Scott, David. *Conscripts of Modernity: The Tragedy of Colonial Enlightenment*. Durham: Duke University Press, 2004:112-119. Ariella Aïsha Azoulay also stated that 'If a certain written history is an alternative

307 Hartman, Saidiya. "Venus in Two Acts." *Small Axe* 12, no. 2 (2008): 9.

308 Hartman, Saidiya. "Venus in Two Acts." *Small Axe* 12, no. 2 (2008): 12.

imperial premises, it cannot be new: it is always already known, and it is only its authors that had to unlearn its imperial version in order to utter it properly, that is, from the point of view of those who never accepted its imperial version of truth.' In Azoulay, Ariella. *Potential History. Unlearning Imperialism*. Verso Books, 2019:198.

310 Foucault, Michel. *Archaeology of Knowledge*. Routledge Classics. London ; New York: Routledge, 2002:145.

311 Azoulay, Ariella. *Potential History. Unlearning Imperialism*. Verso Books, 2019:234.

312 Azoulay, Ariella. *Potential History. Unlearning Imperialism*. Verso Books, 2019:222.

313 On the necessity of acknowledging minor/specific histories for the historically marginalized to enter into discursive theory, and how it implies other archival and historical practices within the field of architecture, see Siddiqi, Anooradha Iyer. "In Favor of Seeing Specific Histories." Edited by Daniel Bertrand Monk, Andrew Herscher, Miriam Tickin, Lucia Allais, M. Ijlal Muzaffar, Mark Jarzombek, and Swati Chattopadhyay. *Grey Room* 61 (October 2015): 87–91. [https://doi.org/10.1162/GREY\\_a\\_00186](https://doi.org/10.1162/GREY_a_00186).



If the Borgesian archival gesture breaks the relations of objects, documents or records with their economies of human and non-human bodies, thus simultaneously, this **gesture** will conceal its temporal mode of existence and its potential **futurities**. In doing so, archival **gestures** relegate archival documents to a **past past**, destroying their (political) agency and **performativity**. Conversely, archival **gestures**, when the power relations, agencies and subjectivities engaged with the objects, documents or records are carefully considered, can also be **gestures of care, maintenance and preservation**. While an archival gesture unavoidably folds the course of **temporalities** and modifies the relationship with an economy of human and non-human bodies, it can also be done while reducing the **distance** with **pasts, futurities, future pasts** and **past futurities** of the same body. In this way, intermittences, temporal loops, **ghostly** touches can act in the current moment, while giving space and time to **futurities** that would have been concealed by the actual economies of human and non-human bodies, as it is the case today for the Sahrawi refugee population. As opposed to being merely operations of removal and concealment, archival **gestures** can also be operations of **hospitality** and **distance reduction**.

Architectural archival practices and archives are a rather new collocation if thought of as autonomous.<sup>314</sup> Their genealogies are not linear, as they have been treated until very recently, as part of fine arts' archives. In "Translations from Drawing to Building," Robin Evans outlines opposing architectural practices. Firstly, there is one that ends "up working on the thing itself," "emphasizing the corporeal properties of things made";<sup>315</sup> this involves making based on direct action and engagement with physical matter. Secondly, design can be mediated through drawing by "disengagement, obliqueness, abstraction, mediation and action at a distance."<sup>316</sup> While mediated by drawings, the architectural image is transposed on a transcendental plane, exterior and agential—the drawing role is to represent this image, to fix it on paper. Conversely, an unmediated—by lasting documents—architectural image belongs to the nonrepresentational and the non-exclusively visual—such haptic images emerge through performed practices. Architectural drawings then can be collected, stored, and retrieved, protected from weather and time, documenting the evolution of their uses and appropriations. Architectural archives are comprised of the documents that mediate the architectural processes, leading (or not) to the process of building. Thus, archives do not need to keep buildings, even though it happens exceptionally.<sup>317</sup>

In the article "In Front of Lines That Leave Nothing Behind," Evans writes about Daniel Libeskind's Chamber Works series (1983)<sup>318</sup> and the existence of other kinds of lines in architectural drawings. He wrote: "we must look in front for the things that the drawing might suggest, might lead to, might provoke; in short for what is potent in them rather than what is latent."<sup>319</sup> Here, Evans sees a possibility for architecture to move back "from building to drawing [...] [to] split into prior and subsequent activities: design and construction."<sup>320</sup> This architectural practice maintains the dichotomy between drawing and building but liberates it from its dependence on construction. Drawings become autonomous architectural works, acting in the world directly for what they can do—not for what they represent—"allow[ing] for the construction of lines in the sky."<sup>321</sup> Accordingly, architectural drawings are not simply a representation; they are part of the world and its materiality, physical and virtual, and enact **fields of potentialities**. They are considered as mediators of iterative processes, as enacting dialogue—whether these dialogues be discussions or orders.

On the other hand, the 'direct' practices working with the matter itself do not produce any type of archivable record in the process. Architectural archives thus exclude a priori this type of practice from its walls, as it cannot be stored and retrieved through documents.

314 It is after May 1968 that the architectural discipline has been definitively and formally separated from fine arts. Nevertheless, parallelly and at the same time, as argued by Evans, the architectural discipline in the sixties and seventies gets more and more separated from construction activities to focus on drawing activities. Paradoxically, while splitting with fine arts, architecture enters the art galleries and museum and sells itself completely independently from construction work, as we see for example in the economic models of Archizoom, Superstudio or others. It is thus in this line, and in the rise of the postmodern *Starchitects* that autonomous architectural archives starts to appear.

315 Evans, Robin. "Translations from Drawing to Building." *AA Files*, no. 12 (1986): 156;160.

316 Evans, Robin. "Translations from Drawing to Building." *AA Files*, no. 12 (1986):160.

317 Kleinman, Kent. "Archiving/Architecture." *Archival Science* 1 (2001): 321–32.

318 Daniel Libeskind, "Chamber Works: Architectural Meditations on Themes from Heraclitus," MOMA,

<https://www.moma.org/collection/works/164668>

319 Robin Evans, "In Front of Lines that Leave Nothing Behind. Chamber Works," *AA Files*, 6 (1984): 487.

320 Robin Evans, "In Front of Lines that Leave Nothing Behind. Chamber Works," *AA Files*, 6 (1984): 488-89.

321 Robin Evans, "In Front of Lines that Leave Nothing Behind. Chamber Works," *AA Files*, 6 (1984): 489.

322 It is important to acknowledge the difference between ‘the Archive’ and ‘archives’, the first referring to Foucault and the limits of the system of enunciability, while the other points at physical institutions. As such, archival practices and archival studies are now fields of research and practices that renews the relationships between the historical discourse, communities and the archives, notably through the more and more spread existence of community archives. As argued by Michelle Caswell, archival practices are nowadays organized around four major concept that guides the practice; records – ‘byproduct of activity, captured as evidence (disembedded from their creation and extracted into systems that allow them to be used), organized into personal or institutional archives as memory (migrated into systems which allow their use across an organization), and pluralized as collective memory (migrated into systems which allow their use across society)’; provenance-whereby, according to most contemporary definitions, ‘all participants in the creation of records are deemed cocreators, and as such enter into a relationship marked by a series of rights and responsibilities, with important implications for ownership, access, and privacy.’; value in which one can find the appraisal process – ‘value refers not to the monetary value of records, but their value in attesting to the events from which they emerged, their value in representing some important aspect of the past, and, in some strands of archival thinking, their value for present and future users.’; representation – ‘representation is the process by which archivists produce descriptive metadata, or data about the data stored in collections.’ In See Caswell, M. L. “‘The Archive’ Is Not an Archives: On Acknowledging the Intellectual Contributions of Archival Studies,” August 4, 2016. <https://escholarship.org/uc/item/7bn4v1fk#author>.

323 Siddiqi, Anooradha Iyer. “Introduction. Architecture as a Form of Knowledge.” *Comparative Studies of South Asia, Africa and the Middle East* 40, no. 3 (December 1, 2020): 497. <https://doi.org/10.1215/1089201X-8747480>.

325 Gosseye, Janina, Naomi Stead, and Deborah Van der Plaats, eds. *Speaking of Buildings: Oral History in Architectural Research*. First edition. New York: Princeton Architectural Press, 2019.

A multitude of minor spatial and architectural practices do not produce intermediary records, working exclusively from the **repertoire** and in dialogue with material flows, and are thus excluded—because of their texture—from the archival regime.

The appraisal process,<sup>322</sup> which consists of archivists’ selection of what deserves to be kept and what does not, produces a second type of exclusionary act that participates in the perpetuation of the **hylomorphic** tradition in architecture. Until recently, the most authoritative and spread voices of the discipline openly despised certain knowledge, practices and individuals, notably crafts.women, clients, or inhabitants. As might be expected, the appraisal processes continued the concealment and silencing of minor spatial practices from the archives and, thus, from the historical discourse. A comprehensive account of appraisal processes in architectural archives is difficult to sketch, as “little consensus has been reached on what constitutes an architectural archive.”<sup>323</sup> Until today, national and individual/personal architectural archives of architects—sometimes gathered by institutions such as the Centre Canadien d’Architecture (CCA)—are the most widespread forms.

Concerning the contemporary world, architectural archives mainly include documents and records produced in the frame of a restricted number of dominant practices, carefully storing and protecting the drawings and documents of, for example, Frank Gehry, John Hejduk, Le Corbusier, Patrick Bouchain, or Herzog and de Meuron. Most of these archives (Fondation Le Corbusier, CCA, FRAC Centre, Herzog and de Meuron’s archives in Basel) focus mainly on the architect as the sole actor and authoritative voice on what the building is and means.<sup>324</sup> As argued by Naomi Stead and Janina Gosseye in the introduction of *Speaking of Building*,<sup>325</sup> these archival practices lead to multiple forms of exclusion, and notably the silencing of the female point of view on buildings and architecture throughout the modern period.

These first observations on architectural archives outline a research field to be pursued and sharpened, which is not addressed in this doctoral thesis. Indeed, the architectural research field has not entirely measured the gaps and absences in the architectural archives and has not given effect to this bifurcation from archives-as-sources to archives-as-subjects.<sup>326</sup> The emergence of architectural archives, as a centralized and nationalist project, in relation to the discipline’s emergence has not been dated, and the sedimented and cemented building of its historiography, at the expense of minor practices, is rarely a subject of interest.<sup>327</sup> Nevertheless, architectural historiography is without any doubt dominated by a male, white, euro-centric, ableist and bourgeois gaze, an expression of a perpetuated **hylomorphic** tradition. These historiographies of mediated and dominant architectural practices reveal a high degree of standardization of the discipline and its documents, one which is based on the drawings, models, notebooks and sketches of a few.

324 The program of the CCA (Centre Canadien d’Architecture) challenges these gaps and proposes series of program, courses and other events that allows architectural archives to be thought beyond the patriarchal star system. Notably, they organized in the frame of the *Toolkit for Today* several seminars around ‘Archival Absencing’ (2019), ‘Activisms’ (2018), ‘Oral History’ (2017), ‘Materials and Atmosphere’ (2014).

326 The work of Alben Yaneva in the CCA develop this approach to unravel the appraisal processes and the mechanisms of the Institution’s architectural archives. See Yaneva, Alben. *Crafting History: Archiving and the Quest for Architectural Legacy*. Expertise: Cultures and Technologies of Knowledge. Ithaca [New York]: Cornell University Press, 2020.

327 On some methods for alternative architectural archives and historiography, see Herscher, Andrew, and Anooradha Iyer Siddiqi. “Spatial Violence.” *Architectural Theory Review* 19, no. 3 (September 2, 2014): 269–77. <https://doi.org/10.1080/13264826.2014.1037538>. For another thread on the question, see Stoner, Jill. *Toward a Minor Architecture*. Cambridge, Mass: MIT Press, 2012.

This standardization excluded the infinite “library of knowledge [that] never migrates from its organic form (memory, bodily praxis) to a standard text form (books, audio, or video recording)”<sup>328</sup> from historiographies. The organic forms of knowledge entrenched in bodies and in the **repertoire**, as much as the non-human forms of knowledge, have not been sources determining “what can be said about the past.”<sup>329</sup> Architectural archives remain impervious to a large part of the production of spatialities, especially when coming to minor practices and the fugitive spatialities of bodies.

Numerous ethical questions now arise. Absences in architectural historiography unveil the necessity and urgency of unearthing counter-narratives, to enter in dialogue with some **ghosts**. The architectural discipline requires to inherit equally from minor practices, especially on how best to enact **futurities** that would escape the dialectics of **hylomorphism** and racial, extractivist capitalism. Alongside, architectural archival practices have to be developed in relation to **subjugated** forms of architectural knowledge and in respect of their textures. It is even more urgent in the context of the Sahrawi struggle for self-determination and cultural autonomy. However, are the archives, with their modes of conservation and knowledge production, viable places to make **contact** with these **pasts**, presents and **futurities**?

328 Povinelli, E. A. “The Woman on the Other Side of the Wall: Archiving the Otherwise in Postcolonial Digital Archives.” *Differences* 22, no. 1 (January 1, 2011): 152. <https://doi.org/10.1215/10407391-1218274>.

329 Hartman, Saidiya. “Venus in Two Acts.” *Small Axe* 12, no. 2 (2008): 9.

## Archival pharmakology. Ethics and paradoxes of “archiving” the oral and the embodied.

In the text “The Pharmacy of Plato”<sup>330</sup>, Derrida analyzes the *Phaedrus*. In the dialogue between Phaedrus and Socrates, the first one wants to read and discuss political discourse with the second, bringing him out of the walls of the city. In his analysis, Derrida hypothesizes that one of the aims of Plato, that remained unnoticed until today—notably due to translation issues—is to define writing as a form of *pharmakon*. Pharmakon can be translated as “‘remède’, ‘poison’, ‘drogue’, ‘filtre’, etc.”<sup>331</sup> and also, as noticed by Bernard Stiegler, scapegoat. The pharmakon is an indefinite liquid, milieu, and/or body that is essentially indeterminate. As inherently transformative, the things from which things emerge, the pharmakon profoundly modifies its milieu of emergence and its economies. It troubles the everyday, as the writing brought Socrates outside the wall of his office and the city.

In their dialogue, and as analyzed by Derrida, Socrates develops on his suspicions toward writing, and thus, about its potential toxicity. He says, as he understands how Phaedrus will read the text he brought under his cloak, that writing opens the paths to “repetition without knowledge,” as the excorporation of knowledge and memory risks the impossibility of their (re)incorporation. This significant threat on knowledge and thinking could, nevertheless, potentially be a remedy for forgetting. In this context, it is simultaneously both a poison and a remedy, and its socialization will define it as being the one, the other, or both.

330 Platon, Jacques Derrida, and Luc Brisson. *Phèdre Suivi de La Pharmacie de Platon / de Jacques Derrida*. Paris: GF Flammarion, 2008.

331 In english, ‘« remedy », « poison », « drug », « filter », etc.’. (my translation). Platon, Jacques Derrida, and Luc Brisson. *Phèdre Suivi de La Pharmacie de Platon / de Jacques Derrida*. Paris: GF Flammarion, 2008:266.





| Fig. C'5 | TThomas Huber.  
Die Bibliothek. 1988. Farbiger  
Lichtdruck auf Hahnemühle  
(Wasserzeichen). 39 x 77,5cm  
(65,5 x 107cm).

“A crystal carafe of unusual dimensions was filled with liquid colors in a mixture that, under the brightness of the spotlight, shone like a single color, so pure and pleasing to the eye that it did not seem to be formed from the dirty residue of work. A twisting iron stopper sealed it, and a glass tube extended down into the colors. Thomas raised the implement to eye level. The liquid was naturally flat and dark, but some reflections floated on the surface resembling particles of metal, and one could well believe that thanks to the siphon a very pure mixture would be transferred onto the canvas.”<sup>332</sup>

The pharmakon is an indeterminate liquid from which will emerge every brushstroke of the painter, as the indeterminate source of **imagination**, destructive and creative. In the line of Derrida, Bernard Stiegler proposed to extend this pharmakological double-edge indeterminacy to every form of technique. He returned to the original domestication of fire, describing the first technical revolution as both the origin of the Gods’ hate—and human’s earthliness through the gift of Prometheus—and the means of the surpassing of the Gods themselves. He thought of techniques as inherently pharmakological—either a poison or a remedy. Thus, without a proper care, “this pharmakon is necessarily toxic as long as new therapeutics are not prescribed.”<sup>333</sup> Writing and reading risk defining a toxic repetition without knowledge if not adequately inserted socially and not at the expense of embodied and entrenched knowledge and forms of thinking. As such, the archival impetus is, as a Borgesian desire to subsume everything and indeed the final truth about everything without knowing it, toxicity of the excorporated.

This notion of pharmakon provides the basis for the ethical questions posed both by architectural internal disciplinary problematics, and by the urgency and need to preserve Sahrawi oral and embodied knowledge in relation to the archives. A compulsive archival drive would lead to the complete destruction of this knowledge and memories; **their entry into the archive would rupture their relations with environments and their economy of human and non-human bodies**. Archival **gestures** must be considered with care, as their operations can profoundly modify the relations between bodies, their temporal coexistence, and their **futurities**. A proper and radically ethical *therapeutic* must be implemented to define itself as a remedy and truly support the circulation of this knowledge and memories. Furthermore, the same conclusions apply to the relations between architectural archives and oral and embodied architectural knowledge. Can we then archive the embodied? Which *therapeutic* can we foresee?

332 Blanchot, Maurice, and Jeff Fort. *Aminadab*. French Modernist Library Series. Lincoln: University of Nebraska Press, 2002:12.

333 “ce pharmakon est nécessairement toxique tant que de nouvelles thérapeutiques n’en sont pas prescrites.” In Stiegler, Bernard. *La société automatique*. Paris: Fayard, 2015:106. My translation

Until now, we have discussed two forms of knowledge conservation and circulation. The organic forms of knowledge and memories, living and embodied, belonging to the **repertoire** and its mode of **migration** and circulation, with performance as their “means of reappearance and acts of remembrance.”<sup>334</sup> On the other hand, the standardized documents refer to the dead memory stored that Plato was also pointing. These documents belong to the archives’ regime and determine “what can be said about the past” in the historical discourse. Going from one form of knowledge to the other means achieving a process of **incorporation** (from the standardized to the organic) or **excorporation** (from the organic to the standardized). To be incorporated, the documents need to be activated and their constitutive operations reenacted, which is an **interpretation or reading**. In the opposite way, an organic form of knowledge needs to be performed and transcribed, which is a **translation or recording**. In both of these operations, the knowledge that results from translation or interpretation is not the same as that which existed previously. On the contrary, it is a new form of knowledge about the prior, an invention, and it is fundamental to consider this gap and difference, which is not a trap but a resource. Excorporations and incorporations are, as an automatic consequence, situated and transformative.

In this perspective, **there is no possibility of archiving the embodied or embodying the archive, and these acts of translations bear strong ethical responsibility.** However, from this difference in the texture of knowledge, the **repertoire** and the archive could be a mutually enriching entanglement, a form of mutual support which does not aim at replacing the one with the other. The Sahrawi knowledge and memories cannot be archived without the risk of destroying them. Therapeutic archival practices would refuse to preserve and standardize the embodied, and instead support its means of reappearance and acts of remembrance, which are performances. In other words, the production of documents would not tend to exhaust and entangle embodied knowledge through excorporations. Instead, these **archival practices would support further performance by providing helpful information—endangered by the delays between performances—and a frame to reenact the performance and its economies of human and non-human bodies.**

The processes of incorporation and excorporation nevertheless raise other significant issues to be considered. By transforming the mode of circulation of knowledge and memories, access and authority over access are also profoundly modified. Excorporation also leads to a new form of visibility, beforehand handled by the bodies performing and remembering. The circulation of the **repertoire** entirely depends on the will of the human archival body. The **distance** with the body created by excorporation can deprive her of her authority over the excorporated standardized documents.

This renewed visibility, mode of access, and agents of authority could be poisonous and destructive if the archival bodies do not define who has the right to access and who has the right to define who has the right to access. Providing access to some in augmenting the visibility of knowledge and memories also engenders substantial vulnerabilities and exposures. Indeed, this is made clear in the Sahrawi fight against the Moroccan regime’s rewriting of their culture.

In order to maintain the mechanism of the **repertoire**, the boundaries of the archives and its access must be thought of according to the positions of those demanding access. On arrival, I was automatically granted access to the archives of the Ministry of Information, thanks to my status of researcher. However, when discussing with Sahrawi women, access to their **repertoire** of knowledge was based on a different set of issues. **Accesses to repertoires are granted by trust and promises.** First of all, my nationality (French) requires me to explain my position toward French foreign policies, **past** and present, and

334 Schneider, Rebecca. “Performance Remains.” *Performance Research* 6, no. 2 (January 2001): 103.

335 Vergès, Françoise. "The White Saviour or Racism Without Race." *Rosa Luxembourg Stigung* (blog), October 6, 2020. <https://www.rosalux.eu/en/article/1800-the-white-saviour-or-racism-without-race.html>.

to request forgiveness regarding the role of France in the atrocities of the war. A clear plan of what I intended to do with the recording of the discussion and the knowledge shared at this occasion has to be presented to ensure solidarity and limit access to people affected by "the white savior syndrome."<sup>335</sup> I was gendered as male and considered single, which also influenced the direction of some discussions. As part of the project of Oral memory archives in which I participated, led by Mohamed Ali Laman, director of the project at the Ministry of Culture and assisted by Lahsen Selki Sidi Buna, I was only granted access to the interview I was participating in (not the previous ones). These nuanced rules of access to **repertoires**, defined by location, time, affects and subjectivities are difficult to transfer into archives, which remain mostly blind to such categories. It is thus critical to consider these categories (time, space, gender, relation to the documents and authors, rationale, ages...) in building the boundaries and therapeutics of an archive to support oral and embodied knowledge.

When considering therapeutic and archival pharmacology in architecture, with the goal of preserving, enhancing, supporting and making **contact** with oral and embodied knowledge, we must consider the same ethical questions and paradoxes. It is necessary to avoid translating (excorporating) these fugitive spatialities, which would impose the regimes of the archives and the dialectics of the historical discourse to their textures. Otherwise, it would lead to a repetition of the same **institutional violence**, destroying their **temporalities**, modes of circulation, modes of access and thus, their **futurities**. The toxicity of **hylomorphic** poison has concealed and destroyed oral and embodied knowledge. However, I argue that archives, mainly through new therapeutics and archival practices, could also constitute a remedy to make **contact** with this same obstructed knowledge. By changing the objects of preservation, archival practices could offer the possibility to intermingle the archives and the **repertoire**, to support one another, one being the threshold to the other.

## Undrawn Spatialities. Traces of architectural events.

When we leave Zora's Jaïma, the sun is setting. We walk five minutes between the Jaïmas of barrio three of Hausa, a neighborhood of Smara, before arriving at the Jaïma of Aguaila. Surrounded by her family members, she is seated on a carpet in front of the sand-brick wall of her Jaïma, enjoying the lower temperature and light of the evening. The washing machine is installed outside just beside us and is running throughout our visit. Like many older people who spent most of their lives in the refugee camps, her eyes are surrounded by a white halo—she is progressively losing her sight due to the intensity of the sun. Aguaila is a public figure in barrio three (neighborhood) of Hausa's daïra in Smara; as a traditional medicine specialist, she is consulted to treat every health trouble. She holds two large needles in her hand, passing them repeatedly through the stitch of the carpet, in synchronicity with the rhythms of her sentences. During her childhood and youth, she lived as a pastoralist in the northeast of Western Sahara; she did not go to the Spanish schools and did not learn how to read or write. Instead, she cultivated the bottomless memory of the Sahrawis and the knowledge of medicinal plants and natural medicines. Thus, the way she describes the Saharan desert is dense in information and details, amplified further by her **gestures** and the position of her body while she speaks.



She mainly introduced her exodus from the camps with her children. When the Moroccan army entered the Sahrawi territories on October 31, 1975, Aguaila was in Jdeiriya, a village at the northern border. The Spanish military left silently without informing anybody. The inhabitants of Jdeiriya were alerted by the dust lifted by their cars. The people, including Aguaila and her children, fled to join the Polisario Front and protect themselves from the Moroccan army. Over four months, two hundred people moved from one water well to another without any equipment to survive before reaching the first refugee camp at the Algerian border. While narrating the exodus, Aguaila named each Ouad (river), the dates of arrivals and departures, while also describing the vegetation and the climatic conditions.

After staying hidden for a few days near Jdeiriya, where she was born, they went on the road to Smara to the water well called M'Jbeiriya, on the Ouad R'ni, a tributary of the Saguia el Hamra. In the riverbeds of Western Sahara lives a tree called the Lezl. At its feet, the sand accumulates. The more significant the heap, the higher the tree grows, while branches are absorbed in the sand. To explain this process to us, Aguaila imitates the plant's growth and the sand accumulation using her hands and arms. She says that in times of trouble, the Sahrawis dig at the feet of trees to create shelter from the heat of the day and protect themselves from the coldness of the night. She reenacts the wood structure with her **gestures**, allowing her to create invisible, temperate, and safe spaces to sleep and spend the days protected. Aguaila and the women dug holes into the sand for several days and nights to protect their children. At this moment, she bends her back, tilting her whole body onward; to warm up their babies, the women hollowed the ground out to use its heat, transforming their bent bodies into blankets.

During this discussion, Aguaila reenacted **figurations** anchored in her body, carrying a timeless co-shaping of Saharan spatialities and the Sahrawis' **gestures**. **The movements of her hands and her body's posture, forming gestural drawings that leave no lasting trace, are the means of circulation and conservation of an architectural knowledge that cannot be standardized into a document but is remembered from the repertoire, the archive of her body.** The constructions of these temporary shelters do not produce any type of records or documents. Furthermore, their visible physical traces rapidly disappear under the sand. Nevertheless, this architectural spatiality constituted a critical means of survival during the exodus, as a capacity to observe the material flows and act with non-human bodies to create shelters. This knowledge belongs entirely to the **repertoire**—and now enters the regime of the archive while I am writing these sentences—and its spatialities remain entirely undrawn.

As previously discussed<sup>336</sup>, this research analyzes spatialities as brought into being by human and non-human bodies through the performative lens. This performative dimension allows for minor spatialities to enter the field of the architectural, as possessing a particular technicity and unfolding spatial knowledge through the operations. From this perspective, **gestures** and words constitute critical means of architectural enactment.

**In opposition to the various traditional disciplinary media and records on which the archival regime and historical discourse are based, undrawn spatialities posit themselves as a category of spatialities that make use of a myriad of architectural events and performances belonging to the repertoire.** Always generic, the undrawn belongs to the *minor*, as one of its subcategories, covering spatialities whose technicity is inherited and transmitted through embodied means and without producing any records. The undrawn remains nevertheless defined dialectically as a gap and/or absence in the archives and the historical discourse. This dialectic enacts the possible entanglement between the archives and the **repertoire** to enhance, support, and preserve the knowledge and memories of the undrawn. Thus, I foresee the undrawn as an escape from the dead-

336 Cf. Chapter B, 'The architecture and the repertoire', especially in the section 'The repertoire, from techniques of the body to performative spatialities', in which I relied notably on an article of Nicky Gregson and Gillian Rose, where they write 'performances do not take place in already existing locations: the city, the bank, the franchise restaurant, the straight street. These 'stages' do not pre-exist their performances, waiting in some sense to be mapped out by performances; rather, specific performances bring these spaces into being. And, since these performances are themselves articulations of power, of particular subject positions, then we maintain that we need to think of spaces too as performative of power relations'. In Gregson, Nicky, and Gillian Rose. "Taking Butler Elsewhere: Performativities, Spatialities and Subjectivities." (2000): 431.

337 In a recent article in *Architectural Review*, Menna Agha and Leopold Lambert argued that “The ‘informal’ designation is a definition based on the fallacious institutional belief that certain self-built bodies do not have a form. Depriving an existing body, like that of a built environment, of the definition and recognition of ‘form’ is a work of erasure and isolation. Such informal designations are used to disenfranchise bodies, and code legal structures that will deprive these bodies of the right to self-develop.” In Agha, Menna, and Léopold Lambert. “Outrage: Informality Is a Fallacy.” *Architectural Review* (blog), December 16, 2020. <https://www.architectural-review.com/essays/outrage/outrage-informality-is-a-fallacy>.

338 See chapter B, ‘The architecture and the repertoire’, especially the section ‘Figurations and the embodied architectural image,’ in which figurations are discussed as ‘spatial images that are produced by and through experience and practices, and that exceeds the limits of visibility and representation’, they ‘enact the performance of spatialities in outlining the dialogical process of imagination in space, between the potential images the landscape affords and its driving forces and gestures.’

339 Turnbull, David. “Maps Narratives and Trails: Performativity, Hodology and Distributed Knowledges in Complex Adaptive Systems? An Approach to Emergent Mapping.” *Geographical Research* 45, no. 2 (June 2007): 140–49. <https://doi.org/10.1111/j.1745-5871.2007.00447.x>.

340 Noland, Carrie, and Sally Ann Ness, eds. *Migrations of Gesture*. Minneapolis: University of Minnesota Press, 2008:XII.

341 See chapter C, ‘A ghost in the Jaïma’, especially in the part ‘Radical coexistences of pasts, futurities, past futurities and future pasts. A/Effective pasts.’

342 Gosseye, Janina, Naomi Stead, and Deborah Van der Plaats, eds. *Speaking of Buildings: Oral History in Architectural Research*. First edition. New York: Princeton Architectural Press, 2019:10.

343 Kleinman, Kent. “Archiving/Architecture.” *Archival Science* 1 (2001): 321–32.

344 See chapter C, ‘A ghost in the Jaïma’, especially in the section ‘Offering hospitality. Repairing broken relations and concealed futurities.’

end of the relentless and unforgiving standardization of architectural, historical, and archival discourse and practices, which transformed what is out of its boundaries into vernacular or informal practices and architectures.<sup>337</sup>

The undrawn architectural event is enacted by **figurations**,<sup>338</sup> as a particular kind of architectural knowledge and image that is not only visual but also haptic.<sup>339</sup> The specific texture of the architectural knowledge and image is made of habits, **gestures**, bodies and minor inventions defined by the emergence of new **driving forces**. **To understand the transformation of architectural spatialities as situated performances, I thus have to trace their genesis from everyday gestures to transformative gestures through body-to-body transmission**, as we discussed with the operations of **hospitality** to plural **temporalities** of Gurba in the previous chapter. The historicity of these spatialities “differs from other types of traces in that it requires physical embodiment, the support of a human body.”<sup>340</sup> As a category of architectural spatialities, the undrawn requires investigations into other systems of traces, in order to address its **temporalities** and **migration**.<sup>341</sup>

Architectural scholar Janina Gosseye stated that “over the past half-century, architectural historiography has been punctuated by attempts to break the silence, to tell alternative narratives and to include other voices.”<sup>342</sup> The documents in architectural archives presenting only the experts’ point of view are criticized for the underlying idealism and incapacity to foresee the majority of the protagonists in a building’s conception and life.<sup>343</sup> As one of the categories that could mediate potential (hi)stories, **the undrawn aims to address standardization and silencing by giving accounts of other systems of traces and circulation of knowledge**. By endorsing the performative dimensions of spatialities and the embodied nature of **figurations**, the undrawn allows us to think of new archival practices and ways of engaging with architectural archives. It permits us to create the basis for a debate on the content of the architectural archives, beyond an analysis of physical documents/records, with the potential opening to other traces of spatialities and potent materialities.

At first sight, undrawn spatialities, such as the one Aguaila introduced us, do not produce physical traces that last, on which one could rely to reenact their existence. But beyond and beneath the visual, myriads of knowledge and memory remain in the **repertoire**, inscribed and entrenched in bodies. If reenacted through performance, their circulation can be reactivated, and this knowledge and memory could migrate from one body to the other without the need to be standardized and excorporated through documents or records. In this perspective, a certain kind of archive, an archive of **figurations**, could support the **reenactment** of undrawn spatialities by providing the conditions for performance to occur. Necessarily spatially dispersed, these strategic archives for architectural **reenactment** could allow **hospitality** to other forms of **temporalities** and existence, offering the basis for a zone of **contact** with **ghostly** touches.<sup>344</sup>

The speculative archives of Sahrawi **figurations** that I introduced in the Interlude is an attempt to foster imagination about the contents, performances and places of such an infrastructure. While it is clear that it is not mine to decide or design it, this exercise of speculative design remains an important step for the rest of this Ph.D., and undoubtedly for the afterlives and futures of my research. As such, it allowed me to approach a point of critical and strategic value concerning the archives and its relation to the conservation and circulation of the **repertoire**. It is true that archival **gestures** might be operations of temporal and relational rupture, and of removing non-human bodies from their economies. However, in this very **gesture** of removal, they can constitute a strategy to conceal the structures of concealment while reducing the **distance** with preempted knowledge and their **futurities**. The eeriness of the archives in terms of relations to **pasts**,

property rights and economies, allows one to think of it as an infrastructure that put in circulation the kinds of knowledge it formerly concealed in **providing the conditions of their acts of remaining and means of reappearance**. Such archives are thought of neither as building, nor as a place where knowledge, **pasts** or events are stored, but as a transformative threshold in which knowledge—as relations and co-operations of human and non-human bodies—is reenacted and circulates.

By giving place and time to latent virtualities and existences, the archival **gestures** could constitute one of the critical operations toward maintaining the political agencies of knowledge and individual lives. At the same time, these **gestures** enact a critical, affective and reflexive gaze on the **repertoire** allowing one to understand its textures and reinvent **driving forces** upon them. Archiving the undrawn spatialities induce archival **gestures** that preserve economies of human and non-human bodies allowing for **figurations** and **performative spatialities** to be reenacted. This practice of architectural **reenactment** is thus a way to access and foster the migration of the **repertoire** of oral and embodied spatial knowledge, while approaching them from a historical and critical perspective.





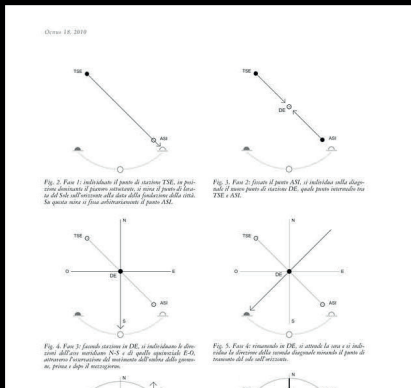
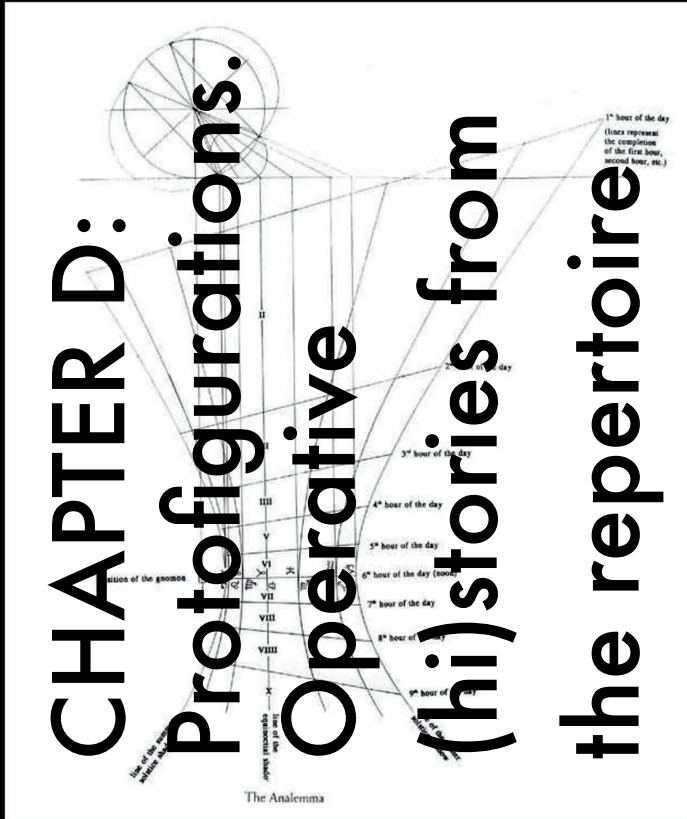
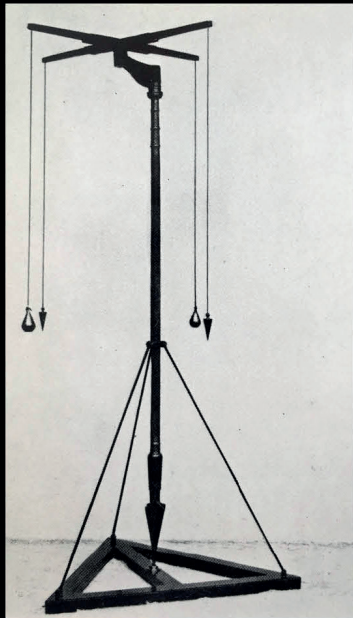
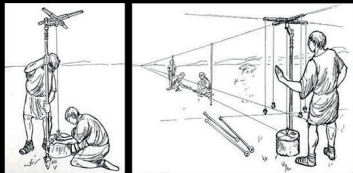
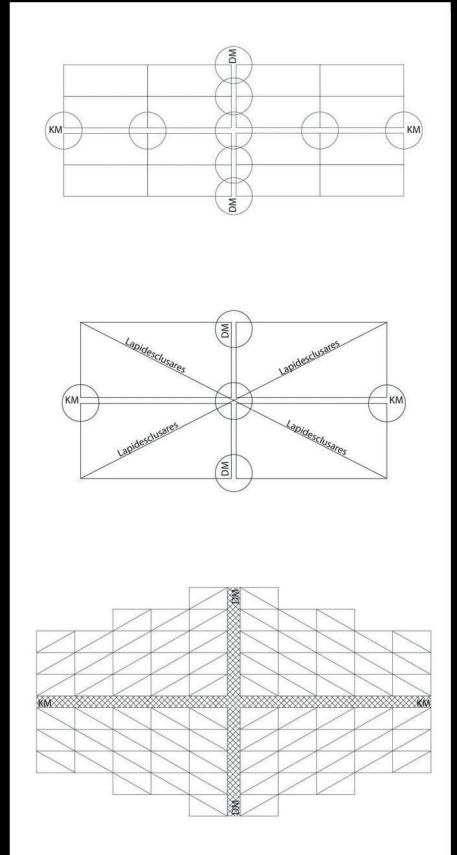
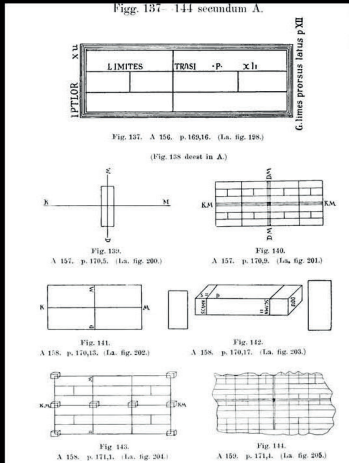
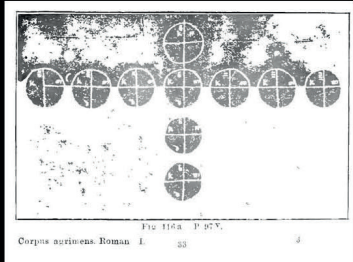
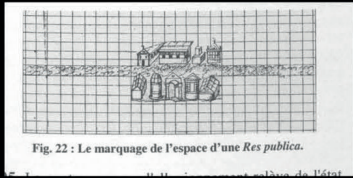
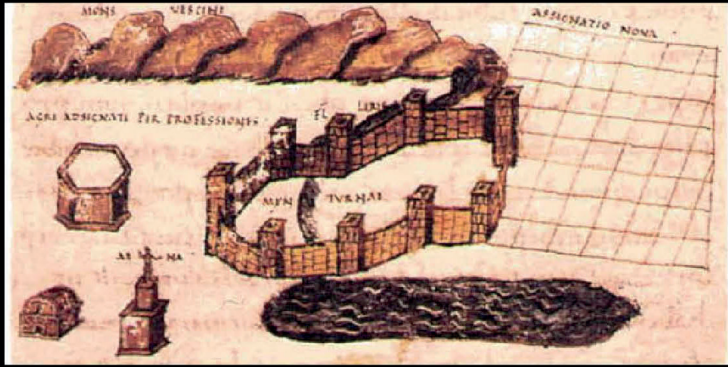
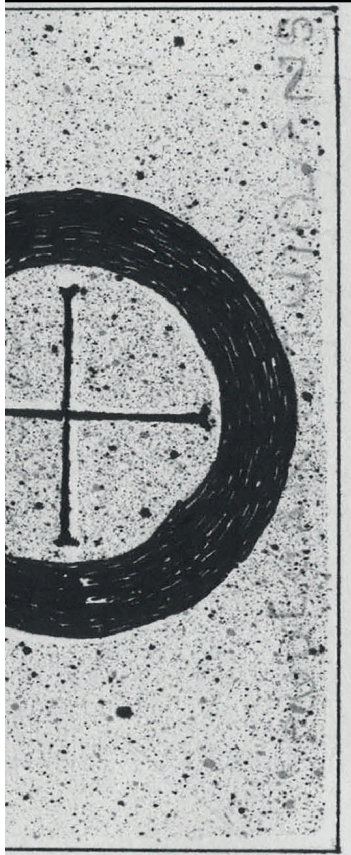
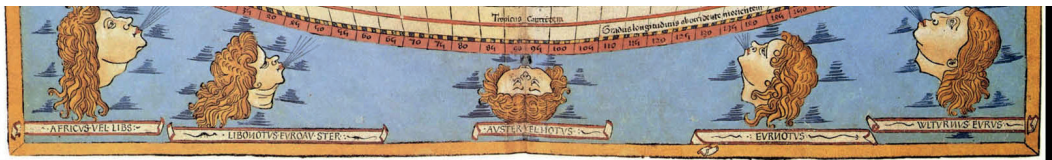








A 145, p. 160.4. La, fig. 185.







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## Performative spatial techniques that structure the field of the potential.

345 ‘Le terme de protostructure, construit selon un procédé morphologique, est constitué de l’assemblage du préfixe proto- et du substantif féminin structure pour le radical. Comme avec la majeure partie des préfixes empruntés au grec, les mots composés avec proto- ne nécessitent pas l’usage d’un trait d’union, protostructure s’écrit ainsi en un seul mot. Le terme de structure est issu du latin structura, lui-même dérivé du supin du verbe latin struere qui désigne l’action d’assembler, d’empiler, mais aussi de construire, disposer ou encore tramer. La forme du substantif féminin structure, qui désigne tantôt l’assemblage, tantôt la forme en résultant, voir même directement l’organisation des parties composantes, tend à englober un ensemble de systèmes pouvant tout aussi bien prendre la forme d’un cadre physique qu’un réseau d’informations. [...]

Le préfixe proto-, qui vient quant à lui du grec ancien prôtos et signifie premier, est composé de la base pro, en avant, et du suffixe superlatif -tatos. Le choix de ce préfixe entend signifier le caractère primaire du substantif qui lui est associé, mais aussi, à la différence du simple emploi du préfixe d’origine latine pré- ou grecque pro-, son inscription dans une suite d’événements dont il est le premier et l’élément déclencheur. C’est cette notion de processus que l’on retrouve dans le terme prototype par exemple, le premier exemplaire d’un élément à reproduire, et qui le distingue aussi du terme d’infrastructure qui comprend le sens de premier, mais dans une vision statique, infra- signifiant en deçà, mais ne comprenant pas de notion d’action et donc de déroulement temporel.’ (My translation). Mignon, Agathe Claire Estelle. “Protostructure, Archéologie et Hypothèse d’une Architecture-Support.” EPFL, 2019:14-15. <https://doi.org/10.5075/epfl-thesis-9460>.

The **repertoire** was proven to be a site and mode of transmission and conservation of spatial and architectural knowledge, little considered by infrastructures of *official knowledge production*. Nevertheless, the **archives** and the **repertoire** are deeply intertwined. To foster, preserve and make contact with embodied and oral spatial knowledge and their **futurities**, these entanglements have to be considered as productive space of conflict. **Figuration** has shown the extent to which the **repertoire** structures the field of the potential through **performative spatialities**—this field constituting a set of contacts with other bodies and their **temporalities**. This chapter introduces the point of departure of this doctoral research: spatial techniques that reconfigure this field of the potential through the enactment of **performative spatialities** by contacts/relations with the **repertoire**.

This Ph.D departed from the term *protofigurations*. My first year was articulated around an attempt to define it and fit in with the common lines of research of the laboratory. When I arrived, Agathe Mignon was finishing her Ph.D. on *protostructures*, which she defined as:

“The term protostructure, constructed according to a morphological process, is an assemblage of the prefix proto- and the feminine noun structure for the radical. As with most prefixes borrowed from Greek, words composed with proto- do not require the use of a hyphen, so protostructure is written as a single word. The term structure comes from the Latin structura, derived from the supine of the Latin verb struere, which designates assembling, stacking, building, arranging, or weaving. The feminine noun structure, which means simultaneously the assembly, sometimes the resulting form, or even directly the organization of the parts, tends to encompass a set of systems that can just as easily take the form of a physical framework as an information network. [...]

The prefix proto-, which comes from the ancient Greek prôtos and means first, comprises the base pro, forward, and the superlative suffix—tatos. The choice of this prefix highlights the primary character of the noun associated with it, but also, unlike the simple use of the prefix of Latin origin pre- or Greek pro-, its inclusion in a sequence of events of which it is the first and the triggering element. It is this notion of process that we find in the term prototype, for example, the first copy of an element to be reproduced, and which also distinguishes it from the term infrastructure, which includes the meaning of first, but in a static vision, infra- meaning below, but not including a notion of action and therefore of temporal unfolding.”<sup>345</sup>

In her Ph.D., she developed the concept of protostructure through the analysis of a corpus of architectural and spatial practices, which gathered building processes behind several examples of housing in Europe. In these examples, the architects designed only a system or structure—the protostructure—which allowed for appropriation by the inhabitants. In some extreme instances, architects, such as John Habraken, only proposed a modular constructive system implemented as self-building; in others, the inhabitants made the finishings. The concept of protostructure helps to analyze the **temporal gap created in the building process, which allows for radical appropriation and incorporation of inhabitants in the design**. Simultaneously, protostructures were developed in the pedagogical context of the first-year architectural studio at EPFL. The protostructures was developed as a self-supporting balloon-frame timber structure, shared by all the students, and supporting spatial **imagination** and negotiation.<sup>346</sup>

This research departed from an extension of the concept of protostructure—either as a historical hypothesis or an archaeology, and an instrument for democratic and inclusive design—to the urban and territorial scales. Defining protofiguration and creating the basis for it to become a viable frame of research took time. I struggled with it. I sometimes hated it, loved it, thought I understood it while every trace of sense disappeared the following day. The first satisfying definition I arrived at, and which I proposed in my candidacy exam one year after encountering the term, was the following:

“Protofigur-e/-ation, n. tym. Greek *prōtos*, “first, primitive form of, from which other similar things develop,” and from Latin *figura*, from the radical *fig* of *figere*, “to form.” “Gestures, forms, configurations or elements that allow, by analogical transfer, the inscription of a practice in a site (spatial or temporal). The use of the term protofiguration indicates the structuring process of the becoming [devenir]; the proto-figure, the images used as embodied layout. Culturally, temporally and spatially situated, protofigurations are a technique of mediation between humans, living beings and the environment. In several cultures, the use of simple and “standardized”<sup>347</sup> gestures and figures reoccurs in foundational acts; the Romans divided the Sky and the Earth into four parts and used extensive grids<sup>348</sup>; the Aztecs, an orthogonal grid aligned with the cosmological system. These practices, dedicated to the cultivation of a collective perception, and through the use of a common cultural figure and its figuration, allow for a re-cognition, attention through doing, experimentation, modulation<sup>349</sup> of an ideal space in the real.”<sup>350</sup>

The definition I give throughout this chapter differs from this first insight. At this time, my research was infused by postmodern and structuralist literature, as the essays of Spiro Kostof, Joseph Rykwert, or Juhani Pallasmaa, which tend toward essentialism and render invisible the complexity of (post)colonial relationships and the **hylomorphic** tradition in the architectural discipline. The research I led in the Sahrawi refugee camps made it clear that this concept of *protofigurations*, as I had previously formulated it, was blind to the texture of Sahrawi spatial knowledge and history.

350 ‘Protofigur-e/-ation, n. tym. grec *prōtos*, «premier, forme primitive de, depuis lequel d’autres choses similaires se développent», et du latin *figura*, du radical *fig* de *figere*, «former». «Gestes, formes, configurations ou éléments qui permettent par transfert analogique l’inscription

dans un site (spatial ou temporel) d’une pratique. L’utilisation du terme protofiguration désigne le processus de structuration du devenir; la proto-figure, l’image utilisée. Située culturellement, temporellement et spatialement, elles sont une technique de médiation entre l’humain, les êtres

vivants et l’environnement. Dans plusieurs cultures, l’utilisation de gestes et de figures simples et ‘standardisés’ est récurrente dans les actes fondationnels; les Romains divisaient le Ciel et la Terre en quatre parties et la grille extensive, les Aztèques, une grille orthogonale alignée sur

346 We developed on this topic in the following article, analyzing the role of the protostructure in the learning curve thanks to the cognitive theory of scaffolding. Dietz, Dieter, Dario Negueruela del Castillo, Agathe Mignon, and Julien Lafontaine Carboni. “HOUSE 1 Protostructure: Enhancement of Spatial Imagination and Craftsmanship Between the Digital and the Analogical.” In *Digital Wood Design*, edited by Fabio Bianconi and Marco Filippucci, 24:1229–52. Cham: Springer International Publishing, 2019. [https://doi.org/10.1007/978-3-030-03676-8\\_50](https://doi.org/10.1007/978-3-030-03676-8_50).

347 Smith, Michael E. “Form and Meaning in the Earliest Cities: A New Approach to Ancient Urban Planning.” *Journal of Planning History* 6, no. 1 (February 2007): 3–47. <https://doi.org/10.1177/1538513206293713>.

348 Rykwert, Joseph. *The Idea of a Town: The Anthropology of Urban Form in Rome, Italy and the Ancient World*. Faber Finds. London: Faber and Faber, 2010, and Kostof, Spiro, and Richard Tobias. *The City Shaped: Urban Patterns and Meanings through History*. 1. paperback ed. London: Thames & Hudson, 2014.

349 Simondon, Gilbert, and Nathalie Simondon. *Du mode d’existence des objets techniques*. Nouv. éd. rev. et corr. Philosophie. Paris: Aubier, 2012.

le système cosmologique. Ces pratiques dédiées à la culture d’une perception collective grâce à l’utilisation d’une figure culturelle commune et sa figuration permettent une re-connaissance, une attention par le faire, l’expérimentation, la modulation d’un espace idéal dans le réel.’



351 Isidoros, Konstantina. *Nomads and Nation-Building in the Western Sahara: Gender, Politics and the Sahrawi*. London: I.B. Tauris, 2018:214.

352 See Wilson, Alice. "Ambiguities of Space and Control: When Refugee Camp and Nomadic Encampment Meet." *Nomadic Peoples* 18, no. 1 (January 1, 2014):15-16. <https://doi.org/10.3197/np.2014.180104>.

353 See Lafontaine Carboni, Julien, and Juan Carlos Gimeno. "Reinvindicar Un Derecho al Campamento." *Sociedad Geográfica Española La Ciudad. Las Ciudades.*, no. 66 (Mayo-Agosto): 94–105.

354 Herz, Manuel, ed. *From Camp to City: Refugee Camps of the Western Sahara*. Zürich: Lars Müller, 2013:66.

The research of Manuel Herz on Sahrawi refugee camps exemplifies the blindness of western spatial and urban concepts to spatialities emerging from non-western and minor epistemologies. In the published book *From camp to city: refugee camps of the Western Sahara*, he presents his in-depth urban analysis of the actual refugee camps near Tindouf. Organized using the categories of *planning, living, administration, moving, communication, commerce and work, health and education, recreation and leisure*, the research reveals the pitfalls of using the western urban systems as a lens to understand spatialities organized according to other categories. It has led to a misunderstanding of the role of *public* infrastructure—protocols, UNHCR social center, etc.—in the social life of the Sahrawi communities. These spaces are mainly built for international representatives and workers, for the Sahrawi nation in exile to perform the symbols of occidental democracy demanded by the western gaze for it to provide support. This infrastructure “echoes empty”<sup>351</sup> when their workers and representatives leave in the summer, unable to bear the climate.

Sahrawi refugee camps are still mostly qualified by their inhabitants as a constellation of tents, named *Almukhayam*,<sup>352</sup> the “tented-place”. As such, it is the Jaïmas that act as the basic social, cultural, and political unit. The mere use of the word “city” when talking about the refugee camps is intolerable for many Sahrawi. Most of them perceive this association as naturalization and normalization of their exile, depriving them of the political subjectivities and agencies afforded by the exceptionality of refugeehood. As such, Sahrawi refugees refuse to name their camps “cities” as it deprives their right to the status of refugees.<sup>353</sup>

Furthermore, to underline the need of his research, Herz argues that “with the exception of a few islands in the Atlantic and Pacific Ocean, the Western Sahara is the only non-self-governing country in the world. It is the world’s last remaining colonies.”<sup>354</sup> Conversely, we might ask if the idea of the postcolonial exists in the world, given the coloniality of the current capitalist organization of international relations that perpetuate the historical systems of domination and violence upon most former colonies and their bodies. In a world where the Palestinian territories are still being colonized, Western Sahara is unfortunately not the only colonial inheritance of the twentieth century and it is not the last colony. In this world, most former colonial empires, as France, are still colonizers of numerous so-called *overseas territories*. The use of western urban categories to analyze spatialities of the Sahrawi refugee camps could have offered an insightful analysis on how the imaginary Western gaze has created a specific form of urbanism in the camps, such that their inhabitants might be recognized as *ideal refugees*. This might also have been able to shed light on the strategic use of these same western categories by the Sahrawi in order to achieve their independence. Regrettably, the research of Manuel Herz did not establish a dialogue with the texture of the Sahrawi spatial knowledge and history. Indeed, I perceive the very reality of such an asymmetry as an inheritance of colonial relationships that still structure our modern condition.

I first approached Sahrawi spatial history through the concept of protofigurations. Nevertheless, through the contacts I had in the refugee camps with the Sahrawi communities, the concept of protofigurations evolved tremendously. I had to unlearn what I had developed, so as not to impose the epistemology within a context in which it risked to conceal more than reveal. The evolution of the concept was influenced by the knowledge and histories I had the chance to listen to, and their potential agencies in the struggle for Sahrawi independence. The trajectory of this research and the concept of protofigurations is the result of these contacts and exchanges. It is an attempt to create a fruitful *vis-à-vis* with potential political agency. The concept of protofigurations thus became an opportunity to discuss the knowledge from the *repertoire* that structured

the camps and its relation to the environment, addressing spatial issues and histories through a territorial, cognitive and performative lens, as introduced in the discussion on the interior of the Jaïma.<sup>355</sup> Through the conversations I had, I tried to understand the extent to which the nomadic and pastoralist knowledge was mobilized in the creation of the refugee camps. It allowed to understand some dimensions of Sahrawi spatial culture's evolution throughout the twentieth century, notably in relation to the Spanish colonial endeavor and the exile, not as a form of sedentarization but as a temporary strategy of survival.<sup>356</sup>

Until the stay in the refugee camps, I developed protofigurations as a spatial and cultural enactive technique that re-con-figures the field of the potential through a performative—thus embodied and iterative—structuring of the **repertoire**—structuration of the social space—and thus of the potential relations with the environment. It points at spatial techniques that modify or enact what is *afforded*, while allowing or alienating dialogues with the material speech acts and **ghosts** of other **temporalities**. As I will analyze in this chapter, practices of inscription<sup>357</sup> or founding rituals can be understood as such techniques. Indeed, they allow us to understand how the **repertoire** is a spatial field of struggle through **performative spatialities**. Thus, protofigurations are spatial practices of projections of social space into real, mainly unmediated by drawing or any type of lasting **documents**, and whose **imagination** and **futurities** are embodied.

To define the term more in-depth, I need to bring in and combine four main references from Philippe Descola—*Les formes du visible*—James J. Gibson—*affordances*—Gilbert Simondon—*allagmatique* and *operations*—and Bernard Stiegler—*cardinalité* and *calendarité* in relation to techniques.<sup>358</sup>

In a series of courses that he gave at the Collège de France called *Anthropologie de la nature*, and especially in the course from 2008 to 2012 (*Ontologie des images, suite, suite et fin*, and *Les formes du Paysage*), Descola shared his research on *figuration*. He defines **figuration** as the process of *figuring*. The process is double-sided; it points both at the **excorporation** and **incorporation** of the image—the act of figuring—and at the social imaginaries of the figures and their agencies. The comparative anthropology of **figuration** aims at escaping a trap in which many art or image historians have fallen; they “treat pictorial representations as illustrations of symbolic and discursive systems that justify them and make them understandable.”<sup>359</sup> In following the work of Alfred Gell in *Art and agency*<sup>360</sup>, in which images are not symbols but traces, hints, or clues of an action or intention, Descola navigates the social roles and agencies of **figurations** and images. Alternatively, **figurations** point toward a form of independence in the lives of the images; they can, and often do, surpass the original intentions of the artist/person figuring the image. An anthropology of **figurations** also “aims to show how the objects and relationships that iconic images depict, the pictorial forms in which they are presented, and the types of agency they exercise are interdependent.”<sup>361</sup> In this sense, **figurations** also bring in the potential agency of the forms/images, while the operations carry the structures with them.<sup>362</sup>

To render the aim of his research intuitively understandable, Descola repeatedly narrates an anecdote about a field trip in the Achuar communities in High Amazonia. At the beginning of the course, *Les formes du Paysage* (2011–2012), he describes a walk in the forest he made with Achuar hunters. At one point during the walk, the ethnologist stops, as the view opens wide over the river and forest. Moved by what is offered to his senses, Descola perceives a *landscape*. Nevertheless, when he asks the Achuar hunter what they see, they answer, and I cite Descola, who cites the hunter: “a familiar environment whose every nook and cranny, however wild the place may have seemed, evoked a host of

355 See chapter C, ‘A ghost in the Jaïma’, especially in the section ‘A discussion with Gurba M.L.’

356 I published an article with my supervisor in the Autonomous University of Madrid on this topic. See Carboni, Julien Lafontaine, and Juan Carlos Gimeno Martín. “Inmóviles, Pero No Quietos. La Sedentarización de Los Saharauis Como Estrategia de Adaptación y Respuesta a La Supervivencia. Sobre La Posibilidad de Un Nomadismo Inmóvil.” *Tabula Rasa*, 2021. <https://doi.org/10.25058/20112742>. n37.02. See in annex the English translation: ‘Immobile but not motionless.’

357 Practices of inscription refer to collective practices of settlement in which are performed social space, projection of features of another world into real. Some use figures, as grids, in order to project the imagined social space into the physical space.

358 I am aware that these four are white occidental male, and I apologize for it. I made a long way throughout these four years, and one was to deconstruct my biases in regard to the reference I use and work with. As this part is a form of genealogy of my own intellectual journey and the journey of the concept of protofigurations, I decided to maintain the presence of these four authors, as they were an effective basis for this research.

359 ‘traiter les représentations imagées comme des illustrations de systèmes symboliques et discursifs qui les justifient et les rendent compréhensibles’ (my translation). In Descola, Philippe. *Les formes du visible: une anthropologie de la figuration*. Seuil-Les livres du nouveau monde. Paris, 2021:16.

360 Gell, Alfred. *Art and Agency: An Anthropological Theory*. Oxford ; New York: Clarendon Press, 1998.

361 ‘vise à montrer en quoi les objets et les relations que les images iconiques dépeignent, les formes picturales sous lesquelles elles se présentent et les types d’agence qu’elles exercent sont interdépendants’ (my translation). In Descola, Philippe. *Les formes du visible: une anthropologie de la figuration*. Seuil-Les livres du nouveau monde. Paris, 2021:26.

362 On the operatory side of science, or *allagmatique*, see chapter A, ‘Architectural hylomorphism’, especially in the last section ‘A ‘versant opératoire’? Toward a theory of operations.’

personal memories rather than a Van Gogh.”<sup>363</sup> These exchanges highlight the process of *enculturation* and reveal the two types of relations with the environment. The perception of a landscape is produced by a training of the eye, previously through painting in the occidental world, and nowadays through other means.

What interests me in this research is this **enculturation process that leads to the structuring of the field of the potential**. Descola analyzes the way the relations of human bodies with other human and non-human bodies are brought about by cultural and social enactment that escape the realm of *propositional thinking*. It led me directly to the second (series of) structuring concepts and theory through which I developed protofiguration: the theory of **affordances** developed by the psychologist James J. Gibson.<sup>364</sup> In a nutshell, the **affordances** of the environment are “what it *offers* the animal, what it *provides* or *furnishes*, either for good or ill. [...] It implies the complementarity of the animal and the environment.”<sup>365</sup> Animals, be it human or non-human bodies, perceive what they can act upon. In this ecological understanding, perception is a mutual relation structured by the potential physical interactions offered by the relation. What I describe as a landscape of **affordances** thus points toward an environment structured by these potential physical interactions—images as **driving forces**. *Figurations*, in return, proposes to frame this field of possibilities as a spatial and embodied knowledge, entrenched in human and non-human bodies, and giving a/effect to this landscape of **affordances**.

Crucially, in the work of Descola and Gibson—and indeed many pieces of research that have been produced following Gibson on social, cultural, technical **affordances**, and in cognitive theories such as enaction theories, scaffolding theories, or extended mind theories—this structuring of the field of potential operations is situated culturally and socially, constructed and transmitted between generations and bodies. The relations with the environment are *oriented* by enactment of a socio-cultural space brought about by knowledge entrenched in the **repertoire**. This orientation is also conditioned by techniques. Bernard Stiegler coined two terms to elaborate on these conditionings and orientations: *calendarité* and *cardinalité*. He wrote:

“—calendarity, which marks out social life by inscribing cosmic rhythms in a ritual symbolism: the calendar as such, but also the whole bath of local singularities that form behavioral programs, social synchronies and their local diachronies;

—cardinality, which traces the limits of territories, confines representations, and constitutes systems of orientation and instruments of navigation in space as well as in time (from the maritime map to the thesaurus and the index, passing through the school textbook and proper names—of streets and cities as well as of persons, which are thus cardinal elements as well as calendrical).”<sup>366</sup>

These concepts allow one to think of the *over-conditioning* of orientation both through social and political forces and through technical rhythms—and its internal ecologies of functioning. Thus, **orientation in space and time can be analyzed through their technical, political, and social over-conditionings. These orientations enact/co-ordinate social spaces, bounded to a specific repertoire of figuration and its landscape of affordances**. This chapter will elaborate on this conditioning through the concept of protofigurations, pointing at performative techniques to implement (socio-technical) orientation system and enact social spaces by engineering of and from the **repertoire**.

363 My translation, in the first course of *Les formes du paysage* (<https://www.college-de-france.fr/site/philippe-descola/course-2012-02-29-14h00.htm>).

364 In chapter B, I explained the way my research articulates the theories of environmental psychology with the overall theoretical frame, in proposing figurations as spatial knowledge that structures the field of potentialities and its landscape of affordances. Thus, I consider it not crucial to be extensive on the theory of affordances here. See especially chapter B, ‘The architecture and the repertoire’, in the section ‘Figurations and the embodied architectural image.’

365 Gibson, James J. *The Ecological Approach to Visual Perception*. 17th pr. New York: Psychology Press, 2011, chapter 8.

366 ‘- la *calendarité*, qui scande la vie sociale en inscrivant les rythmes cosmiques dans une symbolique rituelle : le calendrier en tant que tel, mais aussi tout le bain des singularités locales qui forment les *programmes comportementaux*, les synchronies sociales et leurs diachronies locales;

- la *cardinalité*, qui trace les limites des territoires, confine les représentations, et constitue les *systèmes d’orientation* et les *instruments de navigation* dans l’espace aussi bien que dans le temps (de la carte maritime au *thesaurus* et à l’*index*, en passant par le manuel scolaire et les noms propres - de rues et de villes aussi bien que de personnes, qui sont alors des éléments cardinaux autant que calendaires).’ My translation. In Stiegler, Bernard. *La technique et le temps suivi de Le nouveau conflit des facultés et des fonctions dans l’anthropocène*. Paris: Fayard, 2018:727.



By articulating these concepts, urban figures can be understood not as a form but as performative techniques and sets of operations; in this, protofiguration establishes calendarly and cardinality while enacting a particular **repertoire** of **figurations**. Following the **operatorial side** of protofigurations and urban figures does not require analyzing their forms or the form-generating process, but rather their (social, cultural, and technical) inscriptions and entrenchment in the **repertoire**. How are the **figurations** of spatialities then constructed and transmitted? What dialogue with material speech acts and other bodies does this structuring of the **repertoire** bring about? Understood as opportunities to counter the **hylomorphic** gaze<sup>367</sup> on spatial history and planning, protofigurations are practices of **reenactment** of human and non-human economies. They are processes of socialization and **actualization** of urban figures made possible through performative and embodied practices. This is a form of **migration** through the **repertoire**, but not from one body to the other, but from one economy of human and non-human bodies—or *location*—to another.

**Figurations** are situated embodied spatial knowledge, landscapes of **affordances**, transmitted **body-to-body**.<sup>368</sup> **Protofigurations consist of an analogical transfer of a virtual social space in the real through words and gestures, structuring the actual relations and perceptions with the world and enacting a field of potentialities.** As we will see, this spatial history of the reconfiguration of the **repertoire** enlightens in which way our bodies are struggle zones and how the **repertoire** is one of its fields of struggles.

This chapter focuses on gridded urban figures. The grid raises many paradoxes in spatial histories. Its shape has taken many diverse forms, dimensions, relations with powers, and environments. It has been used in many cultures through time and seemed to possess various political, religious, economic, and legal meanings. However, grids are always analyzed cross-culturally, as if their formal analogy was a sufficient category to render comparable many diverse practices, contexts, and ideas. On the contrary, I will try to grasp the **operatorial side** of the grid in analyzing the performative inscriptions of three grids. It will unveil the diversity of power relationships, agencies and **performativity**, and frame how protofiguration, design from and of the **repertoire**, opens up an **operatorial side** of urban history.

367 See chapter A, 'Architectural Hylomorphism', especially in the section 'A versant opératoire?' Toward a theory of operations.'

368 See chapter B, 'The architecture and the repertoire', in the last section.

## Gridded operations. Grids as performances and operations.

The grid in urbanism has been a widespread subject of research amongst scholars and architects for some time. Its origins are a mystery, with thousands of possibilities and in which the contemporary gaze on ancient civilization—and their projected values—play a key role. One prominent theory is called *diffusionism*. In a classical article published in 1946, Dan Stanislawski built this theory upon recent findings in archaeology. He proposed that the city of Mohenjo-Daro, which developed in the first half of the third Millennium before Christ—thus, one of the first or the first city to show a grid-like pattern according to archaeological records—was a probable origin of

grid systems. He writes that “[t]he very high quality of the manufactures makes evident that it was indubitably the home of men of skill with a long background of training and organization. That Mohenjo-Daro does not represent the earliest settlement of these people may be indicated by the fact suggested above, that the grid city is completely planned and established as a new unit.”<sup>369</sup> Tracing a genealogy of grid-patterned towns through Indian cultures, Chinese settlements, and imperial architecture, to Ancient Greece and the Hippodamus treatise, to the Roman Grid, he hypothesizes on the existence of travelers who spread the design principles throughout the world.

The main problem to be solved by diffusionism was the existence of grid-patterned towns in the Americas. How could the design have traveled across the seas, given the autochthonous population settled there thousands of years before Mohenjo-Daro? Marvelous theories on this point flourished throughout the end of the twentieth century, narrating the sea-crossings of grid designers and the import of such urbanism to American cultures. On the contrary, Stanislawski denied the status of grid to Indigenous American cities in arguing that even if archaeological records show straight lines in some cities in Peru or Mexico, “it was rather a series of blocks, many rectangular, but not communicating with other blocks in the functional way necessary to the grid.”<sup>370</sup> For him, the grid emerged as an Ideal Form, and from there, traveled through various places, perpetuating a specific tradition of planning and its meaning. The task of the scholar is then “to trace this continuity back to its original fountain of purity to decipher the inherent meaning of the grid.”<sup>371</sup> Following from this, several scholars pursued this research of origins and its subsequent pure meaning. Amongst others, Joseph Rykwert<sup>372</sup> leads a comparative analysis of human settlements, showing diverse degrees of standardization and grid patterns bounding the Roman *kardo* and *decumanus*, the Egyptian hieroglyphics for cities (cross-shaped) and the Indian *Vastu Shastra* principles, etc. Most of these pieces of research were soon criticized for their essentialism, neglecting the social, political, economic, and geographical contexts in which grid-patterned cities emerged.<sup>373</sup>

On the other hand, Foucault’s analysis of the instrument of disciplinary power over populations<sup>374</sup> paved the way to another hypothesis on grid-patterned urbanism, understood as a tool of control and centralization of power. When Foucault focused on cities after the sixteenth century, this dark side of the grid was expanded; it was thus seen as an instrument regularly used for expansionist purpose and centralization of authority.<sup>375</sup> Similarly, the grid has been analyzed as a performative instrument for the naturalization and expansion of property regimes.<sup>376</sup> Indeed, thousands of urbanisms and town designs could be designated as grid-patterned. A grid-patterned urban and territorial design can ease legal operations, taxes, discipline and control, and bureaucracy. On the other hand, many other urban forms and designs can ease these powers. These last analyses of grid patterns did not pursue essentialist purposes, researching the pure form and its origins; they recognized that “the ‘essential secret’ of the grid is that it has no essence.”<sup>377</sup> The multiple genealogies of the grid made it a metaphor for modernity and modern arts, a symbol of Cartesianism, a planning tool for expansionism and colonialism, and a religious symbol for others. Some grids are correlated, some use specific elements or aspects of the previous, some refer to an ideal, and some are the results of cosmological operations, while others are by-products of speculative capitalism.

369 Stanislawski, Dan. “The Origin and Spread of the Grid-Pattern Town.” *Geographical Review* 36, no. 1 (1946): 109. <https://doi.org/10.2307/211076>.

370 Stanislawski, Dan. “The Origin and Spread of the Grid-Pattern Town.” *Geographical Review* 36, no. 1 (1946): 112. <https://doi.org/10.2307/211076>.

371 Rose–redwood, Reuben S. “Genealogies of the Grid: Revisiting Stanislawski’s Search for the Origin of the Grid–Pattern Town.” *Geographical Review* 98, no. 1 (2008): 42.

372 In Atkin, Tony, and Joseph Rykwert, eds. *Structure and Meaning in Human Settlements*. 1st ed. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology, 2005, and, Rykwert, Joseph. *The Idea of a Town: The Anthropology of Urban Form in Rome, Italy and the Ancient World*. Faber Finds. London: Faber and Faber, 2010.

373 See the well-documented bibliography of Rose–Redwood, Reuben S. “Genealogies of the Grid: Revisiting Stanislawski’s Search for the Origin of the Grid–Pattern Town.” *Geographical Review* 98, no. 1 (2008): 42–58.

374 See Foucault, Michel. *Il Faut Défendre La Société: Cours Au Collège de France, 1975–1976*. Hautes Études. Paris: Gallimard/Seuil, 1997, *Surveiller et Punir. Naissance de La Prison*. Editions Gallimard, 1975, and, Foucault, Michel, Michel Senellart, François Ewald, and Alessandro Fontana. *Sécurité, Territoire, Population: Cours Au Collège de France, 1977–1978*. Hautes Études. Paris: Seuil : Gallimard, 2004.

375 Grant, Jill. “The Dark Side of the Grid: Power and Urban Design.” *Planning Perspectives* 16, no. 3 (January 2001): 219–41. <https://doi.org/10.1080/02665430152469575>.

376 See Blomley, Nicholas. “Disentangling Property, Performing Space.” In *Performativity, Politics, and the Production of Social Space*, 147–75. Routledge, 2014, and Bromley,

Nicholas. “Law, Property, and the Geography of Violence.” *Annals of the Association of American Geographers* 93, no. 1 (2003): 121–41.

377 Rose–Redwood, Reuben S. “Genealogies of the Grid: Revisiting Stanislawski’s Search for the Origin of the Grid–Pattern Town.” *Geographical Review* 98, no. 1 (2008): 56

Which hypothesis can I glean from this heterogeneous state of research?<sup>378</sup> The first is that *urban formalism is a fallacy* that might lead to essentialism and reductionism. The second is *form follows social stratification*.<sup>379</sup> Such research into a quintessential geometrical truth is born out of the *hylomorphic* tradition in the spatial discipline, which disregards operations, and results from a social stratification (of human bodies, their existence, and their knowledge). Protofiguration proposes then to analyze urban figures through their operations of inscriptions and their *performativity*. In analyzing practices of protofigurations, *I will then focus on performances of inscription in themselves* (their economy of human and non-human bodies and their *gestures*).

Nevertheless, I acknowledge *the agency of the figure in the performance, or more precisely, the agency of what it represents*<sup>380</sup> in a given socio-cultural context. These figures do not possess any original or final truth, only relational patterns perpetuated through a *repertoire* of *figurations*. In hypothesizing the grid as a performance, a *versant opératoire* could emerge, countering the *hylomorphic* gaze on urban forms and proposing a relational approach to urban and spatial history. The very same urban figure can afford a vast array of relations, meanings, and potentialities; in unfolding its operations of protofigurations, one can access this landscape of *affordances* and lead comparative analysis, unveiling power relations, subjectivities and embodiment at stake with regard to an urban figure.

At the beginning of this doctoral research, I applied this methodological and theoretical frame to one of the most analyzed grid-patterned models of cities: the Roman rituals for the foundation of colonies. I initially chose this case study because the profusion of interest and archaeological records and evidence allowed me to couple physical traces with some literary sources. It was then possible to outline inscription rituals and/or colonization practices in considering the human and non-human bodies present and the *gestures* performed at these occasions. Numerous Roman grids still exist today, which could have led to field research (which I, unfortunately, did not have the time to pursue). Most interestingly, the Roman grids were used in several political contexts and regimes with only minor geometrical changes and throughout several centuries. Moreover, Roman grids constituted a major model and myth for ideal Renaissance cities, which could prove helpful in analyzing the meaning formation of modern grid-pattern planning. To discuss the *figuration*, I used a methodology developed in the laboratory and tested in different research and pedagogical context based on the Atlas. This instrument was used as it enables grasp the heterogeneity of the materials associated with these case studies.

In his essays on Atlas<sup>381</sup>, Georges Didi-Huberman describes the archaic Roman practices of divinatory templum—that I will soon introduce—as a way to host the “splitting up of the world” (“morcellement du monde”), to rearrange it and produce new forms of orientation. In his words and similarly, the atlas proceeds from cognitive and symbolic interactions and is an occidental mode of arranging and displaying heterogeneous contents.

In his investigation on the traces of Antiquity in the occidental culture developed in his Atlas Mnemosyne (1923–1929), the German art historian Aby Warburg was looking for some non-physical vestiges, called *Nachleben* (survivals) in *forms, behavior, or psyche*. To produce this Atlas, Warburg built the *Kulturwissenschaftsbibliothek*, conceived around a round working space for discussions and surrounded by more than 40,000 books, carefully organized and regularly rearranged. The boards that constitute the Atlas Mnemosyne actively participated as a medium to host heterogeneous debates, being simultaneously the support, snapshots of the process, and the outcomes of the discussions. Far from an archetypism, the atlas permitted the discussants to use analogy

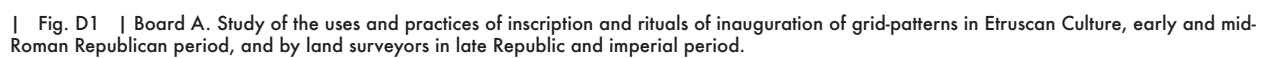
378 For a complete state of the art, see in the introduction and in the bibliography.

379 For more information on this statement, read the chapter one on architectural hylomorphism and the role of patriarchy and bourgeoisie in the hylomorphic use of form in architecture throughout architectural theories.

380 This argument is well developed by Descola, notably when he criticize the lack of interest in figuration by art historians. At this occasion, he emphasizes that even Alfred Gell in *Arts and Agency* did not give importance to the agency of what is represented, a priori evacuating the performativity of present absence. See Descola, Philippe. *Les formes du visible: une anthropologie de la figuration*. Seuil-Les livres du nouveau monde. Paris, 2021.

381 Didi-Huberman, Georges. *L'œil de l'histoire. 3: Atlas Ou Le Gai Savoir Inquiet*. Paradoxe. Paris: Minuit, 2011.





and non-linear genealogy to investigate dynamics of postures, **gestures**, and **figurations** through a long-term and cross-cultural history, the *Nachleben* being the temporal mode of remaining and reappearance. These remainders did not aim at proving the existence of a universal model of human culture. Instead, they played a critical role in arguing that minor existence and survivals thread (hi)stories. It allowed art history to deepen its understanding of the agency of what is figured and the social roles of **figurations**. **The Atlas is a method to navigate in speculative cosmovision. Mnemosyne boards investigate specific cardinality and calendarity while unveiling universes of images with their own temporal and technical dynamics.**

As a powerful instrument to create dialogue within a complex set of images, we developed in the laboratory a visual method of investigation, directly borrowing the techniques of Aby Warburg in his Atlas Mnemosyne. Tested also in the context of transdisciplinary pedagogies, the board helped us to navigate the diversity of sources, media, scales (temporal and spatial) while addressing the gestural scales in spatial analysis. In this research, it provided methods to develop hypotheses on the **operatory side** of grid-patterns. It also helped in understanding the specific kind of calendarity and cardinality they installed, what they afforded (symbolically as much as gesturally) and which dialogues with human and non-humans they allowed or silenced. The boards have shown to be an efficient methodology without the need to reduce the complexity of the textures of knowledge and images, or give a final and conclusive answer.

I will now propose a way to navigate in some boards surveying three performances of protofigurations in three different cities, located in what is today Italy and the south of France. The three performances occurred under three different political systems in Roman and Etruscan history but resulted in a relatively similar urban geometry.<sup>382</sup> The first performance occurred during November or January sixth centuries before Christ. It happened in a site called Marzabotto, in the north of Italy, performed under the codes of the Etruscan religion and political system. The second one was performed at Cosa in 273 B.C., near actual Tuscany, on Etruscan lands. The third one is in the region of Orange in 35 A.D. Through these surveys, I will outline—to the extent that is possible from what I learned—the human and non-human bodies at stake, how they are subjectivized, their **gestures** and what they afford. We observe a surprising formal linearity throughout these three performances, while the disembodiment of the practices (their reliance on other instruments and political/religious aims) will keep augmenting through time. Thus, I will attest to a speculative correlation between the level of disembodiment of protofigurations and its imperialist purpose, through which the field of the potential and the **repertoire** find themselves progressively alienated. Through this comparison of performances, I will unravel how techniques shaped the **repertoire** and its **figurations**, and to what extent the gridded operations unveil the power relations between human and non-human bodies during the performance, and indeed after, through the performative reproduction of embodied norms and **figurations**.

382 We will observe change in the size of the surveyed centuriae, but the underlying techniques were relatively close. The choice of the size of plots is an element that I will not discuss, primarily because we lack the sources to discuss the real process of decision-making on this aspect.

## Dividing the sky, the earth, and the ground. Roman and Etruscan protofigurations.

### Marzabotto.

Etruscan culture developed and spread throughout the center and the north of Italy from 1000 B.C. to the 1st century B.C. The *origins* of the Etruscan people and culture remain, until today, unclear. It is now quite unanimous between scholars that they were not indigenous to this region. Their knowledge in astronomy, geometry, and belief systems could indicate that they immigrated from what is today the Middle East, but no archaeological or literary sources can confirm these arguments. From the 10th to the 6th century B.C., they spread through Italy and along the Adriatic Sea, mixing their population with the autochthonous Italic people. They founded a network of independent city-states, ruling over agricultural territories and central urban cores.

When the Old Latin League, led by the city-state of Rome, started to conquer surrounding territories, and augmented their imperialist endeavor, most of the Etruscan city-states submitted to the will of the Roman Republic and were integrated into its system of domination. Etruscans became citizens, and the central state fully acknowledged their culture. Indeed, in many literary sources, Roman beliefs and political systems are said to have come from Etruscan culture. Thus, throughout their six centuries of existence within the Roman Republican and Imperial states, they continued to practice their religion, co-habited and governed with Roman citizens, and kept their knowledge, sciences and rituals alive.

The *Etrusca Disciplina*, a divinatory art developed by Etruscans, whose origins are unknown, was entirely adopted by Romans. Their priest/divinator, the *haruspices* (or *haruspex*), was part of religious and legal procedures in across the Roman Republic and Empire. The augural discipline that directed the religious/legal roman belief system was analogous to the *Etrusca Disciplina* and undoubtedly borrowed many of its ritual elements. Thus, many Etruscans were magistrates or had political responsibilities. This leads to a complete fusion of the culture around the 3rd century B.C. Its last specificities disappeared in the 1st century B.C., with a complete merge of architectures and rites.<sup>383</sup>

Very little is known about the *Etrusca Disciplina* before the Roman influence. No *Libri* (manuals and records of the discipline) remains. The second source that reaches us discussing Etruscan culture and discipline are the *Historia Naturalis* of Pliny, *De Divinatione* of Cicero, *De Nuptiis Mercurii* of Martianus Capella, and in the *Books* of Livy. No original texts in the Etruscan language were found, and the inscriptions in stones are few and just recently (barely) translatable. Thus, the reception of the Etruscan culture is mediated and filtered by the Roman gaze on them, built upon the Late Republic and early Imperial literary sources.<sup>384</sup>

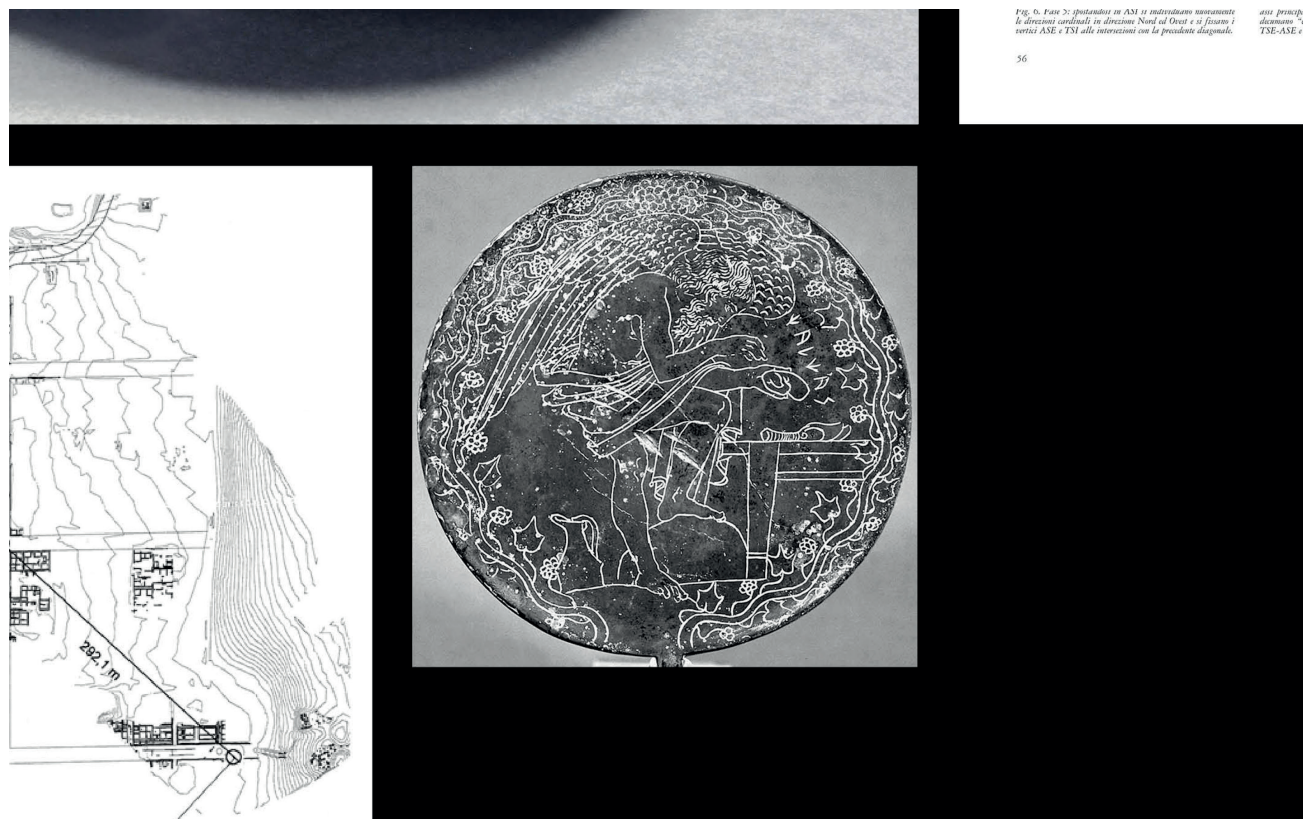
To investigate the founding rituals of Etruscan settlements as protofigurations—i.e., analyzed as techniques structuring the field of the potential and enacting a **repertoire**—I will propose to navigate between these few sources, but mainly through archaeological evidence that I learned from in the texts of secondary sources. I will try to reduce the

383 Ingrid Edlund-Berry says, in relation to the ideal Etruscan temple in Vitruvius: 'Although it seems to be every archaeologist's dream to unearth a temple that fits all the criteria proposed by Vitruvius, the truth is that Vitruvius himself provides a caveat to his ideal plan by stating that temples be designed according to the rituals of each deity (de arch. 4.8.6). Furthermore, as can be expected, even during the peak of Etruscan culture in the seventh-early fifth centuries b.c. no two buildings are identical, and even by the time Etruscan and Roman architectural traditions had merged in the third century b.c. and later, local variations were the norm.' Edlund-Berry, Ingrid. "Religion: The Gods and the Places." In *The Etruscan World*, 562. Routledge, 2014.

384 Dumézil argued about this construction of occidental perception of Etruscan history as trapped by the Roman gaze and historical discourse in an appendix on the Etruscan religion in Dumézil, Georges. *Archaic Roman Religion: With an Appendix on the Religion of the Etruscans*. Baltimore, Md: Johns Hopkins University Press, 1996.



distance to these practices of foundation, and reconstruct the operations and economies of humans and non-human bodies engaged in them. In doing so, I will try to outline which bodies (celestial, vegetal, natural, mineral, human, etc.) these rituals entered in dialogue with, and shed light on the dialogues (and silences) that the Etruscan grids were the figure of.



| Fig. D2 | Etruscan Bronze Mirror of Chalcas the Seer Reading a Liver. Vatican: Gregorian Museum, Rome, cat # 12,240.

The Etruscan haruspices are priests, legislators, but mainly soothsayers. They have a profound knowledge of *fulgurales*, the art of lightning interpretation. The Romans probably reinterpreted their knowledge to make contact with Jupiter. However, the only remaining calendar of Etruscan interpretation doesn't help us understand to what extent they were different from that of the Romans, as, in this **document**, they already seem to be merged.<sup>385</sup> The haruspices excel in the art of *coniectura*, which is a particular type of omen. When no sign, such as the one occurring, has previously been recorded, the interpretation of the sign is called a *coniectura* (situational and specific). On the contrary, the *observatio* is the interpretation of a sign according to a reference to the *Libri* of the discipline, and thus of a past and recorded event.<sup>386</sup> This means that the haruspices, even if organized in a formed discipline, developed their practice upon situated dialogues with non-human bodies, and not only through a set of pre-defined interpretations.

385 On the origins of the Etruscan calendar, and the Roman version that made its way to us see Grummond, Nancy T de. "Haruspicy and Augury: Sources and Procedures." In *The Etruscan World*, 548. Routledge, 2014.

She notes:

'The clearest Etruscan examples occur in the brontoscopic calendar of Nigidius Figulus, which claimed the authority of Tages. Here are several examples from the month of October:

Oct. 1. If it thunders, it threatens a corrupt tyrant over the affairs of state.

Oct. 3. If it thunders, it signifies hurricanes and disturbances by which the trees will be overturned; there will be a great disruption in the affairs of common people.

Oct. 4. If it thunders, the lower classes will have the upper hand over their betters, and the mildness of the air will be healthy.

Oct. 5. If it thunders, there will be a surplus of all the necessities excepting grain.

Oct. 6. If it thunders, appearance of future abundance, yet harvest will be less plentiful and autumn practically empty of fruit.

Oct. 8. If it thunders, an earthquake with roaring is to be expected.

Oct. 10. If it thunders, it signifies the downfall of a praiseworthy man.'

386 Linderski, Jerzy. "The Augural Law." Edited by Wolfgang Haase. *Religion (Heidentum: Römische Religion, Allgemeines [Forts.])*, 1986, 2223.

387 Grummond, Nancy T de. "Haruspicy and Augury: Sources and Procedures." In *The Etruscan World*, 550. Routledge, 2014. She notes: 'Certainly, augury was well developed among the Etruscans, and it is no surprise that among the few glosses surviving on Etruscan vocabulary are the words for falcon, *capys*; eagle, *antar*; crane, *gnis*; and hawk, *arak*. Pliny refers to birds that were *depicta in Etrusca disciplina*, (N.H. 10.37) implying that Etruscan augurs had sacred books to help them to identify birds. The number, color, conspicuous size and variety of action of the birds painted in Etruscan tombs strongly suggest that the artists attempted to show birds of omen, whether good or bad.'

388 Dumézil wrote: 'In fact, one principle supported haruspicy and seems moreover to have governed the whole essentially classificatory religious thought of the Etruscans: the principle of homology, point by point, between the various structured wholes which form the universe. Just as the totality of the gods is distributed over the totality of the celestial regions, so this latter totality, with its divine inhabitants, is reflected in the third totality formed by the parts of the liver sacrificed sheep: from the organic condition of each of these parts a conclusion may be drawn regarding the mystical condition of the corresponding region and the inclination of the divinity or divinities who rule it.' In Dumézil, Georges. *Archaic Roman Religion: With an Appendix on the Religion of the Etruscans*. Baltimore, Md: Johns Hopkins University Press, 1996:650.

389 Most of the datas that I used to reconstruct this hypothesis of ritual, as much as most of the hypothesis, were developed in the experimental archaeological research below cited. Antonio Gottarelli determined the date in reenacting the possible correspondance between sunrise and sunset with the layout of the city. In Gottarelli, Antonio. "Templum Solare e Città Fondata: La Connessione Astronomica Della Forma Urbana Della Città Etrusca Di Marzabotto (III)." *Alma Mater Studiorum - Università Di Bologna*, 2005:123. <https://doi.org/10.6092/unibo/amsacta/2308>.

Haruspices also practice the birds' omen. These rituals allowed to enter in contact with the chief of Gods (Tinia). Archaeologists found tracks of their wealthy knowledge in ornithology. They know the colors, feathers, ways of flying, songs of thousands of birds, each of them relating to specific deities, messages, or dispositions.<sup>387</sup> The most renowned of their divinatory practice is the hepatoscopy (study of the liver and other organs divination, notably the lungs). Archaeologists found bones of diverse animals on religious sites, notably sheep, wolves, and bovine. This type of divination was central in the ritual of inauguration/foundation of a new city, as the liver (as it is the case for most of the Mediterranean and Occidental cultures until very recently) is the organ that bound living bodies to the universe, and which is the seat of all the passions. Indeed, the Etruscan belief system is said to be homological:<sup>388</sup> the levels of the cosmos are scalable and analogical. Each part of the universe is reflected by each of its constituents, which, in turn, reflect the whole cosmos. The sky, the city, the temple, and the liver are analogously organized and readable. The liver of a sheep sacrificed during a founding ritual allows to know the harmonies of the site at this precise moment with the whole cosmos, from the most microscopic to the totality.

The religious and powerful landscape afforded by this belief system and practices grants several non-human bodies religious, legal, and authoritative status. The bodies, be they mountains, rivers, rocks, seas, trees or caves, are key points of cosmological harmony on which humans rely, preserving and perpetuating it. Through their divinatory practices, the haruspices are tasked with defining new key points and boundaries that enact and prolong the cosmological harmony of future cities, and territories, with the existing non-human bodies. This is done through a series of rituals, during which boundary stones (*cippes*) are placed after omen taking—readings of the sign from the future—and through observations of the elements. The haruspices also integrate the Italic belief systems and religious sites into their religious landscape. All of these places are the homes of Gods, and rituals allow the haruspices to offer **hospitality** to the Gods in return for protection.

The task of haruspices is to give meaning to the space and time of Etruscan society with the help of divinatory practices and maintenance of the sacred landscape, which define the borders of this space/time and correspondence with other levels of the cosmos. This calendarity and cardinality based on cosmological observation and dialogue with non-human bodies determines human economies, the way they move, enter in dialogue with resources, organize among themselves, and gives rise to a series of grid-like urbanisms throughout Italy.

The Etruscan founding ritual consists of a series of performances during which the site of the future city will be chosen. These performances include divinatory practices that can be understood as ways of entering into dialogue with non-human bodies. The cosmological forces are consulted through auspices and omens to ask whether the siting and date are appropriate. If the omens are not good, or the sheep's liver resting on the site displays problems, the settlers postpone the rites and/or abandon the site.

The site of the city of Marzabotto is situated near Bologna. On November 27th or January 18th, between 550 and 500 B.C., at sunrise, the rites for foundation of the city<sup>389</sup> are performed on a hill to the northwest of the future city. The city will be abandoned two centuries later due to invasion by the Gauls, and so with such a short lifespan, there wasn't much time to allow modification of the original urban tissue. Since that time, the site of Marzabotto was never inhabited again, making it one of the best preserved and authentic foundational figures we have found. Consequently, Marzabotto has been thoroughly explored and excavated by different archaeologists throughout the 20th century and serves as a model of the Etruscan city-state.

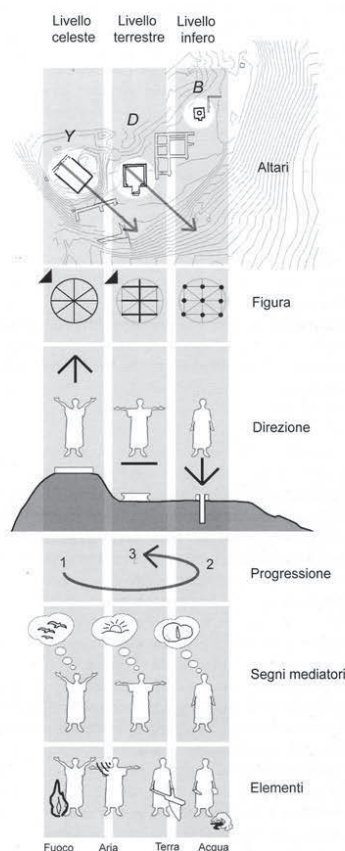
On the northwest hill, during this morning, the elites of the future city and its future inhabitants climb the slope, in a place probably already considered sacred, where they could have good visibility of the sky and a southeasterly perspective, the best orientation in the Etruscan religion. When on top of the hill, the haruspex in charge of the rites starts the performance by inaugurating a temple, the first analogical projection of the cosmos, from which the following operations can be performed. He starts the ritual, probably equally facing southeast, by performing a *dedicatio*, an address to the deities of the site, to call out to them and ask for their protection.

When the God(s) has/have been addressed clearly, the haruspex can progress to the inauguration of a temple in the sky (Y in Fig. D3), a division of the cosmos that permits the God(s) to send messages and be interpreted by the soothsayer. At this moment, the body of the haruspex is central to determine the temple. Directing his glance toward the south or southeast, he defines the boundaries with his arms and in relation to the limits of his field of vision. By dividing the sky into sixteen parts, as customary in the Etruscan religion, the haruspex is ready to receive signs from the gods that inhabit these parts through *fulgurales*.<sup>390</sup>

390 See Aveni, A., and G. Romano. "Orientation and Etruscan Ritual." *Antiquity* 68, no. 260 (September 1994): 545–63. <https://doi.org/10.1017/S0003598X00047049>, and also, in Grummond, Nancy T de. "Haruspicy and Augury: Sources and Procedures." In *The Etruscan World*, 550. Routledge, 2014. , in which she noted: 'The 16 divisions around the edges of the liver corresponded with the 16 divisions of the heavens, and these in turn were keyed to compass points. The mapping of the heavens was essential for interpreting lightning, which began with determining which of the gods who hurled lightning (there were nine in all) may have sent a particular bolt.'

Culti, forma urbana e artigianato a Marzabotto

38. Relazioni concettuali di spazialità e di atteggiamento rituale degli altari in "Y", "D" e "B", secondo l'analogia cosmologica con i tre livelli cosmici discendenti



| Fig. D3 | Speculative diagram created by Gottarelli, hypothesizing the links between sites, elements and gestures of the haruspices. In Gottarelli, Antonio. "Templum Solare e Città Fondata: La Connessione Astronomica Della Forma Urbana Della Città Etrusca Di Marzabotto (III)." *Alma Mater Studiorum— Università Di Bologna*, 2005:134.

primo punto di osservazione della *specio* avrebbe allora conservato in seguito la funzione di "luogo alto", destinato alle sole funzioni collegate con la dimensione "celeste", in una logica di articolazione ternaria dell'intero complesso.

L'ipotesi spiegherebbe così le particolari relazioni spaziali che legano i tre altari, in termini di tipologia, sequenza orizzontale e altimetria. La figura 38 è una schematizzazione dei possibili rapporti ternari relativi alla giacitura delle strutture e alle relative funzioni cultuali, in cui si visualizza l'ipotesi di una destinazione d'uso che collegherebbe le strutture ai tre diversi livelli cosmici ascendenti: con "B" associato al "livello infero", "D" a quello "terrestre" e "Y" a quello "celeste". Si notino, a tal riguardo, i rapporti di giacitura e altimetria: con il profondo pozzo del podio "B" che indicherebbe "il basso"; il podio "D", in mezzo ai due, che, nella sua relazione geometrica di diagonalità con l'abitato indicherebbe l'"orizzonte"; e con "Y", che



The messages from the Gods are favorable in the case of Marzabotto. The haruspex then proceeds to the inauguration of another temple, immediately adjacent (Podium D in Fig. D3). This temple corresponds to the projection of the cosmos on the earth. The haruspex traces lines on the ground like a mirror of the preceding rites performed only in the air. The temple he traces, aligned on the north-south and east-west axis, is where the cosmological order will be transferred to the ground. It will serve as a basis to extend its cosmological alignments to the city. From this point of contact between the cosmological and earthly forces, the haruspex faces south and waits for birds to transmit their godly wills, his arms raised, embodying the east-west axis. On this temple, the haruspex might also proceed to chicken divination, which consists of observing chickens feeding and interpreting their movements.



| Fig. D4 | Podium D of Marzabotto. Source: Museo Nazionale Etrusco di Marzabotto. Accessed on 21.10.21, <http://www.archeobologna.beniculturali.it/marzabotto/note.htm>.

The haruspex then performs another type of divination through the inauguration of a third temple (B in Fig. D3), called the underground temple, or *subterra* in Latin. In Marzabotto, this temple is to the northeast of the previous *templum in terra*, a few meters away, on the same hill. Most of these temples are created in natural cavities or hidden grottes.<sup>391</sup> In Marzabotto, it seems that the haruspex used a natural hole in the ground of the hill. This cavity is a communication channel with the underworld forces. It was later called the *Mundus* by the Romans. The same day, two further rituals will be performed. The first consists of asking the new settlers to throw the first fruits and vegetables of the harvest onto the site (or the last crops from their former homes).<sup>392</sup> Here, many fine jars, probably entailing oils and wines, are thrown with the harvests. Certain Greek legends also mention that the settlers throw earth from where they were born, but we have no evidence to determine to what extent Etruscans practiced this.

During or after this ceremony, the haruspex proceeds to the sacrifice of an animal, usually a sheep found on the site. The exact place where the haruspex stands is decided by the nature of the ground and its topography: the animal's blood has to run naturally into the cavity of the third temple. This temple, strongly built in stone, possesses a channel within the table of the haruspex to guide the blood directly into the ground. During the sacrifice, the haruspex extracts the liver of the animal. As it has been the case with the

391 To learn more on the religious landscape and the way non-human bodies were considered as godly homes, see Edlund-Berry, Ingrid EM. "Ritual Space and Boundaries in Etruscan Religion." *The Religion of the Etruscans* 116 (2006).

392 Dumézil, Georges. *Archaic Roman Religion: With an Appendix on the Religion of the Etruscans*. Baltimore, Md: Johns Hopkins University Press, 1996:663.

sky division and the earthly one, the liver is a model or a map of the entire cosmos.<sup>393</sup> In Piacenza, archaeologists found a bronze model used to teach and transmit divinatory knowledge, allowing us to understand how the haruspex projected the cosmos and the houses of the diverse deities onto the liver.



| Fig. D5 | Piacenza Liver, Bronze. Model of sheep liver found in Settima di Gossolengo, object for divination for haruspices. End of the II B.C. Palazzo Farnese Civic Museum. [ibcmultimedia.it](http://ibcmultimedia.it)

The model of the liver shows us that the projection was not linear: it is not an accurate geometrical reproduction of the celestial division projected onto the liver. Contrary to many other practices of liver divination that exist across the Mediterranean Sea, this divinatory art seemed to be highly sophisticated. The complexity of the projection leads us to think that the rites are unable to give binary answers, as it will be the case within Roman rituals. Twenty-seven deities inhabit forty houses on the liver. On the lower part, the lobe of the sun (North-Usls) and the moon (South-Tivr) divide the liver. The upper part is surrounded by sixteen divisions, with renowned Gods mentioned as Tin Citen and Tin Œuf (equivalents of Jupiter, Uni/Juno, and Ani/Janus). Actual scholars disagree on the way the haruspex held the liver and the direction he faced. Being the right or left hand, the haruspex handled the liver in the palm of his hand and interpreted the messages the Gods inscribed on the liver.

The omens are favorable on this day. The haruspex has prepared the connections and homological projections between the earth, the ground, and the sky, relying on the natural elements and the landscape of non-human bodies in the site. The cosmological alignment ensures the protection of the Gods and a good understanding of their future signs, the whole city and its *templum* being aligned to the way Gods dwell in the world. That same day, if the sun has not yet risen, or the following day, the haruspex waits for the sunrise from the temple on the earth (second temple, Podium D on Fig.D3), on the hill, northwest of the future city, standing and facing southeast. When the sun comes out from behind the mountains, on November 27th or January 18th, the haruspex marks a line on the ground from his position to the horizon, at the location of the sun. This line

393 'Various interpreted as a mnemonic device, a compass, an orientation tool, or an object lesson for instruction in a school of divinity (the categories are not mutually exclusive), this 3rd century BC (Dilke 1987: 202) annotated guide or map for the haruspex (one who divines by the observation of the liver) has its upper (concave) face divided into 40 houses assigned to 27 divinities, some repeated.' In Aveni, A., and G. Romano. "Orientation and Etruscan Ritual." *Antiquity* 68, no. 260 (September 1994): 553. <https://doi.org/10.1017/S0003598X00047049>.



is further extended along the ground to 553 meters. At this point, a stone is buried in the ground, marking the southeast gate of Marzabotto, the luckiest gate. From this first northwest-southeast axis, the center of the city is located at the mid-point of the line, 276.5 meters away from both the templum in the earth and the southeastern gate. This point, the crossroads of the future north-south and east-west axis is marked by a stone, embodying the celestial center of the landscape.

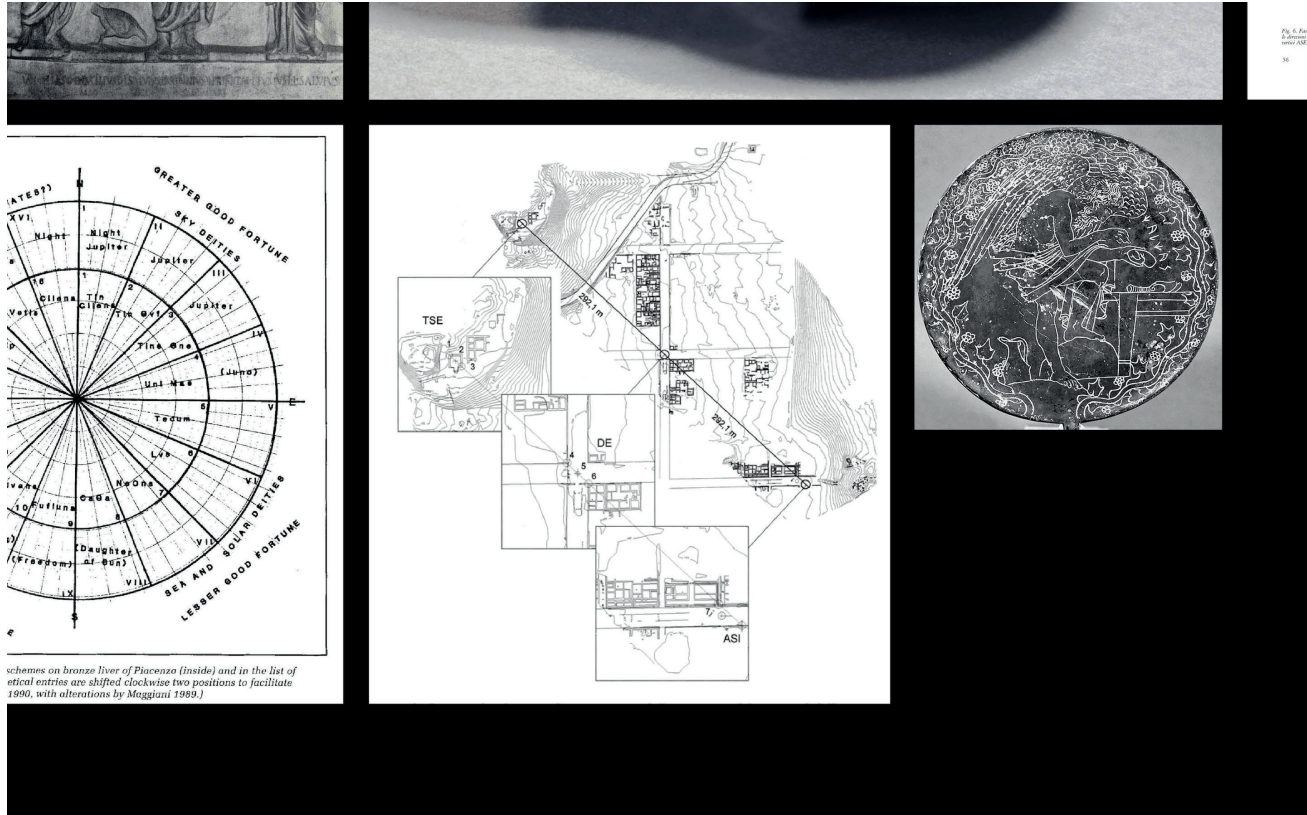


Fig. D6 | Plan of Marzabotto presented in Gottarelli, A. 2010. "Templum Solare e Culti Di Fondazione. Marzabotto, Roma, Este: Appunti per Una Aritmo-Geometria Del Rito (IV)." Alma Mater Studiorum—Università Di Bologna.

At midday on the same day, a *groma*, a simple surveying instrument imported from Greece, is placed at the center of the city. Using the groma, the settlers draw the north-south axis and east-west axis directly on the ground. Later in the day, the haruspex and the settlers place themselves at the city's center and wait for the sun to go down. When it disappears behind the mountains, a point is marked on the horizon and a new axis is laid, passing through the center, and outlining the southwest to northeast axis. The measures and orientations involved are not aligned with the south/north and east/west axis, due to the way the ritual enters into dialogue with non-human bodies of the sacred landscape. To reproduce the cosmological order on the ground, the haruspex marks the points on the horizon when the sun appears and disappears behind hills (and not behind a flat or ideal horizon) which results in a alignment slightly different from the cardinal orientations. In Marzabotto, the orientation is adapted to the site, allowing the landscape to become an astronomical and divinatory instrument from within the hilly terrain and transforming it into a calendar in relation to the city layout.

From that point, by simply outlining a parallel line from the southeastern gate to the north and crossing it with the newly marked southwest-northeast axis, the position of the northeastern gate is determined. From this gate, a line is drawn to the west, intersecting with the northwestern-southeastern axis, to create the first perpendicular angle delimitating the city's boundaries. The same westwardly line is made from the southeastern gate to allow for the last corner at the southwest to be determined.





During the 5th and the 4th centuries B.C., the Roman Republic started its imperial expansion throughout the Latium and Italy. It developed a sophisticated system of domination, whereby the group of city-states of the Old Latin League forged alliances through political negotiation or with the use of force. The model of territorial expansionism was based on the creation of *coloniae*, which literally means the settlement of farmers. These colonies were organized as independent city-states with their own citizens. Rome protected these colonies; in exchange they provided soldiers and military support during Roman military campaigns. However, all the newly founded colonies had a similar administrative, legal, political, and economic organization to that of Rome, reproducing the same social segregation of citizens, with and without the right to vote and participate in civic life.

The process of founding a colony started in Rome, with the election in the highest levels of the Republic of a *triumvirate*. This group, composed of either consulates, magistrates, or praetors (nevertheless mainly magistrates), is in charge of the new settlement's creation and finding and recruiting families to populate the colony. This base population of colonizers is composed of Roman people, Latin people, or other members of privileged communities by the Republic.<sup>395</sup> If the indigenous population—at this time, mainly Etruscans or Italic—surrenders without any resistance, and agree to signing a treatise of submission and integration to the Republic, they can also be integrated within the new community as citizens. Otherwise, they will be deprived of their right to participate in the city's political life and public affairs.

In 280 B.C., only two Etruscans cities close to Rome continued to resist the imperial will. Those two city-states, called Volsinii and Vulci, are situated north of the Latium. That same year, both cities fell and lost their war against the Roman army. Thus, they had to pay the due taxes. Therefore, one-third of their land will be upheld, and all the community members will be considered second-rank citizens. Near these city-states, on the Mediterranean coast, the Roman Republic decided to build a colony to strengthen their position in the north and pursue their conquest.

“The hill is a mass of light gray, dolomitic limestone, riddled with natural fissures and caverns. Roughly oval in shape, it rises above the water some 375 feet (114.00 m.). Along the seaward arc sheer cliffs drop 65 to 145 feet (20.00–45.00 m.), interrupted only on the southwest by a tiny cove. The ascents above are steep and craggy, save on the north and northeast, where a ridge and gentler slopes are more easily negotiable. To a Roman's eye it looked high and rugged enough to be easily defensible, but not too high and rugged to be readily accessible. Beside its eastern foot, moreover, the broad valley rising from the coastal plain to merge northward over a low pass with another descending to the Albegna, would provide a direct route to the territory taken from the Volsinians. It was an excellent position, in the tradition of Roman hill towns and inland colonies, to check Vulci and Volsinii, to support the Roman settlers moving into the confiscated lands on the north and east, and to block the Etruscans further north.”<sup>396</sup>

395 In Gargola, Daniel J. *Lands, Laws, & Gods: Magistrates & Ceremony in the Regulation of Public Lands in Republican Rome*. Chapel Hill: University of North Carolina Press, 2009:268.

396 Brown, Frank Edward. *Cosa, the Making of a Roman Town*. University of Michigan Press, 1980:7.

Having united their new settlers, the triumvirs leave Rome collectively for a journey of around 120 km in the summer of 273 B.C. Arriving on the terrain, the colony had to be inaugurated, the boundaries fixed, and the Gods consulted. An augur, a kind of priest-legislator of Rome, carries out these founding rites. The augural discipline is central in the

Republican civil life. The various rituals they perform define the boundaries by words, delimitating the spaces for each political, religious, and economic activity. A collegium federates the augurs as a keeper of the tradition. They conserve the texts (*Libri*) and are responsible for verifying that the whole Republic respects the augural laws. In this way, the collegium is a highly conservative organ of the Roman Republic. Thus, even if their discipline is said to come from or be based on the *Etrusca Disciplina*, the augurs themselves rarely adventure into any *coniectura* and instead verify the meaning of each sign according to the *Libri* of the discipline, practicing the *observatio*.<sup>397</sup> The main tasks of individual augurs are to *inaugurate* spaces and people, assist the magistrates in public acts (even if most of them are magistrates), and observe and interpret signs according to the augural law.<sup>398</sup>

In the archaic Rome and Roman Republic, laws and spaces are profoundly intertwined. The topography of Rome serves as an archetypal example, as the spaces of Roman public life were marked-out and their boundaries were sacred. Each space (and person) had to be adequately inaugurated for the acts in which it participates to be performative (and legitimate). The founding rites and rituals in the inauguration of colonies were meant to reproduce the founding of Rome by Romulus, thus performing the same imaginary operations.<sup>399</sup>

Arriving on the hill, the augur, accompanied by the triumvirs and the colonizers, climbs on the highest point to get a clear view of the surrounding. The highest point is also chosen to reproduce Rome's topography, recreating the auguraculum on the Arx and its templum as the place where Rome was founded. At this time, the inauguration rituals may have already integrated some features considered sacred for indigenous communities.<sup>400</sup> It seems that in the case of Cosa, no former settlement existed, and the city was founded on non-inhabited lands. The augur must first inaugurate a *templum minor*,<sup>401</sup> equipped with a simple table to start the ceremony. In this first step, the augur relies on temporary markers on the land<sup>402</sup> that can be existing trees, rocks, peaks, or other non-human bodies.

At the beginning of the inauguration of the templum minor, the augur recites a *concepta verba*. It is a similar practice to the Etruscan *dedicatio*, which allows the augur to summon the God he will make contact with. This concepta verba will never change; this temple will remain this God's home. In most cases, it seems that the inauguration templum is dedicated to Jupiter, the Chief of Gods. However, to choose the orientation of the templum, and thus to orientate his body correctly toward the landscape, the augur does not align with cardinal axes. The choice of orientation is instead made according to the best perspective the augur can have. His field of vision must encompass the future city, its territory, and the celestial sphere above them. In the future city of Cosa, the body of the augur is facing the highest peak on the horizon (east/northeast), defining "by nature"<sup>403</sup> the templum—which means that it is defined naturally by the field of vision of the augur. From this templum, he can observe the flight of birds, listening to the messages of Jupiter.

As Varro recounts, the augurs define three types of temples: in caelo, in terris, sub terra. The three are strangely similar to the three Etruscan temples, even if the three types

397 Linderski, Jerzy. "The Augural Law." Edited by Wolfgang Haase. *Religion (Heidentum: Römische Religion, Allgemeines [Forts.])*, 1986, 2223.

398 Linderski, Jerzy. "The Augural Law." Edited by Wolfgang Haase. *Religion (Heidentum: Römische Religion, Allgemeines [Forts.])*, 1986, 2190.

399 Cicero, Marcus Tullius, and D. Wardle. *Cicero on Divination: De Divinatione, Book 1*. Clarendon Ancient History Series. Oxford: New York: Clarendon Press; Oxford University Press, 2006:1.2.3.

400 'In some cases, founders appropriated existing structures for their purposes. In addition, the material remains often make it difficult to establish the identities of certain structures or of the deities who received cult at temples and altars, while their supposed Roman analogues often remain undiscovered. Many of the most prominent structures and spaces, moreover, were constructed or expanded later in a colony's history, leaving the original organization of spaces and structures obscure.' In Gargola, Daniel J. *The Shape of the Roman Order: The Republic and Its Spaces*. Studies in the History of Greece and Rome. Chapel Hill: The University of North Carolina Press, 2017:171.

401 Linderski, Jerzy. "The Augural Law." Edited by Wolfgang Haase. *Religion (Heidentum: Römische Religion, Allgemeines [Forts.])*, 1986, 2275.

402 'Such templa were temporary spaces defined in the imagination for the purposes of auspication, but the same word also signifies a permanent enclosure on the ground, a temp/um inauguratum or temp/um terrestre. Here again, a rite defined the fines. While explaining the temporary enclosure known as a temp/um minus, Festus (p. 146L), probably following the Augustan antiquarian Verrius Flaccus, noted that it was "defined by fixed words." Magistrates seeking to use a temp/um for a temple or altar also identified the lines that were to define the place in their mind, by word, and probably by gesture.' In Gargola, Daniel J. *Lands, Laws, & Gods: Magistrates & Ceremony in the Regulation of Public Lands in Republican Rome*. Chapel Hill: University of North Carolina Press, 2009:36.

403 'Whatever place the eyes had intuiti 'gazed on', was originally called a *templum* 'temple', from *tueri* 'to gaze'; therefore the sky, where we *attuumur* 'gaze at' it, got the name *templum*, as in this: Trembled in the mighty temple of Jove who thunders in heaven,

That is Naevius says, Where the land's semicircle lies, Fenced by the azure vault

Of this temple the four quarters are named thus: the left quarter, to the east, the right quarter, to the west; the front quarter, to the south; the back quarter to the north'

(LL. VII-7). In Varro, Marcus Terentius. *Varro on the Latin language: in two volumes. 1: Books V - VII*. Reprinted. The Loeb classical library 333. Cambridge, Mass.: Harvard Univ. Press [u.a.], 1999:272-5. Roman literature provides different orientation according to the authors.



404 'The formation of the *sulcus primigenus* need have required the presence only of the foundering a few attendants, but closely associated rite certainly involved all or nearly all the colonists. Plutarch (*Rom.* 11) and Ovid (*Fast.* 4.820-24) reported that Romulus, before plowing the furrow around Rome, instructed the would-be citizens to go into the center of the proposed city and throw into a sacrificial pit the firstfruits of the land along with soil of their native territories; Plutarch called the pit the *mundus*—its nature and ritual functions are obscure.' In Gargola, Daniel J. *Lands, Laws, & Gods: Magistrates & Ceremony in the Regulation of Public Lands in Republican Rome*. Chapel Hill: University of North Carolina Press, 2009:75. On the pit in Cosa, see Brown, Frank Edward. *Cosa, the Making of a Roman Town*. University of Michigan Press, 1980:16.

405 Linderski, Jerzy. "The Augural Law." Edited by Wolfgang Haase. *Religion (Heidentum: Römische Religion, Allgemeines [Forts.])*, 1986, 2157.

406 Brown, Frank Edward. *Cosa, the Making of a Roman Town*. University of Michigan Press, 1980:10.

of temples were rarely found as separate entities in colonies of the Roman Republic. In the first newly created temple, the temple of the sky, the augur always stands at one extremity. In the templum in terra, which in the case of Cosa, might be the same delimited area, the augur feeds chickens and observes their behaviors. In the temple subterra, the colonizers buried fruits and vegetables in a hole called the *Mundus*, replicating the Roman Mundus or mouth of hell.<sup>404</sup>

Once the temples are inaugurated, the augur performs the *liberatio* and *effatio* to finish the ritual. The *effatio* consists of spoken formulas and hand **gestures**. This is a visual act of perpetuating the boundaries by redrawing them in the air. The *liberatio* then uses words to remove hostile spirits from the delimited spaces and purify them.<sup>405</sup> Several reports note that buildings were sometimes destroyed during the rites of the *effatio*, if they disturbed the perspectives or sacred boundaries. Later, to define and maintain these sacred boundaries between the auguraculum on the arx, the urbs (within the city wall), and ager (surrounding fields), a new boundary, the *pomerium*, is drawn through a ploughing ceremony, again referring to that carried out by Romulus. In the urbs, no commercial affairs could be run. It is a space dedicated to politics and religion that remains *pure* and distant from the economy. In the urbs, the spaces of the Forum and the comitium are central to civic life and delimitate the spaces of political **performativity**.

From the auguraculum, the layout of the city is decided. In Cosa, the hilly terrain defined the orientation of the grid, together with the necessary visual relations between the Forum and the arx:

"Its orientation seems to have been motivated without regard to celestial imperatives but rather by two mundane concerns. The streets were to have the most moderate and uniform grade possible as they crossed the slopes to be terraced in the future, and they should bring the Forum into axial and visual relation with the Arx and the northwest gate."<sup>406</sup>

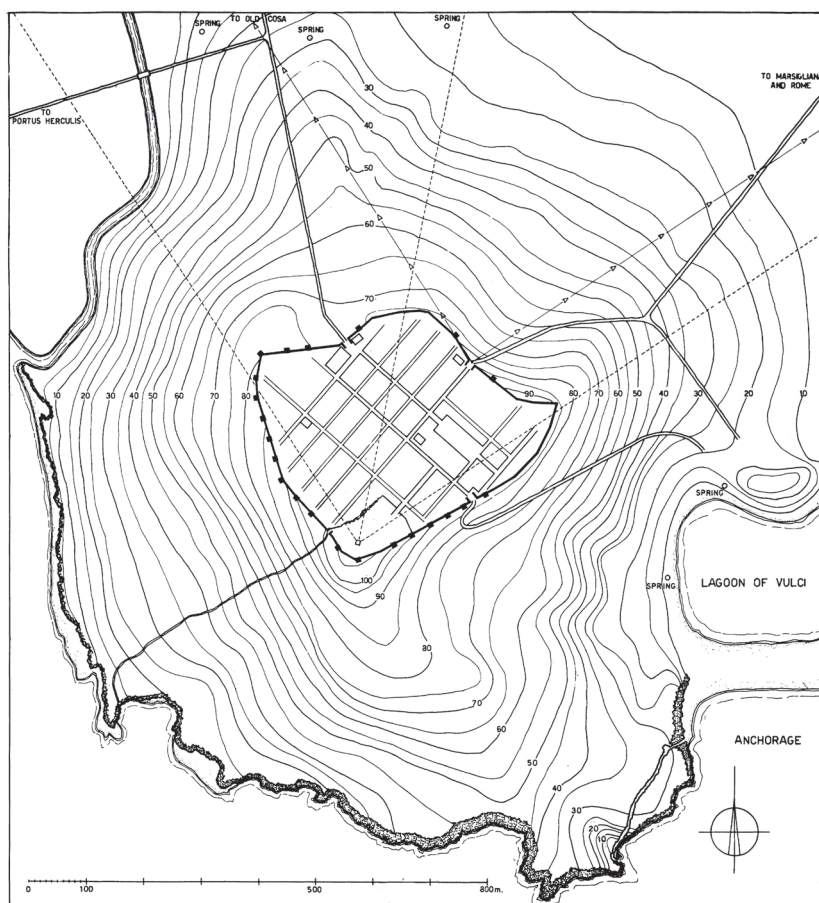


FIG. 2. Hill and town as planned

| Fig. D8 | Plan of Cosa and surrounding ager (extending on the northeast). In Brown, Frank Edward, Emeline Richardson, and Lawrence Richardson. *Cosa III: The Buildings of the Forum: Colony, Municipium, and Village*. Memoirs of the American Academy in Rome, v. 37. University Park, Pa: Published for the American Academy in Rome by Pennsylvania State University Press, 1993.

Surveyors go down from arx and define the axis of the grid while the pomerium is ploughed. The city is inaugurated and possesses performative spaces for political and religious acts, gates, and street layout. The surrounding area can be surveyed using a simple groma to determine the plot that the triumvirs will distribute to the colonizers. At this time, surveying practices were neither a professional practice nor an independent discipline. From the gates, parallel lines are drawn, separating the area in *strigae* (rectangular plot of land to adapt to the site's topography). Boundary stones are placed (*limes*) at each intersection to keep the boundaries clear. The plots are then distributed by sortition.

Life is installed, property defined, gods protecting, political performative spaces delimited, limits between urbs and ager enacted, religious temples outlined. Through body positions and **gestures** of land and sky divisions, the augur performatively delimited all the city's boundaries. These projections are not based on a cosmological ordering or orientation but adapt themselves to the site's topography through the augur's operations, affording a reproduction of Rome on a non-inhabited site. While similar to the Etruscan example in the steps of the rituals and the resulting orthogonal urbanism, the performance differs completely in the kind of dialogues with non-human bodies it enacts. Indeed, as we will see, this process of disembodiment and short-circuit of dialogue, whereby attention is focused on structures—the grid—rather than operations—relations enacted by embodied operations—will expand throughout the Roman culture.

## Arausio.

During the later years of the Roman Republican and the early/mid imperial period, imperial expansionism accelerated tremendously. Hundreds of new colonies were founded all around the Mediterranean Sea. In these colonies, indigenous communities were not given the same rights as the colonizers,<sup>407</sup> and the confiscation of land was extensively practiced.<sup>408</sup> In order to found these colonies, the process that I have just previously tried to reconstruct changed. During the 3rd century B.C., the importance of augural practices declined in Roman society. Their role was confined to the city of Rome itself and its immediate surroundings.

Accordingly, for the foundation of new colonies, the presence of the augurs was not mandatory, but perhaps even extraordinary. The founding acts were performed instead by ersatz augurs, undoubtedly a member of triumvirs, probably a magistrate.<sup>409</sup> To carry out the procedure for the foundation of a settlement, they imitated the rituals performed by augurs but with little knowledge of their operations. At this time, the main objective of the triumvirs was to accommodate the new settlers. The former military constituted the body of colonizers, whose participation in Roman military campaigns was retributed by land and citizenship in a colony. This process was thus self-generative, the greater the need for control of a territory, the more soldiers were required, the more territories the army had to conquer and then to control, etc.<sup>410</sup>

In parallel, surveying techniques, previously not organized into a discipline and using only rudimentary instruments, had developed into a substantial body of knowledge, with renowned and respected practitioners and theoreticians, their books and controversies. These techniques, while previously only necessary to extend lines drawn on the ground and in the air by the augurs to allow certain delimited spaces to be politically and religiously performative, were professionalized and became more central

407 'The presence of non-Romans as full members of a citizen colony is more problematic: Latins traditionally may have possessed the right to enlist in such a settlement, but the privilege probably was eroded during the course of the second century.' Gargola, Daniel J. *Lands, Laws, & Gods: Magistrates & Ceremony in the Regulation of Public Lands in Republican Rome*. Chapel Hill: University of North Carolina Press, 2009:64-65.

408 Campbell, J. B. *The Writings of the Roman Land Surveyors: Introduction, Text, Translation and Commentary*. Journal of Roman Studies Monograph, no. 9. London: Society for the Promotion of Roman Studies, 2000:lx.

409 'While augural activities would have been very much alive among those who first developed regular centuriation toward the end of the third century, those same practices would also have been familiar to officials and scholars in later periods.' In Gargola, Daniel J. *The Shape of the Roman Order: The Republic and Its Spaces*. Studies in the History of Greece and Rome. Chapel Hill: The University of North Carolina Press, 2017:48.

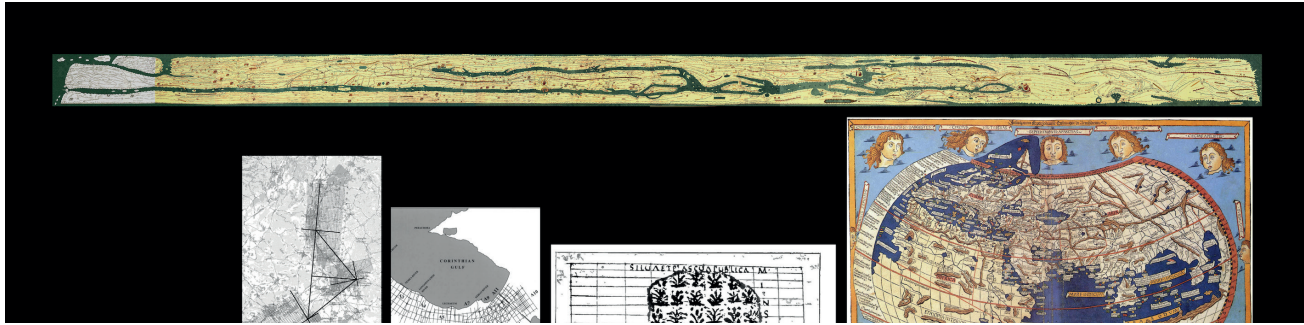
'With the exception of templa in the camps, where only a limited range of actions could be performed, the practice of linking official actions to inaugurated templa was almost certainly limited to Rome and its environs.' In Gargola, Daniel J. *Lands, Laws, & Gods: Magistrates & Ceremony in the Regulation of Public Lands in Republican Rome*. Chapel Hill: University of North Carolina Press, 2009:128.

410 Campbell, J. B. *The Writings of the Roman Land Surveyors: Introduction, Text, Translation and Commentary*. Journal of Roman Studies Monograph, no. 9. London: Society for the Promotion of Roman Studies, 2000:xxv.

411 Campbell, J. B. *The Writings of the Roman Land Surveyors: Introduction, Text, Translation and Commentary*. Journal of Roman Studies Monograph, no. 9. London: Society for the Promotion of Roman Studies, 2000:xlvi.

412 Dilke, O. A. W. *Greek and Roman Maps*. Aspects of Greek and Roman Life. Ithaca, N.Y.: Cornell University Press, 1985:96.

in the foundation of colonies than the augural law.<sup>411</sup> Through surveying practices and *centuriation* (a division of the land into *centuriae*, enough land to distribute to one military division—centuriation), properties were defined and reported on a **document**, called a *forma* (map), allowing central authorities to know each landowner and request the due taxes. These *formae* were produced in two exemplars, one for the colonial administration and one for the central administration in Rome.<sup>412</sup> By compiling these *formae*, the late Republican and early/mid imperial Rome was able to map its controlled territories in their entirety. The grid thus became a strategic tool to easily diagrammatize the whole of the Mediterranean world, and so, to extend the Empire (and its forms of power) over it.



| Fig. D9 | Tabula Peutingeriana. Reproduction dating back to the XIIIth century of a map which is a cumulation of different maps from the end of the 1st century to the 5th. Network of the whole known world. Source: Wikimedia commons.

Through these evolutions, the perspectivist paradigm that guided the former inauguration rituals, placing the bodies of the augurs and colonizers, and their field of vision and relation with non-human bodies disappeared in favor of a return to a system of orientation based on cardinal axis—N/S, E/W.<sup>413</sup> The definition of the *templum*, previously central in the inauguration and which allowed dialogue with non-human bodies, was undertaken by a separate individual, and only the chicken divination practices were perpetuated. The plough ceremony used to define the boundaries between the *urbs* and the *ager* nevertheless remained central until much later.<sup>414</sup>

Surveyors wrote many treatises that since have made their way to us, assembled in a corpus entitled *Corpus Agrimensorum*. The treatise describes the array of knowledge their discipline had developed and how they proceeded to found new colonies, distribute plots and resolve numerous disputes related to property. In these treatises, we learn that the operations and **gestures** of the surveyors make direct reference to the augural discipline and the *Disciplina Etrusca*. Nevertheless, these references are based on a mere formal understanding, which reproduces the grids of the augurs without incorporating their **repertoire** of knowledge and the non-human (and human) dialogues they were enacting.

These surveying practices are based on creating and installing an extensive grid by means of the definition of boundaries and roads. Before the 3rd century B.C., surveyors first laid out parallel lines (*decumani*) with varying distances and then crossed them in right angles to better adapt to the site. After disciplinarization and professionalization, the surveyors first outlined an east-west axis called the *decumanus Maximus*, which will be the main longitudinal road of the city and surrounding area. Then, perpendicularly, they trace a north-south axis called *kardo maximus*. From the intersection of the two axes, they created parallel *decumani* and *kardines* every 708 meters (corresponding to 20 *actus* in the Roman measuring system), creating a grid of squares with its regular network of roads.<sup>415</sup> Every square could then be subdivided in order to be allocated to one centuriation. If surveyors ever adapted the size or orientation of the grids depending on the site, they nevertheless remain quite regular and are consistent in striving toward this ideal scenario. The founding practices of cities were, at this point, much closer to

413 Gargola, Daniel J. *The Shape of the Roman Order: The Republic and Its Spaces*. Studies in the History of Greece and Rome. Chapel Hill: The University of North Carolina Press, 2017:74.

414 Gargola, Daniel J. *The Shape of the Roman Order: The Republic and Its Spaces*. Studies in the History of Greece and Rome. Chapel Hill: The University of North Carolina Press, 2017:37.

415 Gargola, Daniel J. *Lands, Laws, & Gods: Magistrates & Ceremony in the Regulation of Public Lands in Republican Rome*. Chapel Hill: University of North Carolina Press, 2009:128:175.

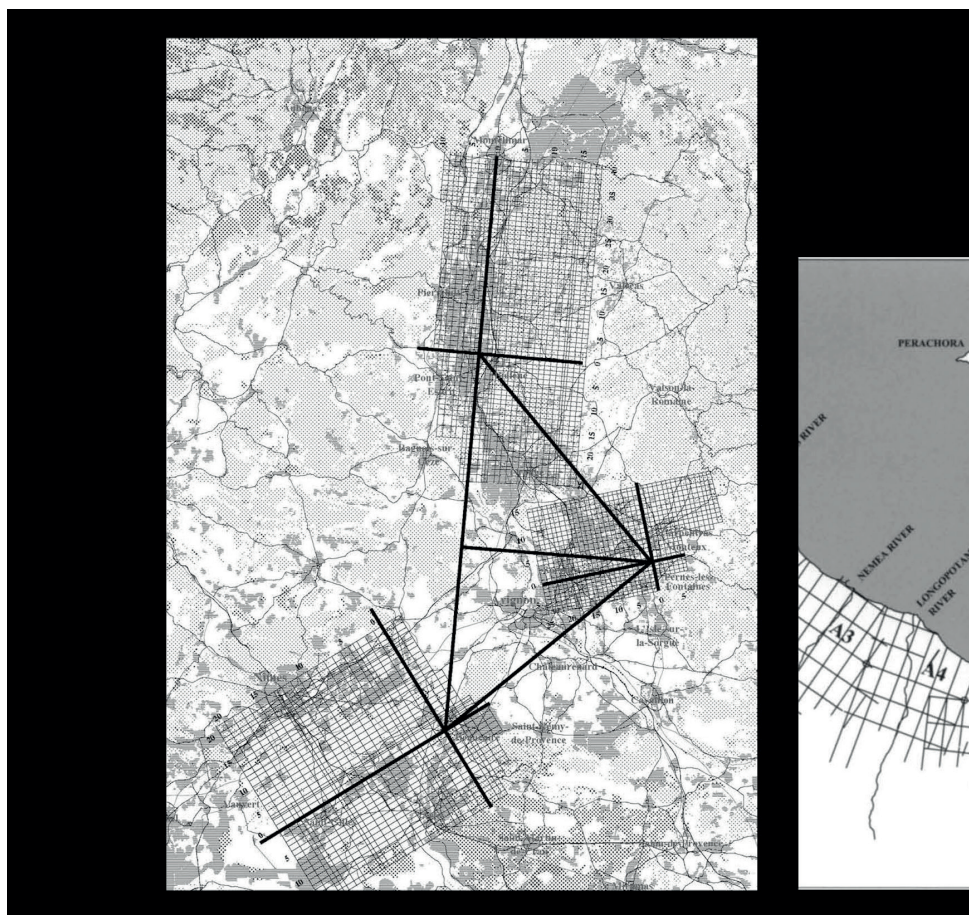


the **repertoire** of operations used for the creation of military camps, as described by Polybius.<sup>416</sup>

In 35 B.C., in the region of Arausio (present-day Orange, in the south of France), an immense cadastre of the whole region was manufactured by surveyors. This cadastre was carried out because several disputes occurred between the newly installed colonizers, who had received the best plots of land, and the Indigenous Gaul communities, inhabiting the rest of the surveyed land. As some of them refused to respect the newly imposed order (particularly the new property lines) and pay the due taxes, the whole grid of the region was redrawn and reported on a stone.<sup>417</sup> This extensive grid on which we can discern the Rhone River is accompanied by inscriptions reporting the landowners' names. After this survey, properties could not be discussed or disputed anymore by indigenous communities. To lay-out the grids, three central points (three crossings of the decumanus maximus and kardo maximum) were set and connected, and from there, the grid was extended using a groma.

"From this basis our ancestors seem to have worked out a methodology of land measurement. First they established two limites, one stretching from east to west, which they called the decumanus, the other stretching from south to north, which they called the kardo. So, the decumanus divided the land into 'right' and 'left', the kardo into 'this side of' and 'beyond'."<sup>418</sup>

In newly founded colonies, temples and forums were also built in a way that made reference to Rome and its founding by Romulus. Nevertheless, the **repertoire** that enacted the spatial relations with the surrounding non-human (and human) bodies disappeared, replaced instead by a "formulaic"<sup>419</sup> practice imposing a form upon a site, the logic of which allowed legal and imperial control over its bodies. The formae that created these forms of power preceded the territory that was colonized.



| Fig. D10 | Reconstruction of the grid inscribed at Orange in the South of France. Reconstitution from the archaeological data of the Orange Cadastre, after A. Piganiol.

<sup>416</sup> 'The manner in which they form their camp is as follows. When the site for the camp has been chosen, the position in it giving the best general view and most suitable for issuing orders is assigned to the general's tent (praetorium). Fixing an ensign on the spot where they are about to pitch it, they measure off round this ensign a square plot of ground each side of which is one hundred feet distant, so that the total area measures four plethra. Along one side of this square in the direction which seems to give the greatest facilities for watering and foraging, the Roman legions are disposed as follows. As I have said, there are six tribunes in each legion; and since each consul has always two Roman legions with him, it is evident that there are twelve tribunes in the army of each. They place then the tents of these all in one line parallel to the side of the square selected and fifty feet distant from it, to give room for the horses, mules, and baggage of the tribunes. These tents are pitched with their backs turned to the praetorium and facing the outer side of the camp, a direction of which I will always speak as "the front." The tents of the tribunes are at an equal distance from each other, and at such a distance that they extend along the whole breadth of the space occupied by the legions' (VI 27). In Polybe, and William Roger Paton. *The Histories*. The Loeb Classical Library 128, 137, 138, 159, 160, 161. Cambridge (Mass.) London: Harvard university press W. Heinemann, 1976:330-1.

<sup>417</sup> Dilke, O. A. W. *Greek and Roman Maps*. Aspects of Greek and Roman Life. Ithaca, N.Y: Cornell University Press, 1985:198.

<sup>418</sup> Julius Frontinus, 'De Limitibus', *Corpus Agrimensorum Romanorum*, p. 28L. In Campbell, J. B. *The Writings of the Roman Land Surveyors: Introduction, Text, Translation and Commentary*. Journal of Roman Studies Monograph, no. 9. London: Society for the Promotion of Roman Studies, 2000:9.

<sup>419</sup> Gargola, Daniel J. *Lands, Laws, & Gods: Magistrates & Ceremony in the Regulation of Public Lands in Republican Rome*. Chapel Hill: University of North Carolina Press, 2009:128:175.

## Operative (hi)stories of the grid. The repertoire as a site of spatial history and struggle.

In the preceding section, I attempted to reconstruct three protofigurations-practices of inscription in a territory and founding rituals. In doing so, I tried to unearth the traces of these sets of operations and **gestures** that have made their way to us in the present-day, and upon which some epistemologies build affect and science. To make this comparative analysis, I brought together archaeological elements, roman literary sources, research of archaeologists and essays of philologists.

These three protofigurations resulted in three grid-like urban forms of similar dimensions. Most importantly, these three grids are considered part of a continuum in the dominant historical discourse, that of the narrative of Roman History. As such, they have been treated without much distinction, trapped in their formal analogy and the narrative of the great history of the Roman civilization, imagined as being rooted in the millennial culture of the Etruscans. This narrative seduced Renaissance and modern scholars equally, who considered Roman History as the root of the European civilization. The difficulty we face in differentiating these grids is itself a trace of the Roman narrative, influencing our relation to the **past**.

Nevertheless, in looking closely at the protofigurations, the formal analogy is disentangled. **The three performances reenact different economies of human and non-human bodies and each outline a specific repertoire of figurations and their landscapes of affordances.** Even if the three grids each display a cardinality (common understanding and orientation of space) and calendarity (common ordering of **temporalities** through narrative and technological determinism), allowing a transcalarity in space and time and its affective continuities, the relations of each with their environment and the dialogues with non-human bodies they enact are radically dissimilar. The figure of the grid and the cross-division of the sky, the earth, and the ground had differing roles in the three cases, and the operations that **actualized** their characteristics embody this dissonance:

-In Marzabotto, the division of the sky, earth, and ground reenact the harmonies of the cosmological and earthly forces on the earth's surface. The resulting patterns thus tend to reproduce the way Gods and other non-human bodies inhabit worlds. All of the spatialities of the city and the territory were projected according to this perspective. As such, the **embodied spatial imagination of the haruspex and the settlers was central in the performance, as they had to negotiate with the non-human bodies present to be able to extend their harmonies.**

—In Cosa, despite similar spatial patterns that placed the temples on the highest point, the similarly-size grid pattern of the urban core, and the operations of the augur, triumvirs, and colonizers bearing the same names (or at least, making a direct reference to) the Etruscan practices, the **repertoire of figurations** that is excorporated and enacted into the real is profoundly different. In Cosa, all **the operations aim to reenact the Roman landscape and its relations with its topographies, lands, the sky, and the Gods**. As such, the **figurations** (embodied spatial images) that lead to the creation of a grid are self-referential and anthropocentric, creating less time and space—in the performance and the enacted economy of human and non-human bodies—for dialogue with human and non-human bodies.

—In Arausio, **the formae (cadastre) as a means of ordering the grid could even be said to precede and produce the territory more than the territory creates the formae**. While the operations of the surveyors are theoretically referring to the *haruspex*’ or augur’s performance, the operations of division do not result from embodied spatial **imagination** but instead from the production of the **actual** according to an ideal. In this case, the **repertoire of figurations** and the operations are tremendously impoverished, as they do not permit dialogue with human and non-human bodies.

In analyzing these three performances, I intended to outline the potential of a **versant opératoire** of spatial history in focusing on the operations from which forms are issued and not on the forms themselves. I proceeded in framing protofiguration not as a formal imposition of an external order onto the material flows but as **a series of operations that structure the field of the potential thanks to the excorporation of virtual images**. These architectural and spatial virtual images (**figurations**) are not understood as fixed forms but as potential relations. Nevertheless, this **operatory side** does not lead to a complete discrediting of form in spatial analysis; however, for the purposes of this research, the grid was considered through the agency of what it represents socially and culturally—what it affords—and not for the form in and of itself.

The **repertoire** seems to be a fruitful site for spatial history in two critical directions. Firstly, I intended to show how the particular texture of **architectural and spatial images from the repertoire and their futurities have been—at least in these historical situations—the dominant means of spatial production and imagination**. The scales of these **gestures** and operations proved to be a relevant frame to analyze how embodied spatial **imagination** and performance endure, notably in giving space for subjectivities, power relations, non-human bodies, their agencies, and their relations. And it is precisely in looking at the operations as relational that I could understand the potential dialogues threaded by these protofigurations and to what extent they enact spaces for plural **temporalities**.<sup>420</sup> These architectural and spatial operations, which indeed **design from the repertoire** shed light on the neglect perpetuated by the dominant architectural history discourse of oral and embodied forms of knowledge,<sup>421</sup> while also revealing the transformative potential of their touch.

Furthermore, these three cases show us how the **repertoire** can be the dominant mode of spatial production. In this perspective, embodied and oral textures of spatial practice and knowledge are also pharmakological; they can be as alienating as the mediated/drawn mode of production. Once understood, these practices can be critically scrutinized, their power relations and subjectivities unearthed, and thus become a field of struggle.

Secondly, it also appears through examples that the protofigurations’ practices were not only designed from the **repertoire** but that they also **designed the repertoire**. They did so not only through material enactment but also by reenacting the **performativity** of certain relations with the environment and a set of norms that define them—in

420 See chapter C, ‘A ghost in the Jaïma’, in the section ‘Offering hospitality. Repairing broken relation and concealed futurities.’

421 See chapter A, ‘Architectural hylomorphism’, in the section ‘Epistemic violence and obscure zones in architectural historiographies.’



422 See chapter B, 'The architecture and the repertoire', in the section 'Figurations and the embodied architectural image.'

423 See the premises to Chapter E, 'Do not knock. Repertoire extractivism.'

424 Lafontaine Carboni, Julien. "Protofiguration, Opérations d'installation." In *L'archaïque et Ses Possibles Aujourd'hui*, Metis Presse. Vol. 1. Paris: GERPHAU, 2020. See in annex.

425 See Chapter E, 'Architectural reenactments.'

reenacting a social space. This agency of architectural and spatial discipline over the **repertoire** is not a new affair. The aim of hygienist and disciplinary movements was to grasp the scale of the **repertoire** (and of the operations) and gain control over it. The **repertoire** is structured by performatively transmitting **figurations**, or images as **driving force**, and the potential relations they enact.<sup>422</sup> Protofigurations are a spatial instrument for structuring this field of potential both through material enactment and the **design of the repertoire**.

As such, the **repertoire** is a field of struggle from the skin's surface to the secret mental innervation<sup>423</sup> it allows. Protofigurations, I argue, continue to be a relevant concept to grasp the historical dimensions of practices of inscription and the current return of artistic and architectural practices whose aim is to (re)explore embodied relations with the urban environment through performance and acts of collective inscription.<sup>424</sup> **These practices reclaim and reactivate the scale of gestures (of hospitality, of repair) as instruments to cultivate affective relationships and continuities by reconfiguring the field of the potential. They open up the futurities of designing from the repertoire (in the architectural discipline, at least), while actively opening up democratic and liberating ways of designing the repertoire itself.**<sup>425</sup>

Nevertheless, the premises of the next chapter will introduce **repertoire extractivism**, an economical practice that capitalizes on the **repertoire**. Through various environmental designs, I will explore how today's **repertoire** has become coded and used as a way of profiting from our **gestures**, all the while putting the **repertoire** itself at risk. In proposing a non-exhaustive set of examples, I will examine how embodied spatial **imagination** and **performative spatialities** are now coded, and thus, their **futurities** preempted. It will enable us to propose **architectural reenactment** as a strategic practice allowing to thwart **repertoire extractivism** while granting temporary access to the **repertoire**.



house-owner,' Nietzsche already wrote in the *Gay Science*.<sup>9</sup> Today we should have to add: it is part of morality not to be at home in one's home. This gives some indication of the difficult relationship in which the individual now stands to his property, as long as he still possesses anything at all. The trick is to keep in view, and to express, the fact that private property no longer belongs to one, in the sense that consumer goods have become potentially so abundant that no individual has the right to cling to the principle of their limitation; but that one must nevertheless have possessions, if one is not to sink into that dependence and need which serves the blind perpetuation of property relations. But the thesis of this paradox leads to destruction, a loveless disregard for things which necessarily turns against people too; and the antithesis, no sooner uttered, is an ideology for those wishing with a bad conscience to keep what they have. Wrong life cannot be lived rightly.

## 19

*Do not knock.* – Technology is making gestures precise and brutal, and with them men. It expels from movements all hesitation, deliberation, civility. It subjects them to the implacable, as it were ahistorical demands of objects. Thus the ability is lost, for example, to close a door quietly and discreetly, yet firmly. Those of cars and refrigerators have to be slammed, others have the tendency to snap shut by themselves, imposing on those entering the bad manners of not looking behind them, not shielding the interior of the house which receives them. The new human type cannot be properly understood without awareness of what he is continuously exposed to from the world of things about him, even in his most secret innervations. What does it mean for the subject that there are no more casement windows to open, but only sliding frames to shove, no gentle latches but turnable handles, no forecourt, no doorstep before the street, no wall around the garden? And which driver is not tempted, merely by the power of

<sup>9</sup> Friedrich Nietzsche, *Werke* (ed. Schlechta), Munich 1955, Vol. II, p. 154 (*The Joyful Wisdom*, Edinburgh–London 1910, p. 203).



his engine, to wipe out the vermin of the street, pedestrians, children and cyclists? The movements machines demand of their users already have the violent, hard-hitting, unresting jerkiness of Fascist maltreatment. Not least to blame for the withering of experience is the fact that things, under the law of pure functionality, assume a form that limits contact with them to mere operation, and tolerates no surplus, either in freedom of conduct or in autonomy of things, which would survive as the core of experience, because it is not consumed by the moment of action.

## 20

*Struwwelpeter*. — When Hume, confronting his worldly compatriots, sought to defend epistemological contemplation, the 'pure philosophy' forever in disrepute among gentlemen, he used the argument: 'Accuracy is, in every case, advantageous to beauty, and just reasoning to delicate sentiment.'<sup>10</sup> That was itself pragmatic, and yet it contains implicitly and negatively the whole truth about the spirit of practicality. The practical orders of life, while purporting to benefit man, serve in a profit economy to stunt human qualities, and the further they spread the more they sever everything tender. For tenderness between people is nothing other than awareness of the possibility of relations without purpose, a solace still glimpsed by those embroiled in purposes; a legacy of old privileges promising a privilege-free condition. The abolition of privilege by bourgeois reason finally abolishes this promise too. If time is money, it seems moral to save time, above all one's own, and such parsimony is excused by consideration for others. One is straightforward. Every sheath interposed between men in their transactions is felt as a disturbance to the functioning of the apparatus, in which they are not only objectively incorporated but with which they proudly identify themselves. That, instead of raising their hats, they greet each other with the hallos of familiar indifference, that, instead of letters, they send each other inter-office

<sup>10</sup> David Hume, *An Enquiry Concerning Human Understanding*, Chicago 1963, pp. 6–7.

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<sup>11</sup> Gus

Premises to CHAPTER E:  
Do not knock.





## Repertoire extractivism and engineering of the volumetric surface of gestures.

426 Adorno, Theodor W., and E. F. N. Jephcott. *Minima Moralia: Reflections from Damaged Life*. Verso 2020 edition. Radical Thinkers. London ; New York: Verso, 2020:43.

427 Adorno, Theodor W., and E. F. N. Jephcott. *Minima Moralia: Reflections from Damaged Life*. Verso 2020 edition. Radical Thinkers. London ; New York: Verso, 2020:43.

428 Adorno, Theodor W., and E. F. N. Jephcott. *Minima Moralia: Reflections from Damaged Life*. Verso 2020 edition. Radical Thinkers. London ; New York: Verso, 2020:44.

430 The research constitutes a good picture of pre-smartphones urban lives according to Greenfield, Adam. *Radical Technologies: The Design of Everyday Life*. London New York: Verso, 2018:10.

429 The concept of code/space developed by Rob Kitchin and Martin Dodge also allows one to understand these entanglements. They write “Code/space occurs when software and the spatiality of everyday life become mutually constituted, that it, produced through one another. Here, the spatiality is the product of code, and the code exists primarily in order to produce a particular

“The ability is lost, for example, to close a door quiet and discreetly, yet firmly.”<sup>426</sup> In the short text of *Minima Moralia*, Adorno reveals a fundamental yet straightforward and shared worry about our urban world. Automated technologies, now known as ambient technologies, have invaded every single element of the urban fabric and regulate what is possible. Still, it remains critical to ask “What does it mean for the subject that there are no more casement windows to open, but only sliding frames to shove, no gentle latches but turnable handles, no forecourt, no doorstep before the street, no wall around the garden?”<sup>427</sup> What does it mean for the subject that the environment responds to her needs as mechanical air-conditioning systems regulate interior fluxes?

Are we witnessing a complete collapse or *withering of experience through the automation of our environments and the collateral standardization of gestures*? If the non-human bodies that populate our environments “limit contact with [us] to mere operation, and tolerate no surplus,”<sup>428</sup> are our gestural routines and relations with worlds becoming Manichean, almost “fascist”, as Adorno states? Does this exhaustion of *gestures* into binaries deprive bodies and thought of their “*most secret innervations*”?

In recent decades, the scales and *temporalities of gestures* have become sites of a double movement of extraction and design. In our intensely mediated environments, a growing number of urban worldly interactions begin with digital recognition through biometric IDing, passcodes and other forms of controlled access.<sup>429</sup> A study led by Keio University, Intel Corporation and Practices Group, identified before the rise of smartphones “broad patterns in the things people carried in their wallets, pockets, and purses on a daily basis [...] necessary to the successful negotiation of the day’s challenge.”<sup>430</sup> Pictures, mementos, icons, charms, hygiene items, keys, ID, fare cards, transit passes, mobile phones—at that time only for calls and messages—and money in several forms.

spatiality. In other words, a dyadic relationship exists between code and spatiality.” In Kitchin, Rob, and Martin Dodge. *Code, Space: Software and Everyday Life*. Software Studies. Cambridge, Mass.: MIT Press, 2011:16. In these spaces, if a bug occurs, the functions of the spatialities cannot be performed anymore. If one takes the time to analyze her own everyday practices, she will remark

that it is the case of most urban spatialities. The supermarket, the metro, the café turned into working space, etc. Information production is everywhere. When considering the smartphone, the amount of information produced is gargantuan.

Similarly, Jennifer Gabrys intensively explored *sensing* as a constructed and collective

practice, and the development of environmental urban sensors and their associated citizens’ sensing practices, notably in Gabrys, Jennifer. “Sensors and Sensing Practices: Reworking Experience across Entities, Environments, and Technologies.” *Science, Technology, & Human Values* 44, no. 5 (September 2019): 723–36. <https://doi.org/10.1177/0162243919860211>.

These results were to a striking degree homogenous in pockets of citizens from London, Los Angeles, and Tokyo. Most of these objects that mediated urban interactions are close to becoming archaic artifacts of a romanticized **past**. Most have since been networked and transferred into a binary language that constructs the material and immaterial world around us.

The most widespread **gestures** to interact with this binary realm are undoubtedly *scroll* and *pinch-to-zoom* on the screen of a smartphone. Thanks to single **gestures** that failed to be patented,<sup>431</sup> humans can act at a **distance** in an incredible array of situations. Urban dwellers mainly relate to their environment—and maybe to **pasts**—by scrolling down. However, as Doreen Mende argues, this seizure of the gestural is not a first, as it had already been used in the name of Christianity to foster “the cruel construction of colonial modernity, orchestrated by an arsenal of hand **gestures** navigating the organization of the gaze.”<sup>432</sup> As such, “the human capacity of looking cannot be subject to psychology alone but also involves technology and politics as part of its ontological-epistemological fabric.”<sup>433</sup> Technology and politics are equally fundamental parts in the development of gestural world-making practices.

How should one consider the disappearance of **gestures**, if “differences in gestural systems embody differences in the aesthetic structuring of thought”, but equally as “gesture retains this vital and culturally meaningful dimension”?<sup>434</sup> What does it mean for the *withering of experience* that the **repertoire** of performed **gestures** has been drastically standardized, and that differences between gestural systems of thought reduced?

How should one develop the questions raised by Adorno about the homogenization of **gestures** and the automation of environments, while also taking into consideration the increase of the array and reach of **gestures**? Some chapters ago<sup>435</sup> I introduced the statement of Thomas J. Csordas, considering embodiment “as a starting point for analyzing human participation in a cultural world.”<sup>436</sup> Alongside Csordas, who develops “a phenomenological conception of **imagination** as a feature of bodily synthesis,”<sup>437</sup> the theories of Simondon were mentioned in which the first texture of images is a **driving force**. In other words, it is a **gesture**. Before **incorporation** as a mental object or external representation, images are anticipation. This anticipation is **a spatiotemporal volumetric surface on which the touch of the environment will exert a force and be hosted, a gesture of hospitality leaving traces within bodies, on their surfaces and in their milieu, thus creating images**. In return, this volumetric surface enacts a landscape of **affordances**. Through acts of **incorporation** and **excorporation**, numerous processes of **imagination** are constituted by an entanglement of embodied operations, movements, and **gestures**. In these theories, the threshold from which practices of world-making emerge is profoundly gestural. **Gestures** are themselves sites of resistance to alienation and homogenization.

These arguments aim at unraveling the takeover of everyday spatialities that can be understood at the level of the volumetric surface of **repertoires** and **gestures**. This threat constitutes an historical condition to be taken into account before considering reenactments. The formal homogenization of the **repertoire** and environmental automations fail to understand the mechanisms of algorithmic *touch*.<sup>438</sup> The **repertoire** is effectively a site designed—directly and through enactment—and from which one can design. Its material and socio-cultural development and transformation are sites of struggles and power relations. The technological and technical interconnectedness manifests this environmental and designed nature. Simultaneously, the reach of **repertoires** and **gestures** reveals the intertwined and distributed nature of subjectivities

431 Apple attempted to patent a series of gestures after the first iPhone in 2007. See Ribeiro, John. “US Patent Office Rejects Claims of Apple ‘pinch to Zoom’ Patent.” *PCWorld*, July 29, 2013. <https://www.computerworld.com/article/2484428/us-patent-office-rejects-claims-of-apple-pinch-to-zoom-patent.html>.

432 Mende, Doreen. “The Code of Touch: Navigating Beyond Control, or, Towards Scalability and Sociability.” *E-Flux Journal*, no. #109 (May 2020). <https://www.e-flux.com/journal/109/331193/the-code-of-touch-navigating-beyond-control-or-towards-scalability-and-sociability/>.

433 Mende, Doreen. “The Code of Touch: Navigating Beyond Control, or, Towards Scalability and Sociability.” *E-Flux Journal*, no. #109 (May 2020). <https://www.e-flux.com/journal/109/331193/the-code-of-touch-navigating-beyond-control-or-towards-scalability-and-sociability/>.

434 Sklar, Deidre. “Remembering Kinesthesia: An Inquiry into Embodied Cultural Knowledge.” *Migrations of Gesture*, (2008):99 and 101.

435 See chapter B.

436 Csordas, Thomas J. “Somatic Modes of Attention.” *Cultural Anthropology* 8, no. 2 (1993): 135.

437 Csordas, Thomas J. “Somatic Modes of Attention.” *Cultural Anthropology* 8, no. 2 (1993): 135.

438 The notion of algorithmic *touch* has emerged from discussion within the ALICE Lab, and especially through the work of Lucia Jalon Oyarzun, when observing the evolution of the dominant mode of practices in architecture, in dialectic with the minor practices and histories. She develops, it in a forthcoming article: “Minor architectures as rebellious (cf. clandestine) technocologies of signs: Reframing major and minor in the computational realm.” In *DESIGN SPACE. Technicities and the Built Environment*, edited by Robert A. Gorny, Stavros Kousoulas, Dulmini Perera, Andrej Radman. (forthcoming)



439 Simondon, Gilbert. *Du Mode d'existence Des Objets Techniques*. Philosophie / Institut Catholique de Paris, Faculté de Philosophie. Paris: Aubier, 2001:151-2.

440 Hansen, Mark B. N. "System-Environment Hybrids." In *Emergence and Embodiment*, edited by Bruce Clarke and Mark B. N. Hansen, 113–42. Duke University Press, 2009.

441 It is important to note that there is a twofold transgenerational dynamic of environmental agency. Human bodies both inherit a repertoire of relation that allows coupling with the environment (through migration of figuration and incorporation of social norms) and a tertiary memory called by Stiegler epyphilogenetic memory. This memory is constituted by the milieu that is inherited (and all the externalized memories), infrastructures and worlds, that are once again individuated by new generations. In Hansen, Mark B. N. "System-Environment Hybrids." In *Emergence and Embodiment*, edited by Bruce Clarke and Mark B. N. Hansen, 135. Duke University Press, 2009.

442 Hutchins, Edwin. *Cognition in the Wild*. MIT Press, 1995.

443 Sterelny, Kim. "Minds: Extended or Scaffolded?" *Phenomenology and the Cognitive Sciences* 9, no. 4 (December 2010): 465–81. <https://doi.org/10.1007/s11097-010-9174-y>.

444 Varela, Francisco J., Evan Thompson, and Eleanor Rosch. *The Embodied Mind: Cognitive Science and Human Experience*. Cambridge, Mass: MIT Press, 1991.

445 Clark, A., and D. Chalmers. "The Extended Mind." *Analysis* 58, no. 1 (January 1, 1998): 7–19. <https://doi.org/10.1093/analys/58.1.7>.

446 Clark, A., and D. Chalmers. "The Extended Mind." *Analysis* 58, no. 1 (January 1, 1998): 8. <https://doi.org/10.1093/analys/58.1.7>.

and sensoriums. Every **gesture** implies scale movements from the local to the planetary, from the molecular to the sidereal. And, as such, we think, perceive, move and digest through **gestures** that are distributed across planetary infrastructures.

The environmental quality of human perception and the distributed nature of thinking contain certain vulnerabilities that can be infiltrated by *new* technologies and algorithmic *touches*. Indeed this can be seen to have occurred in *repertoire extractivism*, namely the action of extracting and outsourcing knowledge from the **repertoire**, short-circuiting embodiment and the development of **gestures—figuration**. The dangers relating to the *most secret innervations* of mental worlds and withering of experience are not to be found—at least entirely—in the diversity of **gestures** we perform and the possibility of closing doors quietly and discreetly, yet firmly. Repertoire extractivism enacts an environmental form of control, which threaten the **repertoire** and mental worlds while producing unprecedented forms of alienations.

The **repertoire**, I argue, is a useful scale and temporality through which to spatially analyze mechanisms of environmental control and algorithmic *touches*. However, to counter repertoire extractivism, methodologies (momentarily) stabilizing the ontology of the **repertoire** are necessary. Before proposing *architectural reenactments* as a potential strategy, this introduction navigates in the jeopardy of the volumetric surface and reach of **gestures**, as a necessary introduction to new conditions and forms of alienations we must be aware of and work with.

To frame how the **repertoire** and the volumetric surface of **gestures** are sites of extraction, the notions of distributed perception and cognition are essential. The technicity of an **architecture of operations** relies on technical objects as it "comprises a mode of relation of the human to the world",<sup>439</sup> enacting contacts with various durations and plural **temporalities**. Such techniques and technologies, and indeed architectures, extend the sensorium and transform the possibilities for embodiment, notably by distributing them. This relationality (through distribution/extension) reveals what Mark B. Hansen calls the *primary environmental condition of humans*,<sup>440</sup> in which environmental agency can be much broader instead of something quite trivial.

Simondon stated that individuation occurs in the coupling of pre-individual reality charges of an individual and its environment. The environment of the pre-individual provides the potential energy for individuation to occur. During the individuation process, the individual and the individual-milieu couple are individuated. In this scope, techniques are situated in between the pre-individual and the individuation process. By creating a new realm of pre-individual reality called the *transindividual*, techniques augment the surface of contact between human bodies, their milieu and the potential energy catalyzed—or at least reachable—through individuation processes. Expanding the spatiotemporal volumetric surface on which the *touch* of the environment will exert a force and be hosted, "technics expand the scope of environment agency."<sup>441</sup>

Scholars from cognitive sciences and neocybernetics have explored this topic through approaches such as distributed cognition,<sup>442</sup> scaffolded mind,<sup>443</sup> enactive,<sup>444</sup> or extended mind theory.<sup>445</sup> The most radical, extended mind theory, suggests that in some instances:

"the human organism is linked with an external entity in a two-way interaction, creating a coupled system that can be seen as a cognitive system in its own right. All the components in the system play an active causal role, and they jointly govern behaviour in the same sort of way that cognition usually does."<sup>446</sup>

Later, scholars criticized the radicality of the proposal and argued that active externality was, at best, very exceptional. Some relevant examples are provided to explain how the environment—human and non-human—enacts, enables and supports action and cognition.<sup>447</sup> One is unraveled in Evelyn Tribble’s *Cognition in the Globe* (2011), which begins with the following enigma:

“Early modern adult playing companies coped with enormous mnemonic loads, apparently performing up to six different plays a week, with relatively infrequent repetition, all the while learning and mounting a new play more than once a month.”<sup>448</sup>

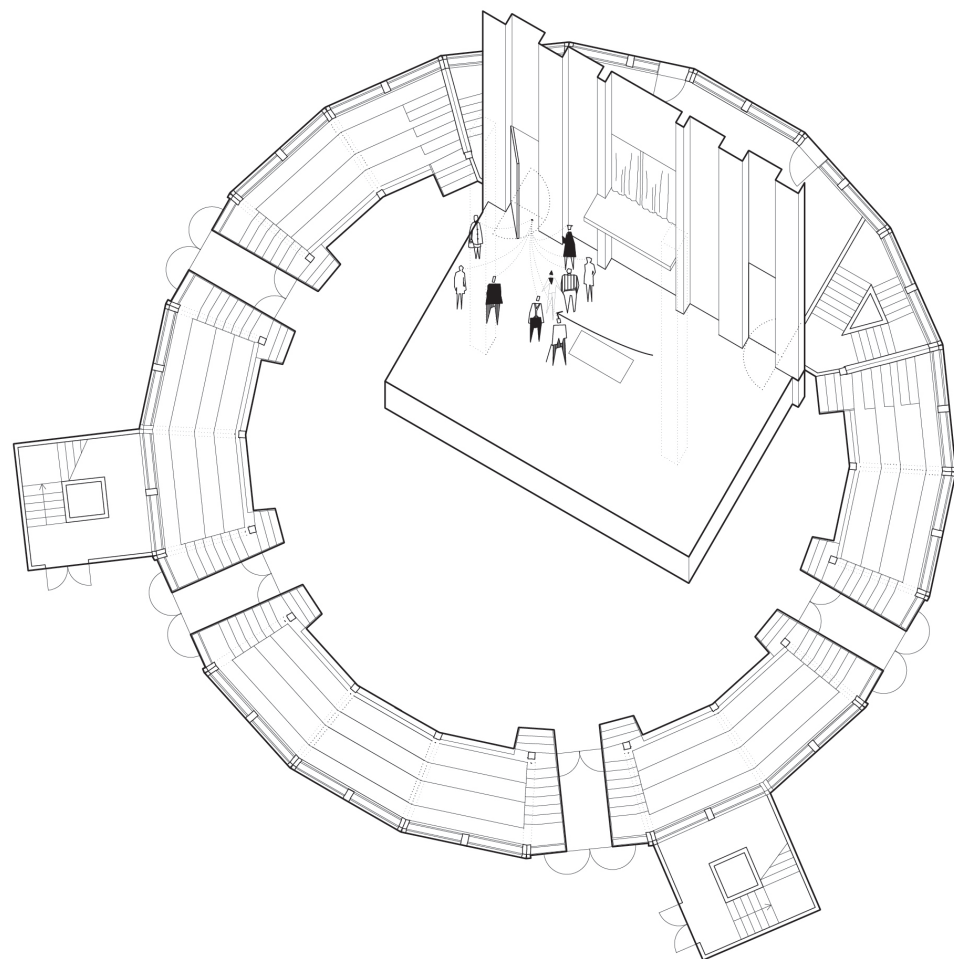
Traditional explanations of such performances were based on the hypothesis of actors’ enormous internal cognitive capacities. However, learning so rapidly and with little or no rehearsal seems almost impossible to even highly trained actors. To resolve this mystery, Evelyn Tribble applied the model of distributed cognition<sup>449</sup> which considers a wider range of factors fostering, enhancing and distributing cognitive processes.

447 For another example, see the section on expanded or distributed digestion which serves as a model to think the scaffolded mind theory in Sterelny, Kim. “Minds: Extended or Scaffolded?” *Phenomenology and the Cognitive Sciences* 9, no. 4 (December 2010): 465–81. <https://doi.org/10.1007/s11097-010-9174-y>.

448 Tribble, Evelyn B. *Cognition in the Globe: Attention and Memory in Shakespeare’s Theatre*. 1st ed. Cognitive Studies in Literature and Performance. New York: Palgrave Macmillan, 2011:1.

449 Hutchins, Edwin. *Cognition in the Wild*. MIT Press, 1995.

## King Lear Act 2 Scene 2



| Fig. E2 | Drawing of the Act 2 Scene 2 of *King Lear* in the Globe Theater, analyzing the role of physical agents in the play, according to the theories of distributed cognition applied by Evelyn Tribble to the context of the Globe theater in London. Copyright: Julien Lafontaine Carboni, 2019.

CORNWALL Fetch forth the stocks!

[...]

CORNWALL Fetch forth the stocks!

(Everybody is looking at the door of the house) Stocks brought out.

450 Tribble, Evelyn B. *Cognition in the Globe: Attention and Memory in Shakespeare's Theatre*. 1st ed. Cognitive Studies in Literature and Performance. New York: Palgrave Macmillan, 2011:7.

451 Clark, Andy. *Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence*. Oxford New York: Oxford University Press, 2003.

452 Clark, Andy. *Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence*. Oxford New York: Oxford University Press, 2003:7.

453 The volumetric surface of gestures refers to the reach of gestures as co-operations between human and non-human bodies. The limits of the volumetric surface are multiple. It refers first to the physical reach of the gesture, the landscape of affordances, offered by environments. In addition, the physical reach has a temporal dimension; the acting-out of a gesture possesses a duration and temporalities across which affordances emerge. Moreover, if one considers the coupling/extension/distribution of human cognition with/in/ across environments, the reach of gestures is expanded to the limits of the economy of human and non-human bodies. Consequently, the volumetric surface of gestures encompasses the limits of the temporary assemblage of human and non-human bodies through which the operations are distributed. In return, this assemblage exert a force on the body gesturing, reaching the last volume of the gestures' surface: the inner bodily surface on which contacts and *touches* will turn into affects. To resume, the volumetric surface is composed of: the physical reach of the gestures in time (four dimensional surface); the limits of the economy of human and non-human body entering in co-operations (from the molecular to the sidereal); the inner bodily surface.

She led an analysis of the non-human bodies at play, the social structures of the company, the internal mechanisms bounding individual and distributed cognition, the dynamics between actors and audiences, the **gestures** associated with performances, and the nature of the text itself. She departed from the hypothesis that “no one of these elements, taken alone, has sufficient explanatory power.”<sup>450</sup> She proved that the theater's space and the embodied and collective use of the stage played a critical role in the capacity of actors to memorize and perform. She showed how space and its myriad of non-human bodies could actively participate in a collective intelligence, a memory performance, and how cognition can be distributed across an economy of human and non-human bodies.

This example shows how environments can play a role in cognitive processes, enabling operations that could not occur otherwise, even in pre-digital contexts. Arguably, the economies human and non-human bodies enact a posthuman collective intelligence. Indeed, cognitive scientist and philosopher Andy Clarks explains that the human species is characterized by its biological flexibility;<sup>451</sup> humans are “creatures whose minds are special precisely because they are tailor made for multiple mergers and coalitions.”<sup>452</sup>

*Mergers and coalitions* are produced by embodied co-operations between human and non-human bodies. I argue that processes of **incorporation** and **excorporation** of environments into cognitive and bodily operations are possible thanks to knowledge from the **repertoire**. **This knowledge, previously coined as figurations enacts performative spatialities, a play that includes human and non-human bodies, and through which cognitive and bodily extensions/distributions are achieved.** **Figurations** enact a landscape of **affordances**, as a grip between worldly textures and **figurations**, knowledge from the **repertoire** and environments. The boundaries of landscapes of **affordances** and the volumetric surfaces of **gestures** are then parallel. The first refers to specific spatiotemporal entanglements while the other, to a broader category of analysis.<sup>453</sup>

Environments considered as cognitive support explicitly have more-than-trivial agencies upon human behaviors<sup>454</sup> and actively participate in every human action, thought and **gesture**, from digestion to drawing. In this perspective, the **repertoire** involves entrenched spatial and architectural knowledge, which enacts relations with environments as its support and activates co-operations and extension with the economy of human and non-human bodies. However, extending/distributing the reach of the volumetric surface of **gestures** augments certain environmental agencies.

Environmental agencies in everyday spatialities are increasingly self-evident through the development of pervasive environmental technologies. Software is part of most urban interactions and spatialities<sup>455</sup>, creating what has come to be known as *everyware*,<sup>456</sup> and deeply transforming how urban spaces are perceived and how they exert forces upon bodies. Algorithms, software, sensors, and machine learning have profoundly “changed the nature of seeing and hence our knowledge of the world.”<sup>457</sup> Yet, “instead of technical mediation of perception, today's concern is ‘the more indirect technical mediation of an environmental sensibility.’”<sup>458</sup>

454 Hansen, Mark B. N. “System-Environment Hybrids.” In *Emergence and Embodiment*, edited by Bruce Clarke and Mark B. N. Hansen, 113–42. Duke University Press, 2009.

455 Kitchin, Rob, and Martin Dodge. *Code, Space: Software and Everyday Life*. Software Studies. Cambridge, Mass.: MIT Press, 2011.

456 Greenfield, Adam. *Everyware: The Dawning Age of Ubiquitous Computing*. New Riders, 2010.

457 Cox, Geoff. “Ways of Machine Seeing: An Introduction.” *APRJA* 6, no. 1 (2017): 11.

458 Hansen, Mark B. N. “System-Environment Hybrids.” In *Emergence and Embodiment*, edited by Bruce Clarke and Mark B. N. Hansen, 124. Duke University Press, 2009.



Computational agents act primarily outside the scope of our control “beyond our awareness,”<sup>459</sup> and engineer the pre-individual reality.<sup>460</sup> Software and its actions, mostly infrastructural, operate at a level that resists representation through images or words. Nigel Thrift noticed that these computational agents are “a part of a ‘technological unconscious’, a means of sustaining presence which we cannot access but which clearly has effects, a technical substrate of unconscious meaning and activity.”<sup>461</sup> This is partly due to the exponential acceleration of technological development. The speed of this development has short-circuited social processes of the **incorporation** of technics, causing a decoupling of sociogenesis and technogenesis<sup>462</sup> and a series of unforeseen consequences.

This seizure of the pre-individual reality is organized through data mining of human relations with their economies of human and non-human bodies. By iteratively extracting information about our **repertoire**—embodied relations with the environment—computational agents can extort resources for a new form of economy. Environmental subjects “are produced in relation to what algorithms understand about our intentions, **gestures**, behaviors, opinions or desires, through aggregating massive amounts of data (data mining) and machine learning (the predictive practices of data mining).”<sup>463</sup> Algorithms capture the reach of the volumetric surface of our **gestures** and, in return, become able to modulate it. This mechanism is what I have coined as *repertoire extractivism*.

The term *repertoire extractivism*, I argue, is important as it allows one to understand algorithmic *touches* as agents of cognitive capitalism<sup>464</sup> and capitalism of attention.<sup>465</sup> It addresses the real-time engineering of environments through the extraction of information about embodied relations with worlds. A growing market of software, algorithmic and other computational agents function through **repertoire** extractivism. They all embody a glimpse of new algorithmic-environmental agencies and their takeover of pre-individual reality.

Among others, biomonitoring practices are regularly used by the majority of inhabitants of the Western world. According to Fox and Duggan, more than 69 percent of the people in the United States in 2013 are tracking their activities<sup>466</sup>. Biomonitoring comprises many sensors and softwares, and measures things like the temperature of rooms when sleeping, phases of sleep, time spent sitting on a chair, number of stairs climbed, steps walked, heartbeats, breathing rhythms, etc. The most competitive current field of research and *innovation* is glycemic monitoring, which attempts to measure it without intrusive methods and using only skin contact. Simple smartphones or smartwatches can measure and collect such data.

Most health-related information is voluntarily shared by humans to better control their bodily fluxes and rhythms. Software and apps analyze the data and provide personalized advice and behavior to improve what has been measured. What is at stake here, as Jaana Parviainen sharply analyzes in her article “Quantified bodies in the checking loop,” is the capacity to sense the inner affects of **gestures**. Indeed, she argues that the communication with the *innesphere*—internal space below the skin within sensory range— as a body topography, might be jeopardized by new technologies. Bodily-self-sensations, or sensations from the innesphere, are not reducible to bodily functions as unitary measures—pulse or blood pressure. The meaning generated by a **gesture**’s inner affect as a sensuous reality, cannot be grasped through software and sensors as a synthesis of socio-cultural realities and biological rhythms. However, by extracting information from **gestures** and creating tables and measures, technologies can insert themselves into the loop much more efficiently than social constructions have previously.

459 Hansen, Mark B. N. “Engineering Pre-Individual Potentiality: Technics, Transindividuation, and 21 St -Century Media.” *SubStance* 41, no. 3 (2012): 33.

460 Hansen, Mark B. N. “Engineering Pre-Individual Potentiality: Technics, Transindividuation, and 21 St -Century Media.” *SubStance* 41, no. 3 (2012): 32–59.

461 Thrift, Nigel, and Shaun French. “The Automatic Production of Space.” *Transactions of the Institute of British Geographers* 27, no. 3 (2002): 312, quoting Clough, Patricia Ticineto. *Autoaffectation: Unconscious Thought in the Age of Teletechnology*. U of Minnesota Press, 2000.

462 See Stiegler, Bernard. *Technics and Time: The Fault of Epimetheus*. Vol. 1. Stanford University Press, 1998.

463 Cox, Geoff. “Ways of Machine Seeing: An Introduction.” *APRJA* 6, no. 1 (2017): 8–15.

464 Boutang, Yann. *Le Capitalisme Cognitif*. Paris, France: Amsterdam, 2007.

465 Citton, Yves. *L'économie de l'attention: Nouvel Horizon Du Capitalisme?* La Découverte, 2014.

466 Fox, Susannah, and Maeve Duggan. *Tracking for Health*. Pew Research Center’s Internet & American Life Project, 2013.

467 Parviainen, Jaana. "Quantified Bodies in the Checking Loop: Analyzing the Choreographies of Biomonitoring and Generating Big Data." *Human Technology* 12, no. 1 (May 31, 2016): 65.

468 Greenfield, Adam. *Radical Technologies: The Design of Everyday Life*. London New York: Verso, 2018. Original emphasis.

469 Hansen, Mark B. N. "Engineering Pre-Individual Potentiality: Technics, Transindividuation, and 21 St -Century Media." *SubStance* 41, no. 3 (2012): 32–59.

470 Hansen, Mark B. N. "Engineering Pre-Individual Potentiality: Technics, Transindividuation, and 21 St -Century Media." *SubStance* 41, no. 3 (2012): 32–59.

471 Hansen, Mark B. N. "Engineering Pre-Individual Potentiality: Technics, Transindividuation, and 21 St -Century Media." *SubStance* 41, no. 3 (2012): 42.

Through such technologies, the body is not sensed through bodily *touches*, affects of feelings,

"In monitoring the data, users actually ignore or bracket their feelings and sensations on body topography and other people within their kinesphere while concentrating strictly on the informatics of the physical body and its conditions. In this sense, the body is totally reduced to the numerical and graphic informatics on the display."<sup>467</sup>

Embodiment and its social constructions and meanings are short-circuited through data extractivism. This extractivism drastically reduces the capacity to enter into dialogue with one's inner bodily affect and the agency that lies in these dialogues. As such, technologies don't need to be inserted under the skin to modify inner bodily **affordances** and profoundly affect the articulation between cognitive processes and embodiment, and through it, the volumetric surface of **gestures**. Without the need to automate the environment or standardize **gestures**, short-circuits of embodiment processes, through biomonitoring, completely conceal the withering of experience and the traces of the inner *touches* of **gestures**, while subjugating the knowledge resulting from these affects.

On the other hand, "networked digital information technology has become the dominant mode through which we experience everyday life. In some important sense, this class of technology now mediates just about everything we do."<sup>468</sup> Most intimate everyday **gestures** are localized and tracked from our pockets. It is not even necessary to mention smart home technologies to describe the extent to which habits, **gestures**, behaviors, and social relations are scrutinized and mined as resources of information. Everyday spatialities that we perform thanks to the **repertoire** of **figurations** are measured and recorded in its wealth of surface details. Software interprets our tastes, habits and capacities to extend in our environment and reconfigure our landscape of **affordances**. The relations we build with environments are drastically transformed without us being able to notice it, as its mechanisms are too well-entrenched in our cognitive processes.

This double-sided **repertoire** extractivism reconfigures worldly sensibilities.<sup>469</sup> While techniques augment the array and the reach of *touch* of our **gestures**, expanded sensoriums become a site of extraction and environmental control, directed toward a minimal range of economic purposes. Simultaneously, our pre-digital **repertoire** of **figurations** and its dialogues with human and non-human bodies is softly and algorithmically jeopardized and turned to shape the **affordances** of our milieu through environmental control. **In this seizure, our repertoire and its spatial and architectural knowledge are outsourced and concealed, depriving us of our capacity to build worlds through gestures.**

The **design of the repertoire** is not produced through standard forms of control—discipline or normativity. Through massive and iterative data extractivism and large-scale analysis with the help of machine learning, software can anticipate the field of potentiality—or pre-individual realities—<sup>470</sup> and shape from the future and through environmental agency the **affordances** of the milieu. These designs operate in the depth of a **gesture**, without being able to notice its operations. This results in a form of *operational blindness*.

The concept of *operational blindness* has been invoked by Mark B. Hansen in "Engineering pre-individual reality". He argues that when cognition and perception are distributed through technical means, "human consciousness does not and cannot experience the functioning of the technically-distributed system to which it belongs *as a direct perception*—i.e. at the time that it is occurring."<sup>471</sup> Human consciousness cannot grasp how it is co-operating with non-human bodies. Strangely, the operational blindness

resembles the **obscure zone** of the **hylomorphic** scheme that Simondon introduced in *L'individuation à la lumière des notions de forme et d'information*.<sup>472</sup> Certainly the slave/crafts.woman is not at any moment in a state of full consciousness of the system through which her cognition, perception and **gestures** are distributed across the extraction site of clay, the workshop and the mold. However, this distribution does not imply blindness to the operations of the individuation of **bricks**, the potential energy, and material and physical forces. In this context, operational blindness is an asset of the master and/or patron.

The universalization of the **obscure zone** of operational blindness as a human cognitive characteristic proposed by Hansen seems to conceal some socio-technical processes of subjugation. Operational blindness effectively comes from a biological/cognitive impossibility of contact with another duration. Or, it can be produced by a social process. In the former case of invisible computational agents, I argue that it is **an instrument and infrastructure of subjugation enacted by the technical dimension of information asymmetry**.<sup>473</sup> In this maneuver, the blindness formerly associated with the dominant, ruling, and thinking classes has been reversed. The complexity of the distribution of cognition and perception is used and fostered to create the basis for information asymmetry. It constitutes the core of repertoire extractivism without us being able to notice it.

While previously the blindness was a means to subjugate other classes through silencing and concealment, the system has now been reversed. The decoupling between sociogenesis and technogenesis due to the great acceleration of technological *innovations* is cultivated as a disruptive tool and instrument for environmental governance. Bernard Stiegler defines it as a general process of proletarianization, considered a process of destruction of the *know-how—to do, to live, to be*.<sup>474</sup> In this context, I argue that there is no operational blindness inherent to human consciousness. It appears here that operational blindness is produced by a proletarianization of distributed human cognition and perception, and is used as a means of subjugation.

Algorithms *touch* by means of repertoire extractivism and engineering of the volumetric surface of **gestures**. To better understand Adorno's critique of the automation of environments and standardization of **gestures**, and to expand it to the actual dynamics, it is crucial to consider these extractions of information. They enable to modulate and design not the **gestures** but what is within their reach. In consequence, they engineer the spatialities and contacts humans can build from the **repertoire** with other human and non-human bodies.

I strongly believe that the field of architecture, both in research and practice, should be concerned with, and develop methodologies and tools for, understanding mechanisms of repertoire extractivism. As it is—in this research—the science of reconfiguring economies of human and non-human bodies, architects cannot remain blind to new dominant modes of spatial production. Tools and methodologies to feel and grasp the force of the algorithmic *touch* are necessary, to allow one to get to know what is within reach by means of a **gesture**. If a **versant opératoire/operatoratory side** of architectural history and theory is to be built, it must take into consideration techniques as “a mode of relation of the human to the world,”<sup>475</sup> and the scales of operations they bring within reach.

472 For more precision on the obscure zone, see chapter A “Architectural hylomorphism. Spatial (hi)stories of the brick molders.”

473 Wark, McKenzie. *Capital Is Dead*. London ; New York: Verso, 2019:89.

474 Stiegler, Bernard. *Technics and Time: The Fault of Epimetheus*. Vol. 1. Stanford University Press, 1998.

475 Simondon, Gilbert. *Du Mode d'existence Des Objets Techniques*. Philosophie / Institut Catholique de Paris, Faculté de Philosophie. Paris: Aubier, 2001:151-2.



In the following chapter, I will weave architectural reenactments as one possible methodology capable of temporarily stabilizing the ontology of the **repertoire** and the spatialities built from it. Through this fugitive stabilization, algorithmic *touches* can be explained and repertoire extractivism at least revealed, thus countering *operational blindness* as means of subjugation. Simultaneously, architectural reenactments offer spatiotemporal thresholds from which to strategically renegotiate spatialities, their histories and power relations, while recirculating knowledge from the **repertoire**.






Fig. E3 | Redrawing of a photograph of the National Hospital at the end of the construction site built from 1976 to 1978 in between the actual location of the camp of Smara and Awserd. The hospital was the first building made by the Sahrawi women in the refugee camps. At this time, women were highly organized; cells of 9 to 12 people were the basic political unit through which the information was spread, and the political decisions were made. Along with the political cells, women were organized in committees, in charge of health, education, social assistance, justice, or craftwomanship. At night, when the children were sleeping, around 11 p.m., they were used to meet, discuss, and debate how they could ameliorate the camp's living conditions. Souilma B., a woman I had the chance to discuss with, remembered one night when a woman had the idea to fabricate bricks out of the sand. Sahrawi women did not have any kind of construction knowledge. Nevertheless, for years, when all the daily tasks were accomplished and the children were sleeping, they met to mold bricks. At the moment they accumulated enough to mount walls, they started to outline in the sand the plan of the hospital at full scale (fig.2) Souilma told us that they were no preliminary plan or paper drawing. Directly on the ground were debated the hospital spaces according to the need of the health committee and external medical aid; until the end of the building were added more rooms and the general layout could shift according to the actual construction and the evolution of the need. It is not yet clear how the construction site was managed. From the discussion we had that the only work division was between the molders and the builders; the plan was issued from collective discussions without hierarchical distinctions. The hospital was built in several months and last for years, permitting the health conditions to be tremendously fostered. Nowadays, only some sand pile subsists; the bricks melted under the rain, and women built new health dispensaries in each camp. As the first public infrastructure, this hospital is the evidence of the sociocultural revolution in terms of the apparition of a public sphere embodying the common and the new spatialities that emerged from collective discussions and imagination.



A charcoal or pencil sketch of a landscape. In the background, there are rolling hills or mountains. In the middle ground, there is a long, low building with a series of windows or openings. In the foreground, there is a large, dark, rectangular structure, possibly a wall or a large building, with some smaller structures or trees to its right. The overall style is sketchy and atmospheric.

## CHAPTER E

Architectural reenactments.  
Strategic practices from the  
repertoire.





## Horizons: (re)producing the repertoire.

<sup>476</sup> Among others, *Agency and embodiment. Performing gestures/producing culture*, of Carrie Noland and *Migrations of Gesture*, edited with Sally Ann Ness both discuss reenactment in cultural and dance studies as a critical means of migration and production, incorporation and excorporation, through performance, of culture, knowledge and memories. They expanded the reach of reenactment -of the re-production and migration of culture through embodiment- to an epistemology restituting agency to the moving and affected bodies, and historicities to their relations in time. In parallel, *The archive and the repertoire*, of Diana Taylor forges, through the notion of scenarios, a renewed object of historical research that is iterative and embodied. As such, and in the context of Latin American hemispheric studies, scenarios are (dis)articulated and restaged through practices allowing for collective memories and knowledge to be performatively maintained and renegotiated. Reenactments are both means of critical inquiry into embodied pasts and presents, and of circulation and conservation -with difference- of collective knowledge.

André Lepecki equally introduced reenactment in articles and essays cited in this manuscript, such as *Singularities. Dance in the Age of Performance*, especially in the chapter entitled 'The body as archive: Will to reenact and the afterlives of dances.' Here, reenactments were a resource for artists and dancers to develop the historicity of their own bodies, to enrich their relations to their

I only recently came to notice the potentialities of reenactment vis-à-vis this research and the conservation and circulation of knowledge and memories from the **repertoire**. Yet the practices that the reenactment covers have been evoked by—and indeed based upon—several studies and books that constitute the core of my bibliography.<sup>476</sup> When setting up relations between the **archives** and the **repertoire**, within the scope of architectural and spatial knowledge, and entering into the nuanced dynamics of **figurations of incorporation and excorporation**, the notion of reenactment appeared as a critical concept and practice. Reenactments consist of reconstructions of **pasts**, as an intellectual exercise, or the reproduction of events or epochs—such as popular pageants. Reenactments radically reduce the **distance** with reconstructed **pasts** and extend the reach of **incorporation** and embodiment. As such, this research could be continued developing reenactment as a core methodology, by attempting to augment the volumetric surface of contact with concealed and **subjugated** knowledge in the architectural discipline.

Reenactments seem to uncover the **obscure zone** of the representation of architectural **hylomorphism**.<sup>477</sup> This representation, dividing matter and form, the one submitted to the other, while splitting and segregating the operations of thinking and making, *corresponds to a kind of human knowledge possessed by someone who stays out of the workshop*. It is brought about by the **distance** between the philosopher's body and human and non-human bodies. It is thus an abstraction, understood as the removal of objects from their constitutive relations and operations with their milieu and **temporalities**. The **distance** between bodies creates the *void* where the knowledge and lives of many have been concealed, "reduced to a mere succession of instantaneous presents, which leave behind no trace."<sup>478</sup> The theory of operations or **versant opératoire** of architectural history/theory is the first possible step to counter this representation, which restores

repertoire and discipline, while opening a field of creativity and invention in contact with plural temporalities and subjectivities. Many other references, such as 'Performance remains' of Rebecca Schneider, *Behind straight curtains*, of Katarina Bonnevier, and even Gilbert Simondon, in his theory of transductive knowledge, mobilized reenactment -or processes that could be qualified as reenactments.

<sup>477</sup> See chapter A, 'Architectural hylomorphism. Spatial (hi)stories of the brick molder', especially in the section 'Brick ontologies. The obscure zone of the hylomorphic scheme.'

<sup>478</sup> This quote appears in a note written as an appendix called 'The theory of ghosts', that is trying to confirm the viability of the Marxist concept of Haunting. Horkheimer, Max, Theodor W. Adorno, and Gunzelin Schmid Noerr. *Dialectic of Enlightenment: Philosophical Fragments*. Cultural Memory in the Present. Stanford, Calif: Stanford University Press, 2002:179.

the centrality of embodied and oral knowledge, the material speech acts of non-human bodies, and their haecceities. This *sidestep* sheds light on the **repertoire** as repository, mechanism, and infrastructure to follow operations, **architectural operations** or **architectures of operations** in **performative spatialities**. Reenactment constitutes a fundamental practice to stabilize the **repertoire** of **figurations** for the duration of a **gesture**. The ontology of its operations can become research objects and equally allow the **repertoire** to enter into circulation.

Reenactment offers perspectives in architectural pedagogical, scientific and operational practices in reducing the **distance** with plural **temporalities** to a minimum through embodiment. It implies strategic relations to the **archives**, understood as a resource of activation and translation. However, **archives** do not constitute the limits of the materials, in-line with a process of unlearning the sources of architectural **historiography**. The **documents** of the **archive**, and the relations with them, give a/effect to a new set of architectural and historical objects within reach, such as **undrawn spatialities**. This renegotiation of architectural historiographies and archival **gestures** proposes an unraveling of **pasts**, presents and **futures** as resources of emancipation and repair. Reenactments of economies of human and non-human bodies, and the operations that individuate them, blur the boundaries between the **actual** and the **imaginary zone** from which they have been reenacted, projecting other worlds into the real. Reenactment is situated on a fundamental ambiguity that is temporal and spatial, and indeed subjective and collective. These thresholds or boundaries are a productive space of conflict between **temporalities**, whether here and now, or there and before. From these thresholds, forms of agency can emerge, as well as new economies, troubling authorities, origins and characteristics. In the field of architecture, reenactment brings within reach scales and processes of design that rarely are in the discipline's scope.

What is at stake through reenactment is thus the (re)production of the **repertoire** as a means to make contact with **subjugated** architectural and spatial knowledge, formerly concealed by the **obscure zone** of architectural **hylomorphism**. This act of reproduction sets up methods of listening to, and may reconstitute a hospitable zone for, individuals previously *reduced to a mere succession of instantaneous presents*. Such reproduction refers to a specific type of **imagination**, a reproductive **imagination**, whose powers reside in choosing which world to reproduce.<sup>479</sup> The reproduction (of the **repertoire**) constitutes a revolutionary perspective<sup>480</sup> that would be able to escape the dialectics of capitalist extractivism.

This chapter explores reenactments as an unfolding of the **repertoire**, opening up its revolutionary perspective by means of close contact with **temporalities**, spatialities and their knowledge. I will first delve into the genealogy of the use of the term reenactment. The term has been employed in many contexts, with meanings that are slightly displaced from each other and sometimes confusing. I will then propose a definition of architectural reenactments and the array of practices it would cover. The proximity, surface of contact and **performativity** of reenactments will be investigated while outlining forms of historical, spatial, and architectural practice and analysis. To conclude, I will speculate on the extent to which architectural reenactments might renegotiate architectural (hi)stories, pedagogies and operations, in order to become a resource for reparatory architectural epistemologies and practices.

479 See Fleury, Cynthia. *Le soin est un humanisme*. Tracts, n°6. Paris: Gallimard, 2019, in which she introduces the notion of 'elaborative imaginative', or imaginative elaboration from pediatrician and psychoanalyst Donald Winnicott. Elaborative imagination refers to the work of care toward the children's environment (in the work of Winnicott), in order for it be hospitable to the development of the children. It is then a work of imagination and care to the environment as a preparation of the encounter between the child and the world. Reproductive imagination then points at an imagination that is profoundly endogenous to the dynamics of the world we live and situate in, situating ourselves and our imagination within this endogenous supplementarity.

480 See the introduction of Federici, Silvia. *Revolution at Point Zero: Housework, Reproduction, and Feminist Struggle*. Oakland, CA : Brooklyn, NY : London: PM Press ; Common Notions : Autonomedia ; Turnaround [distributor], 2012, which is particularly clear on the relations between reproduction and revolution.



## Reenactment?

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481 The introduction of Agnew, Vanessa, Jonathan Lamb, and Juliane Tomane, eds. *The Routledge Handbook of Reenactment Studies: Key Terms in the Field*. First edition. New York: Routledge, 2020, traces a genealogy of reenactment both as a practice and as a concept.

482 Cook, Alexander. "Practices of reenactment". In Agnew, Vanessa, Jonathan Lamb, and Juliane Tomane, eds. *The Routledge Handbook of Reenactment Studies: Key Terms in the Field*. First edition. New York: Routledge, 2020:187.

483 Lepecki, André. "The Body as Archive: Will to Re-Enact and the Afterlives of Dances." *Dance Research Journal* 42, no. 2 (2010):45. <https://doi.org/10.1017/S0149767700001029>.

484 For Example, Vanessa Agnew developed a critic of the historical reenactment from the series *1900 House*, broadcasted on Channel 4 in the UK's in 1999, which was adapted for numerous other western television channels. She cites 'The format could be readily applied to other time periods—1940s House (2001), Edwardian Country House (2002) and Regency House Party (2004)—and other contexts—The Ship (2002), Frontier House (2004), Outback House (2005) and Texas Ranch House (2006), to name just a few. German television also capitalized on the popularity of the Wall to Wall series, producing *Das Schwarzwald Haus 1902* (The Black Forest House; 2002), *Abenteuer 1900: Leben im Gutshaus* (Adventure 1900: Life in the Manor House; 2004), *Abenteuer 1927: Sommerfrische* (Adventure 1927: Summer Resort; 2005), *Windstärke 8: Das Auswandererschiff* (Gale Force 8: The Emigrant Ship; 2005) and, most recently, *Brauteschule 1958* (Brides' School 1958; 2007).<sup>485</sup> She notably criticized the romanticization of the bourgeoisie, concealing the lives of the other social classes.

Reenactment is both a methodology and a practice. It has gained wide academic, artistic, and institutional attention in recent decades while assembling a vast array of practices.<sup>481</sup> These practices of reenactment cover many contemporary approaches to the **past** and its potentialities for **imagination**, and depend on the domain of the reenactors, their intents and their academic or institutional affiliations (or absence of). Reenactment goes from "an eccentric hobby that involves dressing up in period clothes and playing out a reconstruction of historical events"<sup>482</sup> to "a privileged mode to effectuate or actualize a work's immanent field of inventiveness and creativity."<sup>483</sup> Its use in popular cultures—TV shows and movies— has been largely debated and criticized.<sup>484</sup> Many historians express skepticism about reenactments, due to the inability to repeat faithfully an original,<sup>485</sup> the potential nostalgia and romanticization of **pasts** that can motivate them, and their possible exploitation for ideological abuses.<sup>486</sup> With all that in mind, what does reenactment mean? In what context did it emerge, and how has it evolved in different domains? What is its relationship to **archives** and the **repertoire**?

In the first instance, the notion was used by historians to describe "a kind of mental practice, based on the philological reconstruction of the original meaning of texts and the contexts in which they were created. It was an act of imaginative engagement informed by rigorous scholarly protocols"<sup>487</sup>, used by the influential historian and philosopher Robin Georges Collingwood. He argued in detail that

"these practices should lie at the center of historical practices, and that 'historians' ultimate goal is to 're-enact' the thought of past actors in their own minds and thus to create inter-temporal understanding (Collingwood, 1994 [1946], pp. 39, 444 – 451)."<sup>488</sup>

485 This critique is central to the arguments against reenactments. Based on an archival approach to the regime of traces, performances are a failure in every case, as they cannot reproduce the original in all its conditions. Nevertheless, this central failure is also biased; If we approach other forms of historical and knowledge transmission, the concept of originality is not a viable category, as discussed in the cited work of Diana Taylor, and André Lepecki. In considering the situatedness of embodiment and the performative loops and circuits, there can be no such thing as an original. Thus, in understanding reenactment as a mean of actualization, a creative actualization, and in overcoming the desire of originality, we can easily overcome these critiques.

486 As outlined in the previous footnote, reenactments can lead to false representation of pasts. Therefore, power relations are a crucial element to be considered in the preparation of the reenactment, both in the virtual pasts actualized and in the actual performance. I also argue that reenactments produce embodied knowledge, which means that it is in the bodies of performers that knowledge is individuated. Thus, when performed as TV shows, which exclude the potential for embodiment in spectators, reenactments cannot be considered as a source of historical knowledge. In this case, only the actors can be said to participate in the reenactment.

487 Cook, Alexander. "Practices of Reenactment." In *The Routledge Handbook of Reenactment Studies: Key Terms in the Field*, edited by Vanessa Agnew, Jonathan Lamb, and Juliane Tomane, First edition., 187–90. New York: Routledge, 2020:190.

488 Cook, Alexander. "Practices of Reenactment." In *The Routledge Handbook of Reenactment Studies: Key Terms in the Field*, edited by Vanessa Agnew, Jonathan Lamb, and Juliane Tomane, First edition., 187–90. New York: Routledge, 2020:190.

The historian's gaze toward the **document** emphasizes the context of production of historical materials, and the careful rebuilding of scenes allows one to hypothesize and access the power relations, subjectivities and **temporalities** at stake. This method proposes an **ethic** of research and an affective engagement with the material, which demands great **imagination**, empathy and rigor. Today, the term reenactment would not be used to describe this process, be it in the historical field or others, such as dance. Such research of fidelity, understood as the authority of an original upon the **actual**, would lead instead to the term reconstruction.<sup>489</sup> It refers to methodologies and practices that aim to rigorously follow up and reproduce what has been by reassembling its traces—mainly **documents**. The research of fidelity and truth is both the main motive and end goal of *reconstruction*.

In dance, the **repertoire** has long been a category of analysis and a central instrument to preserve and circulate knowledge and performance. Indeed, legacy, originality and authority in dance raise numerous questions that are not brought up by other disciplines. The **repertoire** for institutions or choreographers has always been central to tackling the relationship to **pasts** and references. Myriads of notational systems exist in the field of dance, and a good deal of effort is made to systematize the writing of performances; nevertheless, its heritage remains primarily embodied. Reenactment thus serves as an essential practice to recreate certain performances and preserve them, while some artists will also use them as creative sources of **imagination**. At the same time, institutions are increasingly more eager to put on dance performances and reenactments, integrate the discipline within art history, and give more space to performance in art museums.<sup>490</sup> However, while in some instances these reenactments are envisaged as trustworthy and authoritative reconstructions of **past** performances, in others they are inventive devices to create new relations to **pasts**, stemming the use of other terms such as reconstruction or re-creation.

Reenactments in contemporary and modern performance art pieces pose similar problematics. Among other examples, Marina Abramović has started to reenact her major artworks in *Seven easy pieces*.<sup>491</sup> In general, she and her reenactments have been widely criticized as a demonstration of “how easily the practice of re-enacting historical performance works becomes a clever marketing strategy that promises a captivating experience of, or sometimes an active participation in, live performance turned into spectacle, which hopefully attracts new audiences to the museum.”<sup>492</sup> These attempts to capitalize on the reenactment of performances also conceal the fact that that most were initially devised with the intention of producing **documents**.<sup>493</sup> Artists “quickly became fully conscious of the need to stage it for the camera as much as for an immediately present audience, if not more so.”<sup>494</sup> In these cases, the embodied experience of the performance, its lived experience, does not necessarily grant privileged access to the intentions of the artist or the piece itself. Thus, the reenactment of performance art is able to be instrumentalized by institutions to capitalize on existing works, while sometimes concealing the artistic work in and of itself, otherwise identified with the act of documenting.

If the relations between reenactments and **documents** were once clear, according to the definition of Collingwood, the reenactment of performance art clouds these first definitions. Despite an attentive reconstruction of a **document's** context, which becomes the scene of reenactment, what it offers as materials is not sufficient to reach authenticity in embodied reenactment.<sup>495</sup> Lasting **documents** belong to the archival regime, which *a priori* exclude some forms of knowledge. What has been concealed, erased or neglected by the textures of the archival regime—or its appraisal processes—escape the

489 See the chapter ‘Reconstruction, Re-creation, Reinvention’ in Main, Lesley. *Directing the Dance Legacy of Doris Humphrey: The Creative Impulse of Reconstruction*. University of Wisconsin Press, 2012, and Agnew, Vanessa. “Introduction: What Is Reenactment?” *Criticism*, 2004, 327–39.

490 See Benichou, Anne. *Rejouer le vivant: les reenactments, des pratiques culturelles et artistiques (in)actuelles*, 2020. The third part of the book, entitled ‘Des répertoires à rejouer, à l’horizon des musées’ specifically deals with the desire of art museums to promote dance and reenactment.

491 Gugenheim, 2005.

492 De Laet, Timmy. “Moving (in) the Museum: Re-Enactment as Research into the Musealization of Dance.” *Muséologies: Les Cahiers d’études Supérieures* 8, no. 1 (2015): 60. <https://doi.org/10.7202/1034610ar>.

493 See Jones, Amelia. “‘Presence’ in Absentia: Experiencing Performance as Documentation.” *Art Journal* 56, no. 4 (December 1997): 11–18. <https://doi.org/10.1080/00043249.1997.10791844>.

494 Auslander, Philip. “The Performativity of Performance Documentation.” *PAJ: A Journal of Performance and Art* 28, no. 3 (September 2006): 3. <https://doi.org/10.1162/pajj.2006.28.3.1>.

495 Allen, Jennifer. “Einmal Ist Keinmal.” *Observations on Reenactment*. In: S. Lütticken, Ed., *Life, Once More: Forms of Reenactment in Contemporary Art*. 1st Ed. Rotterdam: Witte de With, 2005, 177–213.

496 Lütticken, S. "An Arena in Which to Reenact." *Life, Once More: Forms of Reenactment in Contemporary Art*, 2005, 59.

497 Agnew, Vanessa. "History's Affective Turn: Historical Reenactment and Its Work in the Present." *Rethinking History* 11, no. 3 (September 2007): 299–312. <https://doi.org/10.1080/13642520701353108>.

498 Agnew, Vanessa. "Epilogue: Genealogies of Space in Colonial and Postcolonial Reenactment." In *Settler and Creole Reenactment*, 298. Springer, 2009.

499 Agnew, Vanessa, and Jonathan Lamb. *Settler and Creole Reenactment*. Springer, 2009.

500 Agnew, Vanessa. "Epilogue: Genealogies of Space in Colonial and Postcolonial Reenactment." In *Settler and Creole Reenactment*, 299. Springer, 2009.

501 See chapter C, 'A ghost in the Jaïma', in the subsection 'Surpassed by modern education.' Afterlives of institutional violence.'

502 Agnew, Vanessa. "Epilogue: Genealogies of Space in Colonial and Postcolonial Reenactment." In *Settler and Creole Reenactment*, 299. Springer, 2009.

potential narratives of the **past** that can be produced from within the **archives**. Thus, if **documents** from the **archive** are used, they must be considered in their specific context of production and not as trustworthy representations of **pasts**—not as sources but as subjects. The same paradox is apparent in reenactments of performance art, such as *Seven easy pieces* and indeed other examples, where the **documents** of the performance are not considered to be its final products, privileging the embodied medium over others and placing authority and originality at the service of a reenactment turned spectacle.

As argued by Sven Lütticken, it is critical to consider not only the capitalist society of spectacle but also the rise of neoconservative and religious fundamentalist. The constructed images of certain **pasts** openly serve as political ideals to be reenacted:

"Islamists try to reenact a phantasmatic 'pure' Islam [...]. Western neoconservatives on the other hand try to recreate a pre-sixties modernity, in less violent ways and accepting of most technology. Some want to go beyond the cities to the more distant time before the French Revolution; [...]. The situation is complex; Georges W. Bush's infamous—and hastily retracted—use of the term crusade gave us a glimpse of the program of Christian fundamentalists in the United States, who would gladly return to the days of the Pilgrim Fathers, or even to the time of the Crusades."<sup>496</sup>

Other ideologies glorify the European imperial and colonial **pasts**. Indeed, this is precisely what is primarily criticized in popular pageant and historical reenactment practices, consisting of restaging events or everyday life scenes. Thousands of examples could be taken from reenactments of famous battles (battle of the bull run for the centenary of the civil war in the USA, 1961; battle of the Bulge in 2001) or everyday life (as in the work of the artist Omer Fast and his reenactment of the colonial city of Williamsburg, Virginia in the eighteenth century; American traditions since the beginning of the nineteenth century for communities' self-representation; historical reality television series, such as the German *Abenteuer* 1900, 1927 or *Windstärke 8*). The research of authenticity and truth in reenactments is based on a collective image of **pasts** forged by historical discourse and **documents** that operate in archival regimes, and perpetuates inequalities systems of domination. This, in turn, transforms reenactments into malleable instruments for ideological abuse, especially toward spectators.<sup>497</sup>

One fundamental dimension to learn from historical reenactments and pageant practices is that reenactments operate as a simplification of "complex historical processes and conflate current social and political concerns with earlier ones."<sup>498</sup> **This flattening consists of a drastic increase in the surface of contact with pasts for the reenactors, while also offering space and time to lives and knowledge previously concealed and subjugated by dominant narratives.** The book *Settler and Creole Reenactment*,<sup>499</sup> edited by Vanessa Agnew and Jonathan Lamb, brought together analysis and discussions of postcolonial and colonial reenactments used to claim ethnic and civil rights. Reenactments rearrange "the past by telling neglected stories, by showing histories from below rather than from above, and by emphasizing conjectural interpretations of the past."<sup>500</sup> In certain conditions, reenactments perform the acts of remembrance and means of reappearance of knowledge and memories whose circulation has been blocked by imperial violence and modern education.<sup>501</sup> They offer opportunities to make contact with concealed **futures**, experiencing

"how the past might have unfolded differently—how economic and gender inequities, territorial dispossession, racial persecution, and genocidal violence could have been avoided—and it thereby allows the future to be imagined anew."<sup>502</sup>



Reenactments have to operate from this flattening of **temporalities** and consciousness of the temporal ambiguities they rely on. The **past** must not be considered a **past past**,<sup>503</sup> but rather coexisting alongside the **actual**, in order for reenactment to avoid becoming an instrument for the relegation of knowledge and lives to the imperial linear chronology.<sup>504</sup> Questions concerning power relations, or who should decide what to reenact, and how, are critical to avoid recreating instruments that would subjugate potential histories. It is the case both for historical reenactment or that of dance, in which

“[t]he function of citation may, however, be primarily the experience of the performer, and their relationship to the past. Such uses of history and memory set thought in play and thus short circuit the power relations through which the dancing bodies are disciplined and controlled. If history is no longer seen as a source of transcendent, aesthetic values, the audience enters new kinds of relationships with performers as witnesses to a process of remembering in which they may only be partly included.”<sup>505</sup>

**Reenactments are modes of conservation and circulation of the repertoire, along with its temporalities, historicities and systems of authorities, and originalities.**<sup>506</sup>

The notions of truth, fidelity to the original and authority cannot be considered end goals of reenactments, as they are partly obsolete within the dynamics of the **repertoire**. **Instead, used with care, they can be instruments that serve an ethic of the repertoire**<sup>507</sup> **when considering pasts, not merely as something distant to be brought up once more, but as something along to make contact with.** Thus, aware of potential for capture and instrumentalization, (historical and artistic) reenactments remain a central tool to address and foster embodied and oral knowledge circulation while proposing critical, affective and inventive relations to **pasts**. Historical reenactments permit the reenactors to experience the multiplicity of voices unheard by the historical discourse, to be affected by them, and open up a field for multilayered, complex and unresolved approaches to what has happened. This affective and speculative perspective on reenactment grounds potential histories while offering new scales and elements of analysis formerly concealed by the archival regime.

Thus, while reenactment as a term and practice is an *invention* of the nineteenth and twentieth century, it is nevertheless a much older and more widespread practice constituting the *act of remaining and means of reappearance* of the **repertoire**, forming itself as a historical medium. As a temporal continuum or continuity, this mode of communication and transmission should thus be employed with care. Out of the dominant historical and epistemological circles, reenactment and performance are and have been the mnemonic reserves of humans. When one tries, through reenactment, to make contact with various embodied **pasts**, it is the reenactment of a zone of **imagination**, invention or **actualization** of **past** performances that transforms the body of the reenactor into a medium of history, reactivating the formerly **subjugated repertoire** as a medium of **historiography**. **Reenactment creates the basis for a potential contact with other knowledge, speech acts of human and non-human bodies, and offers hospitality to modes of thinking and relating with worlds and their futurities.**

In a scholarly context and following the definitions that emerged according to Collingwood, reenactment is a particular mode of accessing **pasts** through embodiment. It necessitates a set of knowledge, competencies, care, **ethics** and humility, allowing one to make contact with **subjugated** forms of knowledge by reactivating the **repertoire** as a mode of transmission and conservation of knowledge and memories. In our context, the tasks of the reenactor are:

503 See chapter C, ‘A ghost in the Jaïma.’

504 Allen, Jennifer. “Einmal Ist Keinmal.” *Observations on Reenactment*. In: S. Lütticken, Ed., *Life, Once More: Forms of Reenactment in Contemporary Art*. 1st Ed. Rotterdam: Witte de With, 2005, 177–213.

505 See Burt, Ramsay. “Memory, Repetition and Critical Intervention: The Politics of Historical Reference in Recent European Dance Performance.” *Performance Research* 8, no. 2 (January 2003): 41.

506 See chapter B, *The architecture and the repertoire*, especially the section ‘The architecture and the repertoire. Body-to-body historicity and migration of spatialities’, and chapter C’, *Archival pharmacology*, especially in the section ‘Archival pharmacology. Ethics and paradoxes of “archiving” the oral and the embodied.’

507 See chapter C’, ‘Archival pharmacology,’ especially in the section ‘Archival pharmacology. Ethics and paradoxes of “archiving” the oral and the embodied.’

508 Benjamin, Walter,  
Hannah Arendt, et Harry  
Zohn. *Illuminations*. New York:  
Schocken Books, 1986:254.

- (1) to relearn how to use her body as historical material, investigating her own **repertoire**, and how historical, spatial and socio-economical forces have shaped this **repertoire**;
- (2) to unlearn the sources that constitute the dominant historic narratives while observing other ways of transmitting memory and knowledge, orally or through **gestures**, and to analyze the **migration** of this knowledge from one body to the other;
- (3) to consider how reenactment allows one to make contact with **subjugated** forms of knowledge, particularly those of the **repertoire**. Through this contact, reenactment should foresee how this knowledge dwell and inhabit our spatialities, while considering how it does so intergenerationally, despite the silencing practices our cultures have been through;
- (4) to embody the conviction that “nothing that has ever happened should be regarded as lost for history.”<sup>508</sup>

## Architectural reenactment?

509 See the study of Swedish and Danish living history museum and the role of architectures as a support for remembering in Hoekstra, Ross. “Architectural Reenactment. Investigating Architecture’s Supporting Roles.” 2015. [https://issuu.com/rhoekstra/docs/reenactment\\_almanac\\_draft\\_issuu\\_dow](https://issuu.com/rhoekstra/docs/reenactment_almanac_draft_issuu_dow).

510 Mannell, Steven.  
“Architectural Reenactments at 1:1 Scale.” *Journal of Architectural Education* 60, no. 2 (November 2006): 29–42.  
<https://doi.org/10.1111/j.1531-314X.2006.00077.x>.

511 Mannell, Steven.  
“Architectural Reenactments at 1:1 Scale.” *Journal of Architectural Education* 60, no. 2 (November 2006): 29.

512 Mannell, Steven.  
“Architectural Reenactments at 1:1 Scale.” *Journal of Architectural Education* 60, no. 2 (November 2006): 41.

513 This is tackled by the Training Network ‘Communities of Tacit Knowledge: Architecture and its Ways of Knowing,’ in the frame of Marie Skłodowska-Curie Actions within the European Framework Program Horizon 2020. It aims at addressing the knowledge specific to architects when designing, which is

Architectural reenactment is a rare collocation. One of its main occurrences refers to re-constructions of architectural or urban historical objects. It describes the practice of reproducing decor for living history museums as the backdrop for historical reenactments.<sup>509</sup> In this perspective, the emphasis is on buildings for the uses of reenactors, which function mainly as a background.

Another occurrence of the term is in an article that discusses a pedagogical experiment at Dalhousie University, Canada, entitled “Architectural Reenactments at 1:1 Scale.”<sup>510</sup> The experiment described pertains to a series of two-week workshops during which parts of architectural objects are rebuilt. Attending students, “immersed in the milieu and writings of a selected architectural ancestor, work through the subject’s design and construction methods, become intimate with specific examples of work, and finally project a speculative vision of architectural possibility.”<sup>511</sup> In learning about the construction techniques, discourses, and projects of the *architectural ancestors*, through drawing, models, and full-size elements, participants are led to reproduce certain **architectural operations**, in this case, that of Rudi’s Cabana by R.M. Schindler and Jean Prouvé’s Evian pavilion. The author argues that students, through reenactment, were able to unravel the choices that ordered architectural space in both case studies, engaging “the nonverbal discourse of the making hand, in order to ‘speak differently’ about architecture and design.”<sup>512</sup> This constitutes a precedent of reenactment as a means of relating to architectural history and **documents**, investigating the operations of an architect through bodies as the medium of **historiography**.<sup>513</sup>

not explicitly formulated as architectural knowledge. This program directly questions oral and embodied knowledge, and aims at creating a common basis for research and opportunities of transmission. See <https://tacit-knowledge-architecture.com>.  
See equally the chapter

‘Reenactment’ in Ursprung, Philip, Francisco Díaz, and Francisco Quintana. *Representacion Del Trabajo = Representation of Labor: Historiografía Performativa = Performative Historiography*. Primera edición. ARQDOCS. Santiago de Chile: Ediciones ARQ, Escuela de Arquitectura Pontificia Universidad Católica de Chile,

2018. The reenactment consisted in re-producing a performance of Allan Kaprow with the artist and a group of architectural students in Athena. If it concerns performance art, the context in which it took place makes of the practice a precedent to be mentioned.

The last occurrence that I observed, situated between the two aforementioned types of architectural reenactment, refers to a practice in experimental archaeology. It is used in archaeological contexts where no remaining building of a studied epoch has been found. To build up a hypothesis about what the constructions and architectural landscape might have been, archaeologists assemble the technical objects at the disposal of the population and meet on a site where the material available is similar to what was likely available previously. From there, they begin a process of creative reconstruction, reenacting the **architectural operations** that could have been individuated with the knowledge, technical and non-human bodies within reach. Like the previous 1:1 scale reconstructions, this experiment is not about final results but a speculative series of **architectural operations**.

For the purposes of this research, and in the attempt to make contact with the **repertoire** as a medium of histor(iograph)y, the definition I propose of architectural reenactments covers reenactment practices of spatial practices—be it building practices, navigation practices, or certain **undrawn performative spatialities** and their economy of human and non-human bodies. The goal is not to reach authenticity and historical truth or fidelity. Instead, it is thought of as a strategic opportunity to reactivate the **repertoire** and its **figurations**—oral and embodied architectural knowledge, which enacts a landscape of **affordance** and dialogues with human and non-human bodies. Such architectural reenactments demand a series of material conditions and a corpus of embodied and oral knowledge that must be performed and shared by some bodies to migrate to other bodies.

Reenactment, as an architectural, historical methodology, allows for ambiguous, fuzzy and new subjectivities that grant access to other **repertoires** of **figurations**.<sup>514</sup> As a particular mode of accessing histories, knowledge and memories, reenactment is profoundly transformative for the subjectivities, and human and non-human bodies at play. It allows minor performative loops to be analyzed, understood, and subverted. By reenacting the subjectivities at stake, the **operatory side** of spatialities and its social conditions of production are made visible, countering the blindness of architectural **hylomorphism** with the constitutive operations of its spatialities and its social economies<sup>515</sup>. Thus, architectural reenactments are not limited to construction practices and **architectural operations**, but they propose a particular method of navigating through knowledge and their **temporalities**.

Whether reenacting certain **architectural operations** or **architectures of operations**, architectural reenactments pave the way to a critical, embodied and reflexive approach to our built environments<sup>516</sup> by rendering perceptible architectural and spatial knowledge, habits and social norms that structure our relation to the environment. As education of bodily attention, **figurations** and its pandemonium of **driving forces** are affecting reenactors, opening a new field of analysis of built environments. Strategically, reenactments foster the **migration** and circulation of knowledge of/from the **repertoire** while being hospitable to its **temporalities** and **futurities**. Simultaneously, they enact possible renegotiations of spatialities through the **repertoire** at the scale of a **gesture**.

This section will delve into the methodology of architectural reenactment as a strategic practice to renegotiate architectural histor(iograph)ies, spatialities, and **architectural operations**. During my stay in the refugee camps, we had planned architectural reenactments with Lahsen Selki Sidi Buna, which consisted of visiting former refugee camps to reenact certain **undrawn** spatialities and stir up embodied knowledge. Unfortunately, due to the management of the pandemic, we had to postpone these projects. The considerations thus remain speculative but retain the potential to be developed at a later opportunity.

514 It is clear that these new figurations are in dialogue with one's own repertoire and necessitates reflexivity to understand the co-shaping of the repertoires. In this sense, reenactment as a historical method demands clear positionalities.

515 On the blindness of architectural hylomorphism due to social stratification and hierarchies of knowledge, and the necessity of an architectural theory of operations, see chapter A.

516 In her PhD at the KTH Stockholm, Brady Burroughs developed the practice of *Architectural Flirtations* as a way to subvert the codes of the architectural critique and go beyond the classical grammar of critical and historical discourse. To do so, she developed exercises and techniques to enable architects, students, teachers, etc., to get under the skin of other subjectivities, to multiply the relationships with the architectural objects discussed, and thus, the voices considered as legitimate and hearable. She developed this work upon the essays of Sara Ahmed, and notably her queer phenomenology of Disorientation. See Burroughs, Brady. "Architectural Flirtations: A Love Storey." *TRITA-ARK. Akademisk Avhandling*. Doctoral thesis, monograph, Arkitektur- och designcentrum, 2016. DiVA. <http://urn.kb.se/resolve?urn=urn:nbn:se:kth:diva-194216>.



## Proximity/reach. Critical, affective historical practices.



| Fig. A1 | Snapshot of the film of Harun Farocki, *Vergleich über ein Drittes* (Comparison via a third), 61min, 2007 (seen at <https://vimeo.com/225091024>, on the 20th of October 2020).

517 Gordon, Avery. *Ghostly Matters: Haunting and the Sociological Imagination*. 2008:178. Quoting Spillers, Hortense J. “Changing the Letter: The Yokes, the Jokes of Discourse, or, Mrs. Stowe, Mr. Reed.” *Slavery and the Literary Imagination*, 1989, 51.

518 ‘Ce qui réside dans les machines, c’est de la réalité humaine, du geste humain fixé et cristallisé en structures qui fonctionnent.’ Simondon, Gilbert, and Nathalie Simondon. *Du mode d’existence des objets techniques*. 2012:13.

*Reaching material speech acts.* Let’s return to the spatial (hi)stories of the **brick** molders. Chapter A argued that the **hylomorphic** representation of the **brick** fails to grasp the **brick**’s haecceity and the knowledge and lives of **brick** molders. By reducing the **brick** to its form and subjugating matter, the **hylomorphic** scheme is unable to grasp a **brick**’s operations of individuation, energy modulations, and knowledge in **gestures** of human and non-human bodies. In doing so, **hylomorphic** representations create an irreducible ontological **distance** in time between the **brick**, the clay, the potentialities in the swamp, the workshop and the operations. This **distance** is an infrastructure of concealment and relegation of knowledge structures that have been estranged to us, performatively reproducing social stratification. Even in handling the **bricks**, reducing physical **distances** by holding them, the **bricks** presented in Harun Farocki’s video are all the *same*.

The question is then, how can one be affected, how can one make contact with the material speech acts of **bricks**? How can one reduce the **distance** enacted by architectural **hylomorphism**, creating forms of proximity with the **brick**, a dialogue that would bring its operations of individuation within *reach*?

There are surely myriad ways to enact this proximity. And one is reenactment. In the process of reconstructing the **brick**’s operations of individuation, the **hylomorphic** irreducible **distance** is compressed “back to a *point of density*.”<sup>517</sup> First, the logistics of reenactment logistics require an investigation into the political economy in which the extraction of the material and the manufacture of the **brick** occurred. What human and non-human bodies co-operated in the individuation, and in what way. The social and technical organization in between these bodies must also be understood and available to reenactors. This can be done through preparatory and archival research. Alongside the relations between “the human **gesture** fixed and crystallized”<sup>518</sup>, and the mold in which the **brick** will individuate must be reenacted—recalled, re-membered:

“it is thus not an immediate knowledge nor a mediated knowledge that we can have of the individuation [of a brick], but a knowledge that is a parallel [bricking] operation to the

known [bricking] operation; we cannot, in the usual sense of the term, know the [bricking] individuation; we can only individuate, individuate ourselves and individuate in ourselves; this seizure is thus, in the margin of the knowledge itself, an analogy between two operations, which is a certain mode of communication.”<sup>519</sup>

The knowledge necessary to construct dialogue between the molder, its milieu, technical objects, the prepared matter and other non-human bodies participating in the operations, which belongs to the **repertoire** and is crystallized in the **brick**, is reenacted, performed. Reenactment constitutes its acts of remaining and means of reappearance, offering the possibility of knowledge from the **repertoire** to circulate and migrate from one body to another. The reenacted operations of **bricks** develop a proximity between human and non-human bodies through which the knowledge of the **brick** is excorporated and incorporated anew, preventing their material speech act from falling on deaf ears.<sup>520</sup>

*Hospitality toward pre-empted futurities.* Beyond their material speech acts, architectural reenactments of **bricks** allow reenactors to be affected by inner *touches* of operations and **gestures** crystallized in the **brick**. Thus, a sensuous dimension of the **brick**’s historicity—and the historicity of its relations with human and non-human bodies—is within reach of reenactors. This extends the spatiotemporal volumetric surface on which the *touch* of the environment—and material speech acts of **bricks**—will exert a force and be hosted. In this way, the **temporalities** and **furutures** of the knowledge, memories and histories of **brick** molders, previously concealed by the irreducible **distance** of **hylomorphic** representations, are possibly welcomed on the volumetric surface of **gestures**.

519 ‘Seule l’individuation de la pensée peut, en s’accomplissant, accompagner l’individuation des êtres autres que la pensée; ce n’est donc pas une connaissance immédiate ni une connaissance médiate que nous pouvons avoir de l’individuation, mais une connaissance qui est une opération parallèle à l’opération connue; nous ne pouvons, au sens habituel du terme, *connaître l’individuation* ; nous pouvons seulement individuer, nous individuer et individuer en nous; cette saisie est donc, en marge de la connaissance proprement dite, une analogie entre deux opérations, ce qui est un certain mode de communication.’ Simondon, Gilbert. *L’individuation à la lumière des notions de forme et d’information*. 2005:36.

520 See Schuppli, Susan. *Material Witness: Media, Forensics, Evidence*. Leonardo. Cambridge, MA: The MIT Press, 2020.



| Fig. C1 | The Jaima. Disposition of the interior space and relations to other tents in the camp between 1980 and 1991. Diagram made with Lahsen Selki Sidi Buna during an interview with Gorba M. L. on the 8th of March 2020. We can see the women’s objects on the west side of the tent, the position of the kitchen on the east, with the fabric extension. Lahsen Selki Sidi Buna and Julien Lafontaine Carboni.



**Hospitality** to other forms of knowledge and lives, through architectural reenactment and **distance** reduction, brings us back to the **ghost** in the Jaïma. The **ghostly** architectural agency of the absence of Gorba's husband in the Jaïma was hypothesized as being **actualized** through her **gestures**. These architectural **gestures** of **hospitality** and the space enacted for the **ghost** were used as a weapon to fight for return. In enacting this space and perpetuating her nomadic habits and knowledge, she maintained **futurities** otherwise pre-empted by war and colonialism. These **futurities**, (re)produced as present corporealities, **actualized** by the void at the east of the Jaïma, were *for me ghostly*, as it was *for me* a contact with a structure of knowledge that I did not know yet or anymore.

An architectural reenactment with younger Sahrawi, using the **architectures of operations** of Gorba in her Jaïma, would be an opportunity for **migration** of these embodied **gestures** and their **futurities** to new generations. Architectural reenactments not only reproduce **architectural operations** or **architectures of operations**, but also strategically circulate the knowledge and memories of the **repertoire**, allowing the **temporalities**, knowledge and **futurities** that it involves to migrate **body-to-body**. They short-circuit potential **epistemic violence** and silencing while maintaining the potentialities of the **repertoire**. As such, architectural reenactments propose a spatiotemporal breach for *peaceful reconciliation* and repair.

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Questions of what is to be architecturally reenacted and with what objects of research are critical. Indeed, reenactments could also reproduce **epistemic violence** and silencing by reenacting architectures of the dominant discourse. Even if reenactment would produce knowledge formerly concealed by architectural **hylomorphism**, it does not mean that it would systematically deconstruct the hegemony of certain voices in architectural history. Choosing which economy of human and non-human bodies to reenact should thus be done strategically, in relation to knowledge from the **repertoire**. And indeed, the circulation, conservation and **migration** of this economy must be performed with in mind the struggle for reparation and epistemic justice.

By reproducing operations that bring an economy of human and non-human bodies into being—**architectures of operations**—**undrawn spatialities** become a tangible object of architectural history while preserving their historicities. Architectural reenactment brings them *within reach*. It draws them to the reenactors. It allows one to follow other threads of potential histories and minor inventions neglected by dominant discourses, such as the architectural **gestures** of Gorba. Architectural reenactments compress the irreducible **distance** imposed by architectural **hylomorphism** with objects and operations of **pasts**. It reenacts proximity with **pasts**, presents, **futurities**, **past futurities** and **future pasts** of architectures that have been neglected or concealed.

Architectural reenactment fosters circulation and **migration** of the **repertoire**, by offering a zone for peaceful reconciliation with its oral and embodied knowledge, its forms of **imagination**, as its *acts of remaining* and *means of reappearance*. Such reenactments augment the reach of our **gestures** by unfolding the volumetric surface through which we are affected by human and non-human bodies—such as the material speech acts of **bricks**. By changing the focus from the objects of architectural history to the operations that create them, reenactment proposes a critical and affective relation to histories, emphasizing the **repertoire** and its oral and embodied knowledge, thought of as a zone and a resource for repair and peaceful reconciliation.



## Contact/surface. Critical spatial analysis.

*Subjectivities, social norms and power relations.* Architectural reenactments are strategic practices to provoke the circulation and **migration** of knowledge from the **repertoire**. In migrating **body-to-body**, this knowledge extends the reach of reenactors' **gestures** and operations, reducing the **distance** with the material speech acts of non-human bodies. This renewed reach potentially grants access to **undrawn architectural operations/architectures of operations** as objects of research and mediums of histor(iograph)y. Thus, in addition to increasing proximity, architectural reenactments also augment the surface of contact with the **actual**. Nevertheless,

“it is not by a mechanical adjunction of more and more numerous elements which, while remaining unmoved, it attracts around it, but rather by an expansion of the entire consciousness which, spreading out over a larger area, discovers the fuller detail of its wealth. So a nebulous mass, seen through more and more powerful telescopes, resolves itself into an ever greater number of stars.”<sup>521</sup>

This augmentation of the surface of contact offers a better grip on worldly textures in the form of bodily attention, extensions of the spatiotemporal volumetric surface on which the environment exert forces. I argue it opens a route toward histories and spatial analysis that avoid flattening the subjectivities and power relations enacted by spatialities and architectures.

Through architectural reenactments, bodily techniques and social norms that make up **performative spatialities** are made visible and perceptible, as their touch is brought about as an element of reenactments. Moreover, the ways in which environments support and reproduce social norms can be sensed even if the dynamics are heterogeneous to the bodies in presence. As such, reenactment grants access to the way spatialities are lived and experienced, but more accurately, to what they afford or offer as support. It does so while remaining socially, culturally and technically situated, according to social matrixes. This dimension constitutes both the weakness and strength of architectural reenactments; the **migration** of the **repertoire** occurs through bodies which differentiate it at every turn. Each body has its own historicity, struggles, expressivity and thus “[t]he repertoire both keeps and transforms choreographies of meaning. [...] But even though the embodiment changes, the meaning might very well remain the same.”<sup>522</sup>

In the process of migrating from one body to the other, spatial and architectural oral and embodied knowledge is transformed by acts of **excorporation** and **incorporation**; fidelity, originality and authority remain central to an **ethic** of reenactment but cannot constitute its end goals. There may be a similar experience of a socialized body, a parallel understanding of worldly texture, but there cannot be *sameness* in **migration**. Thus, reenactment proposes an embodied spatial analysis, which avoids flattening the multiplicity of meanings and plurality of **temporalities** in **performative spatialities**. It does so, not by erasing previous affects or aggregating new meanings, but in augmenting the surface of contact with the **actual**, developing a finer grain of its potentialities.

*Stabilizing the ontologies of figurations.* Other scales of spatial analysis are within reach through this grip on worldly textures offered by architectural reenactment. While **figurations**, such as the circular meeting, or other forms of radically embodied **architectures of operations**, have been excluded from architectural history and practice partly because of the texture of their knowledge, architectural reenactments function as

521 Bergson, Henri. *Matter and Memory*. New York: Zone Books, 1988:165-6.

522 Taylor, Diana. *The Archive and the Repertoire: Performing Cultural Memory in the Americas*. Durham: Duke University Press, 2003:20.



| Fig. B1 | Drawing of a Morning Meeting in the refugee camps in 1976. Source: Manfred O Hinz, '3WM Interview mit Gunther Hiliger', *Terre des Hommes* (1977): VIII. Found in the Archives of the Ministry of Information of the SADR, redrawn by the author.

523 Mauss, Marcel, and Nathan Schlanger. *Techniques, Technology and Civilisation*. 2006:81.

instruments and tools that enable their acts of remaining and means of reappearance. **Migration, imagination** and invention through embodied and oral **architectural operations** and their historicities enter the domain of spatial analysis.

From our understanding of architectural reenactments, we can learn that “there is perhaps no ‘natural way’ for the adult.”<sup>523</sup> No spatialities or architectures exist in a void. Instead, **figurations** enact them from the **repertoire**. From the most banal to the most specialized, spatial and architectural knowledge is organic AND profoundly organized. This **operatory side** consists of techniques and knowledge that must be considered in architectural history and analysis. This side focuses on techniques to **design the repertoire** and **design from the repertoire**, and scrutinize these organic forms of techniques as being in no way more *natural* or emancipatory. On the contrary, the **performative spatialities** that they enact are equally saturated with control, and they equally participate in the subjugation of knowledge and lives. These scales and textures of analysis, accessible through reenactment, are necessary to enact reparative and post-domination **futurities**. They are even more crucial since our bodies themselves are sites of multiplicities of silencing and concealment that we perpetuate performatively, without being able to notice.

These remarks gain further significance under repertoire extractivism and its exploitation of the gestural scale of everyday spatialities. The engineering of the potential, through environmental design and the extractivism from which it operates, today constitutes one of the major means of spatial production and **design of the repertoire**. Traditional tools of architects or architectural historians are unable to grasp this form of engineering, which, crucially, modifies the volumetric surface enacted by our **gestures** and their reach. Once again, as a particular means of navigating through and shedding light on the co-operations of human and non-human bodies in **performative spatialities**, architectural reenactments could allow one to disentangle environmental design and the algorithmic *touch*. They achieve this by unearthing operational blindness and a/effects of the **repertoire**’s environmental design, restituting islands of investigation into these power struggles.

## Performativity/loop. Critical spatial practices.

The process of finding new methodologies for critical architectural histories and analysis must consider their impact and **performativity** on society and practice. While architectural reenactments reactivate the circulation and **migration** of knowledge from the **repertoire**, they also enact space and time for renegotiation at different scales and forms of agency by developing relations with worlds.

As suggested by feminist and queer architectural theorist Katarina Bonnevier, “[i]n any building activity ideologies and norms are reiterated. What I want to bring into play is that this also works the other way around—subject positions are partly construed through building activities.”<sup>524</sup> And this reiteration occurs in the common world of everyday spatialities. Spatialities are brought into being through the embodied gesturing and wording performances of individuals, coupled with potentialities enacted by milieus and socio-spatial norms that architectural practice reiterates in design. And it is through the same performance, through **techniques of the body**, that individuals are inserted and subjectivized into the social. This approach to spatialities situates the agency of human beings in the subversion of socio-spatial norms in performance, in the consciousness of the mask, and in the renegotiation of socio-spatial norms reiterated. As argued by Judith Butler, “all signification takes place within the orbit of the compulsion to repeat; ‘agency,’ then, is to be located within the possibility of a variation on that repetition.”<sup>525</sup> In this perspective, the critical point is to decipher the blurry boundaries between performance and **performativity**.

*Inner touch.* Through architectural reenactments, in the compulsion to repeat economies of human and non-human bodies, the parallel loops of **performativity** and reproduction of norms in built environments are potentially unveiled. In this motion, the reenactors can study how built environments support and reproduce social norms and simultaneously find ways to set them against themselves at the scale of **gestures**. Here, we are referring to the (re)production of a post-domination and emancipatory architectural **repertoire**, which offers instruments to renegotiate **performative spatialities** and its subjectivities—**designs of and from the repertoire of architectures of operations**.<sup>526</sup> This form of agency, which resides in what Carrie Noland defined as *interoceptive feedback*, refers to the possible subversion lying in the inner *touch* of **gestures** that reiterates social norms. In her book *Agency and Embodiment: performing gestures/producing culture*, Carrie Noland develops a careful reading of Butler’s main text, *Gender Trouble* and *Bodies that matter*, to outline the absence of embodiment in her conception of **performativity**. In Butler’s words, the body is a “surface inscribed with meanings”, “a form whose distinct parts have been assigned incontrovertible valences within a limited and limiting male/female dichotomy of signification.”<sup>527</sup> As such, the argument is that there is no precultural or pregendered sensory-motor experience, that feeling one’s own somatic experience is culturally situated and interpreted through signs. The inscription, sign or mark mediates and produces one’s subjectivity upon the body and between one’s soma and associated cognitive processes.

Iris Young’s research, *Throwing like a girl, and other essays in feminist philosophy and social theory*, widely cited and discussed in the work of Butler, includes a very telling example commented by Noland. *Throwing like a girl* is demonstrated to be a gestural routine of feminized bodies produced by cultural conditioning. She argues that the taught experience of space is highly different for boys and girls.

524 Bonnevier, Katarina. *Behind Straight Curtains: Towards a Queer Feminist Theory of Architecture*. Trita-ARK, 2007, 1. Stockholm: Axl Books [u.a.], 2007:16.

525 Butler, Judith. *Gender Trouble: Feminism and the Subversion of Identity*. routledge, 2011:145.

526 This hypothesis will be developed in the coming Unité d’Enseignement ENAC ‘DRAG(U.E.), Performativity of the built environment.’ See the course book: <https://edu.epfl.ch/coursebook/en/drag-ue-performativity-and-the-built-environment-PENS-317>

527 Noland, Carrie. *Agency and Embodiment: Performing Gestures/Producing Culture*. Cambridge, Mass: Harvard University Press, 2009:173.



“Instead of mobilizing the entire body to propel an object, as boys do, girls concentrate the motion in one limb, misjudge the space they can encompass, and thus fail to ‘reach, extend, lean, stretch, and follow through in the direction of their intention.’”<sup>528</sup> “Further, this gendered privation of sensitivity to the moving self appears to be predicated on and produced by discursive commands and warnings: the young girl is ‘told that she must be careful not to get hurt, not to get dirty, not to tear her clothes, that the things she desires to do are dangerous for her. Thus she develops a bodily timidity that increases with age.’”<sup>529</sup>

Like every other gestural routine, young girls’ gestural routines are determined culturally through repetitive discursive practices that discipline behaviors and **gestures**. Nevertheless, as Noland argued, the capacity of feminized bodies to learn how to throw like a boy, as a result of experience and training, is not acknowledged by Butler as a subversive potentiality. **Gestures** can create dissonance between the reiterated and discursive norm and **actual** gestural performance, subverting dichotomies. Bodies and **gestures** allows to perform more than one subjectivities. In return of such performance, an affective and kinesthetic experience of dissonance can open a gap between the marked bodies and gestural routines, and bring about subversion of norms.

Furthermore, “[w]hat it feels like to perform the act of throwing is never at issue for Butler since, in her stringently antiphenomenological axiomatics, feelings are always mediated by words that make those feelings available while alienating us from them.”<sup>530</sup> Indeed, **performativity** in her work is focused on discursive (speech) **performativity**, rejecting embodiment and interoception as hinge points for expanded subjectivities. The variation in Butler’s case is highly bound to the possibility of creating new subjectivities in repetition upon a dissonance of *verbal performance*. In the case of verbal dissonance—when language is exceeded and does not possess the resource to designate the performance—language calls for a proliferation of new possibilities. Subversion (and agency) is situated in language itself, as it always exceeds the possibilities of meaning renewing subjectivities through language.

Can the gestural *exceed* itself as does the language? Do the gestural and the embodied possess an agency in reiterations—and particularly in **performative spatialities**? For Noland, the key is in the repetition and variation on the Butler model. In this repetition, bodies reexperience the reproduction of **gestures**. She writes:

“The subject, in ‘reexperiencing’ social meanings, becomes alert to the distinction between meaning-making for others and being a material support for that meaning, or, more precisely, being a material and animate support for that meaning. In other words, the term ‘reexperience’ offers the possibility that through repetition, through reenactment, the subject may reexperience her own moving body as an embodied sign—that is, as a sign and as a form of embodied animation. [...] Such discontinuities and dissonances can only be attributed to accident, since the subject’s own awareness of embodiment is never seriously considered as a possible source of agentic change.”<sup>531</sup>

In reexperiencing meaning-making through the gestural reenactments of socio-spatial norms lies a possibility of deviation in the gestural routine. This deviation or variation is produced from feeling the moment of one’s body, interoception. The affect within the body produced by **gestures** opens a gap between the movement and the meaning attributed to the moving body, beyond language, creating the basis for other subjectivities and spatialities. And architectural reenactments can provide the basis to blur the limits

528 Noland, Carrie. *Agency and Embodiment: Performing Gestures/Producing Culture*. 2009:173.

529 Noland, Carrie. *Agency and Embodiment: Performing Gestures/Producing Culture*. 2009:174.

530 Noland, Carrie. *Agency and Embodiment: Performing Gestures/Producing Culture*. 2009:176.

531 Noland, Carrie. *Agency and Embodiment: Performing Gestures/Producing Culture*. 2009:191-2.

between potential **gestures actualized** and virtual **gestures actualized**. In this sense, **performative spatialities** and their norms can be subverted, reinvented through the agency of one's own bodily perception, leading to new gestural routines and relations with the milieu. By making contact with the reproduction of socio-spatial norms, our bodies can recognize the norms applied and resources to subvert it. In this subversion, what is afforded by the milieu can change dramatically, with the help of an expansion of the volumetric surface of contact with the milieu.

“However, the gesture is both a sign, a parsed unit of a continuum, and a potential movement experience, an exertion of energy that belongs to a continuum of energy exertion.”<sup>532</sup> Socio-spatial norms and their performativity may condition gestures. Nevertheless, the moving body can sense and create a dissonance in the very act of gesturing, as a capacity to feel kinesthetically how the gestures are conditioned gestures. In reenacting spatialities, gestures—and not only language—are a field of subversion and invention, in the very affect they afford to bodies in their gestural and performative routine.

532 Noland, Carrie. *Agency and Embodiment: Performing Gestures/Producing Culture*. 2009:194.

533 It is anticipated that this hypothesis on architectural reenactment will be tested in a future project of research, still in its early infancy, and provisionally entitled ‘How to design inclusive (post domination) xxx?’, xxx standing for a series of spaces and spatialities. This research aims to be developed as handbooks for architecture students and architects.

534 See Majewska, Ewa. *Feminist Antifascism: Counterpublics of the Common*. London: Verso, 2021.

*Performativity in design.* Alongside and with the help of architectural reenactments, a similar field of subversion and agency is thus within reach in design. Reenactors can imagine and develop (queer) forms of design, spatialities and objects that thwart the **performativity** of social norms by subverting the performance of reproduction of social norms against itself—**design of and from the repertoire of architectural operations**.<sup>533</sup> This constitutes the agency and responsibility of architects/designers/urbanists when enacting new spatialities and projecting **architectural operations**. This practice allows one to unravel how architectural and built elements reproduce socio-spatial norms and how they performatively design the **repertoire**, as we see, for example, with toilet doors. Architectural reenactments are a powerful historical, analytical and operatory tool for the design of research and pedagogies. In this way, they propose agencies that escape the heroic forms of subjectivity produced by neoliberal capitalism,<sup>534</sup> so heavily encouraged in contemporary architectural curriculums.

Agencies still exist through the **repertoire**: in interoceptive feedback, in dialogues with material speech acts, in **gestures** of **hospitality** to plural **temporalities** or from the position of architects. The architectural discipline has to reclaim the **repertoire** of **figurations** and architectural reenactments as terrain of **imagination**, inventiveness and struggle against destruction, exhaustion and alienation of our worlds. We have to reclaim an **imaginary zone**, in which we can make contact with **repertoires** of **figuration** to enact **futurities** through embodiment and at the scale of the volumetric surface of **gestures**.

## Close contact. Renegotiating architectural (hi)stories, pedagogies and practices/operations.

In chapter A, I discussed the theory of knowledge that accompanies the theory of operations as one of reenactment. Gilbert Simondon wrote:

“Only the individuation of the thought can, by being accomplished, accompany the individuation of the beings other than the thought; it is thus not an immediate knowledge nor a mediated knowledge that we can have of the individuation, but a knowledge that is a parallel operation to the known operation; we cannot, in the usual sense of the term, know the individuation; we can only individuate, individuate ourselves and individuate in ourselves; this seizure is thus, in margin of the knowledge itself, an analogy between two operations, which is a certain mode of communication.”<sup>535</sup>

In his definition, knowledge is a reenactment; a parallel individuation operation to the known individuation. The texture of knowledge outlined by Simondon is not discursive; it is an organic and embodied knowledge, remaining and reappearing from the **repertoire**. The logics and **temporalities** of reenactment structure the **migration** of knowledge from one (non-human) body to another, with performance as its *acts of remaining and means of reappearance*. As argued by Simondon, reenactment is an epistemology and a methodology to understand and construct (**architectural/architectures of**) **operations** as research objects.

Architectural reenactments are an active threshold from which to make close contact with **figurations** and operations, to reactivate their circulation and imaginative and reparative potential. The ontology of operations is fuzzy and fugitive due to their **temporalities** and entanglements with the social worlds, as does the ontology of architectural and spatial knowledge discussed so far. However, architectural reenactments grant an incomplete and temporary, yet crucial, access to them. This access is an opportunity to investigate, and indeed make migrate, operations.

In preceding chapters, I hypothesized and unraveled the **repertoire** as a site of architectural and spatial design, as much as *from which* to design—**design of/from the repertoire**. I attempted to grasp the complexity of the textures of **architectural image** and knowledge, their modes of circulation and **migration** and their cycles of **imagination** and invention. The relationship of **architectural image** and knowledge to **archives**, drawing, architectural **documents**, techniques, technologies and the architectural discipline itself

535 ‘Seule l’individuation de la pensée peut, en s’accomplissant, accompagner l’individuation des êtres autres que la pensée; ce n’est donc pas une connaissance immédiate ni une connaissance médiante que nous pouvons avoir de l’individuation, mais une connaissance qui est une opération parallèle à l’opération connue; nous ne pouvons, au sens habituel du terme, *connaître l’individuation* ; nous pouvons seulement individuer, nous individuer et individuer en nous; cette saisie est donc, en marge de la connaissance proprement dite, une analogie entre deux opérations, ce qui est un certain mode de communication.’ Simondon, Gilbert. *L’individuation à la lumière des notions de forme et d’information*. 2005:36.



were each occasion to reconsider their historicities and concealment of circulation. More recently, I realized the extent to which architectural reenactments are a strategic practice to preserve and circulate the **repertoire** and its knowledge, both in the context of short-circuiting knowledge **migration** in Sahrawi refugee camps, and in western universities and practices.

Considering the void of attention and knowledge in architectural theory and history enacted by architectural **hylomorphism**, I am conscious that this research remains wide in the problematics it addresses. However, epistemologies and methodologies uncovered by contacts with the **repertoire** and within the discipline of architecture propose to renegotiate architectural (hi)stories, pedagogies, and practices/operations by creating the basis for concealed forms of agencies and their **futurities**. They promise (hi)stories thought of as close contacts with knowledge, lives, non-human bodies speaking of broken relations, embodied **pasts** and corporeal **futurities**. (Hi)stories that are not built upon case studies, but Kin studies.<sup>536</sup> (Hi)stories in which scientificity and objectivity are not infrastructures of relegation, subjugation and distancing, but proximity, solidarity and struggle. (Hi)stories that migrate **body-to-body** in the depth of a **gesture** and carry the depth of their relations with worlds. Operative (hi)stories that acknowledge the wealth and diversity of human architectural and spatial knowledge and which (re) produce material to encourage its circulation and forms of **imagination**.

The haptic vocabulary employed is an attempt to build a glossary for such architectural (hi)story; *touch*, reach, **distance**, **gestures**, contact, surface, proximity. Words to think and share, to avoid making architectural (hi)story a **past past**, but rather a resource and a dimension of the **actual**. In close contact, architectural reenactments allow one to consider what has been broken, what can be repaired, and how to cope with the irreparable. They outline horizons of (re)production of knowledge, lives, and built environments as revolutionary, from which appear **imagination**, invention, and choices that ideologies of progress and innovation had previously discarded from our reach.

As a last point of thought, I would like to consider the role of drawing in architectural reenactment. If drawing has been a tool and instrument of architectural **hylomorphism**, discrediting the embodied and oral knowledge of crafts.women, how then should it be considered in this revolutionary (re)productive horizon?

In the ALICE laboratory, the *Oxford dictionary* is often quoted to set out the possible definitions of drawing/to draw. To draw in the first sense is defined as *to picture with the use of lines*. It also means *to drag, pull, move toward, carry, or take a deep breath*. The lab develops drawing as a tool to situate human and non-human bodies, their dynamics and the possibilities of their entanglements. As an assembly of their multiplicity and plurality, drawing is thought of as able to create commonalities with life, proxy of one another.

And what if, starting from this movement, drawing ceased to be understood as, and indeed to act at, a **distance**, to control human and non-human bodies from afar? Could we think of drawing as an operation of getting closer, of bringing within reach—a reach that does not enact control, but proximity, solidarity, affect—what is to be re-membered, re-paired, re-produced, and transmitted? **Gestures** and words bring into dialogue, and literally bring within reach, plural **temporalities** and co-existences. Drawing operations can parallelly afford common grounds, articulating co-operations. As a volumetric surface on which temporal and spatial dynamics resonate, drawing operations echo worldly *touches*, reducing the **distance** and reverberating in the depth of a **gesture** and the unfolding of a word.

536 See Kanngieser, Anja, and Zoe Todd. "From Environmental Case Study to Environmental Kin Study." *History and Theory* 59, no. 3 (2020): 385–93.

To draw then, as to drag, pull, move toward, carry and take a deep breath of worlds we live in, augmenting the surface of contact with them, as a haptic resonance of plural **temporalities**. Never a command, nor an attempt to short-circuit the reach of the **repertoire**, not to be naive, then, of forces that circulate through and by drawing. Not drawing of operations but operations of drawing, conceived as many close contacts and grips with worldly textures, **gestures** of **hospitality**, and resources for emancipatory spatial and architectural practices. (Hi)stories and pedagogies of drawing not thought of as **documents**, but as close contacts, surfaces of dialogues, **gestures** of **hospitality**. Architectural reenactments understood as strategic practices of renegotiation from the **repertoire**.









Conclusion



| Fig. 114 | The day before I had to leave for the airport, Lahsen Selki Sidi Buna, Mohamed Ali Laman and I were in the refugee camp of Dajla to conduct some interviews for the Oral memory archiving project. When the heat of the day dropped toward sunset, Lahsen offered to take me to an abandoned neighborhood to the South East of the camp. Dajla is on the edge of the desert. As the desert moved north, the Jaïmas were slowly engulfed by the dunes. When they left the site for a somewhere safer, the population deconstructed their buildings, brought the bricks which remained in good shape, and left only the foundations, which began to merge with the ground.

The only building still standing was the protocol, an administrative and political center of the neighborhood. Built entirely from sand bricks, it is slowly decaying from the force of the wind and the rare occasions of rainfall. It was constructed in the eighties by women to provide the population an infrastructure to administrate the camps, distribute international support, and host discussions for the organization of everyday life. A series of square rooms with domed roofs create a circular courtyard from which all the spaces are accessed. To the North, two larger rooms were used for craft and education. Lahsen argued that the design was developed to embody the ideals of equality of the newly born state in exile. In this perspective, women decided to configure the space around a courtyard that could host round meetings with almost the entire neighborhood population. Taken in March 2020. Photograph by the author.











This research has attempted to open up a *zone of peaceful reconciliation*. In and from this zone, we delved into the repertoire as a site of architectural and spatial oral and embodied knowledge. Discussions with older generations of Sahrawi in the refugee camps have shown us that organic knowledge is an active producer of architectures, spaces and spatialities. To trace these architectures, we pursued epistemological, theoretical and methodological investigations across different fields. It became clear that a renewed approach to architectural historiography was necessary. This oral and embodied knowledge possesses numerous textures, grips on the world, temporalities and modes of migration: an infinite library of potential architectural histories.

To develop this *zone of peaceful reconciliation*, we observed the evolution of the historical relationship between the architectural discipline and oral and embodied knowledge. There, we found an *obscure zone* enacted by an entrenched paradigm in architectural epistemology coined as *architectural hylomorphism*. This defines the ontology of architectural knowledge by dividing thinking and making, drawing and building, and consequently, architects and crafts.women. We observed these divides in the writings of architectural practitioners and theoreticians of the Renaissance. Architectural hylomorphism was introduced as means of division of labor and social stratification, legitimizing the *superiority* of architects over laborers—and indeed forced, enslaved, feminized and racialized bodies. An analysis of the representation of the individuation of bricks, with the help of the theories of Gilbert Simondon, uncovered the *obscure zone* in which the operatory knowledge and lives of brick molders are concealed, “reduced to a mere succession of instantaneous presents, which leave behind no trace.”<sup>1</sup>

This *obscure zone* is an epistemological, historical construction that has resulted in an inability to make contact with oral and embodied knowledge from within the discipline. Infrastructures of *official* knowledge production—particularly the archives—have reinforced the boundaries of this zone, excluding many histories, lives and knowledge from the dominant historical narratives. Thus, both epistemological and ethical questions were raised in attempting to turn this *obscure zone* into a *zone of peaceful reconciliation*. The knowledge from the repertoire migrates body-to-body, requires presence, and grants authority upon access to performing bodies. The dynamics of incorporation (from a standardized document to a living body) and excorporation (from a living body to a standardized document) profoundly modify the texture of knowledge and its relations with the world. Histories of epistemic injustice encourage one to rethink

1 Horkheimer, Max, Theodor W. Adorno, and Gunzelin Schmid Noerr. *Dialectic of Enlightenment: Philosophical Fragments*. Cultural Memory in the Present. Stanford, Calif: Stanford University Press, 2002:179.

the pharmacological dimensions of the archives and historical discourse, as being both poisons and remedies. They demand new *therapeutics*—i.e., co-operations between the regime of the archive and that of the repertoire.

Epistemological gaps have nevertheless remained in our capacity to make contact with knowledge *from the repertoire*. To start bridging them, an architectural *theory of operations*, in line with that of Gilbert Simondon, was sketched. *Operations*, as the *structures through which a brick is produced*, prevent hylomorphic representation and grant access to the backdoors of its obscure zone. As a genuine epistemological perspective, operations possess an ontology which do not reproduce the hylomorphic divides and allow one to consider oral and embodied knowledge and its *technicity*—i.e. the way it *operates*. As such, an architectural theory of operations enables one to follow human and non-human bodies, listening to the “human gestures fixed and crystallized”<sup>2</sup> in bricks and their material speech acts.

From the thresholds offered by this theory of operations, this research explored the ontology of oral and embodied knowledge and how it *operates* in space, architectures and spatialities. The concept of *techniques of the body* introduced the idea that knowledge from the repertoire is socially and culturally situated: social spaces are produced, performed and enacted by *implicit* sets of norms, incorporated and unfolding performatively through bodies. These co-operations of human and non-human bodies, produced by techniques of the body and knowledge from the repertoire, have been defined as *performative spatialities*, while *figurations* referred to the architectural and spatial images on which these performances rely.

This research then worked towards potential definitions of architectural and spatial oral and embodied knowledge—figurations—and associated textures of embodied architectural images. The interpretation of Simondon’s *Imagination et invention* outlined a process of imagination in which embodiment was “a starting point for analyzing human participation in a cultural world.”<sup>3</sup> In this imagination process, images are at first *driving forces* or gestures that establish a volumetric surface on which the environment exert force. In continuation, figurations were defined, by means of an operatory architectural image, as driving-forces or gestures—as a technique of the body—that performatively shape performative spatialities. As an inherited, incorporated or learned repertoire, figurations thus enact the perceptive relationship between an individual and her milieu: the potentially *reachable* gesture-images bring about a *landscape of affordances*. These images are performative and constituted by performances—situated socially, culturally and subjectively—which activate the milieu and its potentialities. By means of this architectural and spatial knowledge, the milieu is oriented and meaningful, and the virtual images surrounding us are afforded as potentials through gesture-images.

Following the ghost of Gorba M. L.’s husband in her Jaïma permitted a better understanding of the performativity, historicity and forms of invention of figurations. Through exile and in a culture in which architectural and spatial knowledge is mainly oral and embodied, she produced the architecture of her Jaïma without mediation by lasting and standardized documents. Following these operations, we were affected by the fact that the evolution of her domestic landscape through gestures was inhabited by an absence. Through embodied architectural operations, Gorba granted hospitality and agency to her husband’s absence and reenacted the figurations of her former mode of living as a pastoralist nomad in Western Sahara. This imagination process, reiterated through embodied operations, actualized the presence of absence while maintaining the temporalities and futurities pre-empted by war and colonialism. In these architectural gestures, she preserved concealed futurities as present corporeality.

2 ‘Ce qui réside dans les machines, c’est de la réalité humaine, du geste humain fixé et cristallisé en structures qui fonctionnent.’ Simondon, Gilbert, and Nathalie Simondon. *Du mode d’existence des objets techniques*. 2012:13.

3 Csordas, Thomas J. “Somatic Modes of Attention.” *Cultural Anthropology* 8, no. 2 (1993): 135.



This contact with Gorba's knowledge taught us how to reframe the relationship between pasts, futurities, past futurities and future pasts within the temporal dynamics of the repertoire. Plural temporalities of the repertoire are not something to be once again brought back, but rather brought along to make contact with. As performance is both the *acts of remaining and means of reappearance* of the repertoire and its temporalities, discussing its knowledge and histories appeared to be a matter of reducing the distance with plural co-existing temporalities. As such, this renewed perspective on temporalities engaged this research in considering that "nothing that has ever happened should be regarded as lost for history."<sup>4</sup> Figurations and oral and embodied knowledge from the repertoire never disappear, and their histories "cannot be new: it is always already known, and it is only its authors that had to unlearn its imperial version in order to utter it properly."<sup>5</sup> Working on histories and operatory knowledge from the repertoire is a question of possibilities of contact. It requires us to consider where we are standing, to be touched, and to host this touch in the depth of a gesture.

By means of speculating on the possibilities of contact, the Interlude proposed infrastructures that could (re)enact figurations in the Sahrawi refugee camps, a context in which the circulation of the repertoire and the (re)production of its futurities as corporeal presence is a matter of life and death. This opened up imaginaries about potential archival gestures which could avoid breaking up the relationship between knowledge, its milieu and holding bodies. It has been shown that the paradoxical spatiotemporal existence of archives that previously dissolved the agency of knowledge can be transformed into a means of disturbing notions of property and authority, which could even support further performances and circulation of the repertoire.

On this basis, the research sought combine architecture of operations and design from the repertoire with architectural theory, history and production. Gorba's embodied operations demonstrated the architectural agency at the scale of a gesture. The unfolding of architectural knowledge from the repertoire was understood as genuine operations and relationships with human and non-human bodies. It unveiled a specific type of imagination and invention processes, with its techniques/technicity, agencies, and relations with the world and temporalities. I believe it has shown the extent to which the repertoire is a repository of architectural knowledge and history, as well as the urgency and relevance of considering architectures from the repertoire and caring for their futurities.

Furthermore, this research explored how design from the repertoire engineers the field of the possible through performance. Grid-patterned urban forms, notably in Etruscan and Roman contexts, were analyzed according to their *operatory side*—i.e., their operations of inscription, performances and gestures through which they produce social and material space. This methodology enabled a much deeper understanding of the power relations, imagination processes, and relationships between human and non-human bodies in spatial design than could have been achieved through an approach based on formal analogy. It has been shown that architectures produced by organic media—embodied—are in no way more *natural*, and in no way less concerned by power dynamics, processes of subjugation, and mechanisms of domination. Protofigurations were then introduced as a spatial and cultural enactive technique of design from the repertoire based on calendarity and cardinality—collective, technical and incorporated systems of reference in time and space. The design of protofigurations re-con-figures the field of the potential through a performative—thus embodied and iterative—structuring of the repertoire and thus of the possible relations with the environment.

4 Benjamin, Walter, Hannah Arendt, et Harry Zohn. *Illuminations*. New York: Schocken Books, 1986:254.

5 Azoulay, Ariella. *Potential History. Unlearning Imperialism*. Verso Books, 2019:198.

The ontology of operations—and figurations— remained nevertheless fugitive, as it is performance that constitutes “both the act of remaining and a means of reappearance”<sup>6</sup> of operations. How to architecturally analyze performative spatialities, figurations and operations while their textures “can’t be represented as graphical elements of the situation?”<sup>7</sup> While operations allowed one to theoretically and conceptually reveal the gap of the obscure zone, strategies of conservation and research to encourage the circulation of operatory knowledge from the repertoire needed further explorations. In order to interrogate what could have become an epistemological barrier, architectural reenactments were proposed as practices that could stabilize the repertoire for the duration of a gesture.

Architectural reenactments were introduced as a strategic methodology for architectures of operations and design from the repertoire to be introduced into architectural epistemologies and pedagogies. From the field of dance, archaeology, history and as a popular practice, reenactment has been analyzed as cutting across “complex historical processes and conflating current social and political concerns with earlier ones.”<sup>8</sup> However, we have shown that this flattening augments the surface of contact with pasts for the *reenactors*. This contact might open ways to give back some space and time for concealed and subjugated lives and knowledge. Architectural reenactments open routes to a critical, embodied and reflexive approach to our built environment through potential contacts with knowledge from the repertoire. They offer hospitality to modes of thinking and relating with such knowledge and its futurities by following the speech acts of human and non-human bodies. Reenactments achieve this by momentarily stabilizing the ontology of operations, by granting incomplete and temporary yet crucial access to the temporalities and entanglements of architectures of operations. Simultaneously, architectural reenactments might well reactivate the circulation and imaginative/repairative potentials of the repertoire.

*Answers to the problematic and findings.* This research began by asking what kind of knowledge lies in the repertoire. The knowledge is multiple and fugitive and possesses myriad textures. It manifests itself in the unfolding of a gesture or the utterance of a word. It is a profoundly relational knowledge, as it is performative and entangled within economies of human and non-human bodies. Whether the constructive and projective knowledge of medieval master masons, or Gorba’s and Aguila’s gestural and oral knowledge, it refers to the embodied and organic capacities of co-operations with the environment, following its grains and material speech acts. It is a knowledge that induces a peculiar process of imagination, the agencies of which lie in its reiteration and constitute (re)production as revolutionary.

By means of material from discussions in the Sahrawi refugee camps, architectural agency and migration of gestural and oral operatory knowledge has been observed and analyzed. The circulation of this knowledge relies on the repertoire as an infrastructure of conservation, but whose mechanisms and temporalities are profoundly different from the archival regime. Instead, it requires presence for body-to-body migration, triggering socio-technical environments of transmission, and allowing for the knowledge to be incorporated by other bodies. The knowledge present in gestures or words might transform through migration and incorporation. The meaning of the same gesture might evolve while its formal expression remains the same, or conversely, the formal expression might evolve while the meaning remains the same. This vulnerability of the repertoire to what bodies carry with them has provoked skepticism around its *trustworthiness*; it does not possess the stability of a standardized document and upsets the concept of authenticity, originality and authorship.

6 Schneider, Rebecca. “Performance Remains.” *Performance Research* 6, no. 2 (January 2001): 103.

7 ‘ne peuvent être représentés comme des éléments graphiques de la situation’, Simondon, Gilbert. *L’individuation à la lumière des notions de forme et d’information*. 2005:234.

8 Agnew, Vanessa. “Epilogue: Genealogies of Space in Colonial and Postcolonial Reenactment.” In *Settler and Creole Reenactment*, 298. Springer, 2009.

According to the ontology of oral and embodied spatial and architectural knowledge, the potential histories we might follow address scales and temporalities that are barely graspable with the material of traditional architectural historiography. To unravel such barriers, this research departed from a *gap* in the production of knowledge in architecture identified as the void in hylomorphic representation. Through genealogical investigations, it has been shown that this *gap* was a historical construction of the discipline and profession, concealing oral and embodied knowledge. With regard to critical and postcolonial theories, this process of *subjugation* has been discussed as a broader mechanism in the western world, expanding through colonialism, and supported by various infrastructures in which universities and archives played prominent roles.

In this research, I did not provide an all-encompassing and comprehensive account of potential histories from the repertoire; this category remains general and requires listening to specific situations. Instead, I proposed to reframe what could be thought of as *documents* of architectural historiography while sharing minor threads of potential histories weaved with epistemological inquiries. To make contact with such histories without destroying their relationship with worlds called for the (re)enactment of a zone of peaceful reconciliation. This zone was brought about by an architectural theory of operations. This theory sets aside the obscure zone of architectural hylomorphism, thwarts its mechanisms, and turns it into a zone of peaceful reconciliation. Operations have enabled epistemological shifts, grasping how oral and embodied knowledge enter into spatial production within multiple scales and plural temporalities. Operations has equally opened up methodologies for architectural and urban histories, transforming the role of (urban) forms and their centrality in discourses, enabling us to focus instead on how they *operate* and what they *afford*.

From within this zone, design from the repertoire has been proved to be a genuine mode of architectural production and imagination. Alongside this first category, undrawn spatialities have appeared as a relevant category to grasp a multiplicity of spatialities, spaces and architectures while not reproducing divides that lead to epistemic violence. Moreover, performative spatialities/performative productions of social space have been demonstrated to be supported by figurations—architectural embodied knowledge from the repertoire—at the scale of a gesture. This perspective grants access to scales and temporalities of performance in the weaving of potential histories and spatial analysis.

In delving into *an architectural theory of operations*, and entering into dialogue with knowledge *from the repertoire*, this research has also outlined the epistemological gaps which remain. I believe that operations and architectural reenactments are practices that enable us to trace and weave potential histories of architectural knowledge from the repertoire, while bridging the gaps in the production of knowledge. This manuscript has thus been an attempt to sketch a zone of possible contacts from which others could emerge. It has offered a basis for debate and reflection on the ethics of the repertoire, its temporalities, and its methodologies, with the goal of perhaps opening unexpected horizons of repair and reconciliation with pasts and futurities.

*Significance for literature.* This research has proposed oral and embodied operations as means of architectural production in scrutinizing design from the repertoire. While literature has considered some architectural practices that succeed in “working on the thing itself” and “emphasizing the corporeal properties of things made,”<sup>9</sup> the broader discipline has rarely considered such practices as a proper and coherent mode of architectural production, with its socio-technical infrastructures and mechanisms of transmission. This research has provided elements to overcome the romantic gaze on

9 Robin Evans, “Translations from drawing to building,” *AA files* 12 (1986): 156, 160.



architectures *without architects* while deconstructing former asymmetric categories such as informal, vernacular, traditional, spontaneous, indigenous, popular or ephemeral. The production of spaces, spatialities and architecture through organic means is highly organized and possesses complex technicities. It is equally permeable to power relations, processes of subjugation, and knowledge stratification. Undrawn spatialities, I believe, constitute the most significant output of this research in this perspective.<sup>10</sup>

Simultaneously, this research can contribute to the literature on oral methodologies and critical historiographies in architecture. Firstly, it outlines how oral and embodied knowledge and histories require more attention and research regarding the historical construction of the discipline. It does so by shedding light on their potential role in architectural production—whether from within the discipline or not—, their means of operation, and the way in which they could be included as legitimate forms of knowledge and histories within design processes. In return, it offers methodologies to revisit architectural historiography by making contact with (formerly) subjugated forms of architectural knowledge. This perspective relates literature on repair and unlearning with strategies and epistemologies for listening to potential histories.

In looking closely at the production of social space—performative spatialities—and its relations to bodies and their knowledge, this research can equally contribute to feminist and queer literature in architectural theory and epistemology. The scale of gestures has been problematized as a critical volumetric surface to disentangle the production of subjectivities in relation to the built environment, while defining bodies as differentiated and multiple. This manuscript sheds light on agencies in these entanglements and on the way in which queer and feminist perspectives grasp the negotiation of performative spatialities through the repertoire.

The discussions carried out in Western Sahara, and their outcomes, could participate in the current debates in humanitarian architecture and refugee studies, notably in the temporalities and materialities used to analyze refugee camps. Many controversies are ongoing in relation to the *urbanity* of protracted refugee camps, and consequently on the epistemology and methodology used to understand the political and architectural agency of refugees. This thesis has offered arguments to defend architectural agency at the scale of the domestic unit and the gestures which give rise to political agency. It has attempted to shift the focus away from the public infrastructures of refugee camps by redefining their role in sociability and politics, while at the same time avoiding a flattening of the paradoxes and complexities raised by the refugee status. Moreover, the research can provide epistemological elements of reflection on the historicity and temporalities of the infrastructure of refugee camps.

For studies concerning Western Sahara, the *findings* of this research might contribute to a better understanding of Sahrawi spatial and architectural knowledge, especially their modes of invention and circulation. This has been achieved in the manuscript and through the publication of articles found in the annex.<sup>11</sup> Transformation of the socio-spatial practices and the temporary physical immobilization of the population were introduced as a means of perpetuating the repertoire by maintaining its relation with worlds and caring for its futurities despite the exile. Accordingly, this research develops ongoing discussions in literature by confirming that Sahrawi political agency is largely grounded in their socio-spatial practices from the repertoire and that the maintenance and transmission of this knowledge represents an urgent issue to be understood as preparing for a potential return.

10 See in annex the article ‘Undrawn spatialities. The Architectural Archives in the Light of the History of the Sahrawi Refugee Camps.’ See Lafontaine Carboni, Julien. “Undrawn Spatialities. The Architectural Archives in the Light of the History of the Sahrawi Refugee Camps.” *Architecture and Culture* 9, no. 3 (April 29, 2021): 502–22. <https://doi.org/10.1080/20507828.2021.1894063>.

11 The article ‘Immobile but not motionless. Magnitudes of Sahrawi nomadism throughout refugeehood and colonialism,’ previously published in Spanish, provides a comprehensive account of the evolution of Sahrawi spatial practices throughout the XXth century, relating the transformation of socio-spatial practices in the camp with adaptations due to Spanish and French colonialism. As such, it grounds an approach to the *sedentarization* of the Sahrawi as a strategy of adaptation to their conditions that does not annihilate their nomadism. In this perspective, the refugee camps are, as in the words of the Sahrawi population, very similar to several forms of encampments ingrained in Sahrawi culture. See Carboni, Julien Lafontaine, and Juan Carlos Gimeno Martín. “Inmóviles, Pero No Quietos. La Sedentarización de Los Saharauis Como Estrategia de Adaptación y Respuesta a La Supervivencia. Sobre La Posibilidad de Un Nomadismo Inmóvil.” *Tabula Rasa*, 2021. <https://doi.org/10.25058/20112742.n37.02>.

12 See Azoulay, Ariella, and Louise Bethlehem. *Civil Imagination: A Political Ontology of Photography*. English-Language ed. London ; New York: Verso, 2012.

*Significance for other fields and practices.* Regarding International Justice in the Sahrawi struggle for the right to self-determination, the findings provide some approaches to understand the cultural autonomy of Sahrawis without suffering from the potential toxicity of the archival regime and historical discourse. The double challenge concerning Sahrawi knowledge—providing legible *proofs* and maintaining the ecologies of their knowledge and their temporalities—has been addressed with all its complexity and paradoxes. This revealed elements enabling one to escape some dangers of the imperial shutter<sup>12</sup> by developing indicative *therapeutics* between the archives and the repertoire.

In the same perspective, the results of this research might interest archival programs and architectural institutions. It has provided some potential guidelines to preserve the relations of knowledge with the world, or at least not to breach them irreversibly. The temporalities and futurities of knowledge and artifacts are a fundamental part of their ontologies. Preserving them also involves maintaining their temporalities. Archival gestures have been discussed as potentially breaching these temporalities and depriving knowledge of its social, cultural and political agency. Thus, in analyzing the modes of migration of the repertoire and its architectural and spatial knowledge, the research provides the basis for debate between archival and performance studies. The ethics of conservation and preservation could be of particular interest for archival programs.

For architectural practitioners, this research proposed conceptual and methodological tools to disentangle the field of forces created by architectural operations. Architectural tools and instruments have been described in their pharmacological dimension—as both a poison and a remedy. The social context produced by technical architectural operations, in regards to the power relationship enacted by architectural tools and instruments, should be approached with care. Some elements to allow us to scrutinize our uses of tools have been provided, while also proposing lines of inquiries toward inclusivity and repair.

Furthermore, practitioners might find it relevant to consider the interrelated nature of the production of social space and its set of norms, and the production of architectural norms. The analysis of performativity and subjectivity grants access to other scales. It enables one to understand how social norms and embodied knowledge shape the uses and meanings of spaces and architectures and, in return, how architectures and spaces might shape social norms and embodied knowledge. These double performative loops can be understood as another field of agency for architects to support other modes of life and emancipatory practices.

A point that could be of interest to legislators and/or politics is the relationship between normativity and the performativity of norms, alongside the preservation of the repertoire. This research has noted that techniques—and particularly construction techniques—produce and are produced by social organization. In the same way that this work seeks to redefine architectural drawing through its operations—and thus, the socio-economic relationships it produces—the techniques of construction and their norms can be understood in relation to the social context they enact, and the knowledge they can shut out. Following this, we can first note that if a technique is considered worthy of being preserved, it cannot be preserved without its social context and its own futurities. Secondly, if knowledge from the repertoire truly becomes an object of interest and conservation, then construction norms might require a negotiation based on operations to open up the possibilities of the repertoire.

I equally believe that the perspectives brought about by architectural hylomorphism can serve architectural historians and theoreticians to deal with what has been called a *gap* in knowledge or research, not as an unexplored area to be discovered but as voids constructed

by the epistemology of the discipline. This does not mean that these voids have been intentionally built, as is the case for some protagonists of architectural hylomorphism, but that what is out of reach is performatively constructed from a negative of the current state of knowledge. This negative boundary also possesses its own history which partially coincides with the history of subjugated knowledge.

By means of the theory of operations, the definition of its ontologies, and the repertoire, architectural educators might find some conceptual tools to consider oral and embodied knowledge in architecture and their role in the (re)production and circulation of such knowledge. The repertoire allows one to bring embodied techniques into discussion, which are currently difficult to grasp with the conceptual apparatus at hand in curricula. It thus provides elements to for inclusive pedagogies.

For researchers in architecture, this manuscript might be helpful to consider research on operatory knowledge and histories from the repertoire. Such contacts nevertheless call for a form of radical listening to both human and non-human bodies. A small number of discussions in the Sahrawi refugee camps led to a complete transform of the methodologies and the means of tackling this topic. Unexpected outcomes have been able to surface because of a profound will not to impose my own epistemologies in contexts where they might constitute more of a barrier than a support. Radical listening thus compels us to accept ignorance as a real strength from which to enact solidarity. It also involves thinking of research as being produced from a border zone, enabling a grip on the worlds whose contact surfaces are in constant negotiation.

In the same perspective, research into subjugated forms of knowledge should pay attention to the ecology of knowledge and histories they are tracing. As is the case with archival gestures, the construction of *objects of research* can deprive the repertoire of its social, cultural and political agency. Considering these ecologies should constitute a priority to preserve their futurities, and to avoid perpetuating old enduring patterns. Knowledge is as precious as the entanglements that (re)produce it.

Lastly, this research strongly advocates for a better understanding of ghosts. Ghostly contacts are touches with structures of knowledge that has been estranged, that we do not know, yet or anymore. Things that can appear to be intuitions might prove to be pasts, futurities, pasts futurities or future pasts acting in the present within a system of causality and agency that one might not understand, yet or anymore. Ghosts appear to call out to us as agents of repair, and our relations with them could constitute a fertile ground for researchers to work toward social and epistemic justice.

*Limits of the research.* Covid 19 had a significant impact on the research I led and the manuscript I was able to produce. Firstly, on the number of Sahrawi people with whom I had the chance to enter into dialogue. Due to the pandemic, I was expelled from Algeria sooner than expected. I was not able to go back to the refugee camps until now, as the measures to protect the health of the refugees, combined with the restarting of the armed struggles, led to the prohibition of foreign visits. As this research concerns oral and embodied knowledge, remote discussions were not considered as a satisfying means to increase the number. This impacted the research as the sample cannot be viewed as representative of the whole of Sahrawi society; however, I remain convinced that it provoked a deep attention to the discussions that were held and focused on minor threads that a large sample may have annihilated.

In parallel, the focus on epistemological and theoretical questions has been strengthened by the drastic reduction in movement and difficulties in accessing sites of investigation.



The discourse developed on architectural hylomorphism should be considered as a potential history of a dominant narrative. However, due to the difficulties of making contact with minor threads of architectural history and theory, the arguments of architectural hylomorphism cannot and should not be generalized to the entire practices and discipline, whether historically or currently.

Equally, Covid 19 and a lack of time prevented the organization of architectural reenactments. This largely influenced the way Chapter E is constructed, which is a speculative approach to the practice and its potentials rather than being based on actual experiments. It does, however, constitute a horizon I hope to reach as a part of the teaching unit “DRAG(U.E.). Performativity of the built environment” that I co-organized with colleagues from ALICE and the DRAGlab EPFL.

*Recommendations for further research.* Research could be continued and intensified on the disciplinarization processes of architecture to better understand the evolving ontology of architectural knowledge. The transformations of its relations with patrons and crafts.women, in regard to the infrastructures of official architectural knowledge production, is currently becoming a proper field of investigation. To support this, further inquiries into what *official* knowledge has repressed in its own terms would constitute a point of departure to then make contact with subjugated architectural knowledge. From these genealogical and historical investigations on architectural epistemology and institutions, myriad obscure zones could become visible and weave *minor* and *potential* architectural histories. Further research on the end of the Middle Ages and early Italian Renaissance, especially the tools and instruments used in building and design processes, in the organization of construction site, could provide a richer understanding of the excorporation of the repertoires of crafts.women and the socio-professional processes associated with the reemergence of the figure of the architect. In the contemporary context, research on the evolving relationships between the profession of architecture and construction sites—temporalities, expertise, human organization—and practices “working on the thing itself” could develop an understanding of the current state of oral and embodied theories and practices within the field. In a similar strand, the performativity of the built environment and the way in which architectures indirectly design the repertoire could be further investigated, following feminist and queer literature, to enable performative social spaces to become a scale and temporality, studied and taken into account within architectural practices.

Further research is needed to move from architectural archives-as-sources to architectural archives-as-subjects. While the topic is growing, comprehensive accounts of the diversity of archival practices in architecture are genuinely lacking, especially given the heterogeneous nature of these practices, depending on the countries and institutions in which they are found. Critical historiographies that take into account operations—and oral/embodied knowledge—could expand and enter into dialogue with archival practices and sciences in order to open up programs of circulation (and research) of architectural knowledge from the repertoire. To do so, the ontology of operations and practices of reenactment could be further explored as means to give back space and time for oral and embodied modes of architectural (re)production in architectural history, theory and pedagogy. By considering the necessity of the repertoire as an infrastructure of conservation and circulation of knowledge, experimental methodologies—such as reenactment—could be developed to make contact with the repertoire and explore its processes of imagination and (re)production. This research would encourage the integration of the repertoire into architectural curricula and practices.

Such investigations would contribute to studies on refugees and embattled indigenous communities, for example in the case of Western Sahara, by providing elements to understand and means to support oral and embodied memory archiving and preserving projects. Infrastructures and methods that encourage the circulation of the repertoire are necessary for the Sahrawi refugee populations to finally come back to Western Sahara while allowing for pre-empted futurities to unfold through this return. Studies on the circulation and imagination of the repertoire are advanced in the fields of performance and dance. However, epistemological and methodological inquiries are required in social anthropology—the main field pursuing research on the refugee camps— and architecture for such domains to participate in these processes of circulation and imagination. Methodologies acting as new *therapeutics* between the archives and the repertoire could serve as fruitful basis on which to enact zones of peaceful reconciliation. In these zones, knowledge and lives may merge from within the architectural discipline, striving for repair.

Contacts with the repertoire stretch the perspectives on architectural practice. These contacts make us acknowledge the wealth and the diversity of seemingly separate and formerly divided practices and bodies of knowledge. Undrawn and unwritten architectures thread potential and minor genealogies that provides resources to escape many dead-ends we are facing. They teach us architectural operations proceeding from a vital proximity between human and non-human bodies, and between plural temporalities.

With this in mind, architecture appears much closer to life. It appears a mode of creating continuities and discontinuities, of entering in contact with other human and non-human bodies and their temporalities. With this in mind, architectural also appears as a way to take care of the virtual images that surrounds us, to the common affects that hold us together. Architecture not solely as a way of seeing them, but as a way to render them present, to grant their latency the intensity of corporeality.

Operations such as Gorba's or Aguila's gestures reveal the potency of oral and embodied knowledge in architecture and life. The repertoire enables us to engage with this knowledge, to understand it, but also to incorporate it, to perform its acts of remaining and means of reappearance while, in these motions, weaving its potential histories and revolutionary horizons.

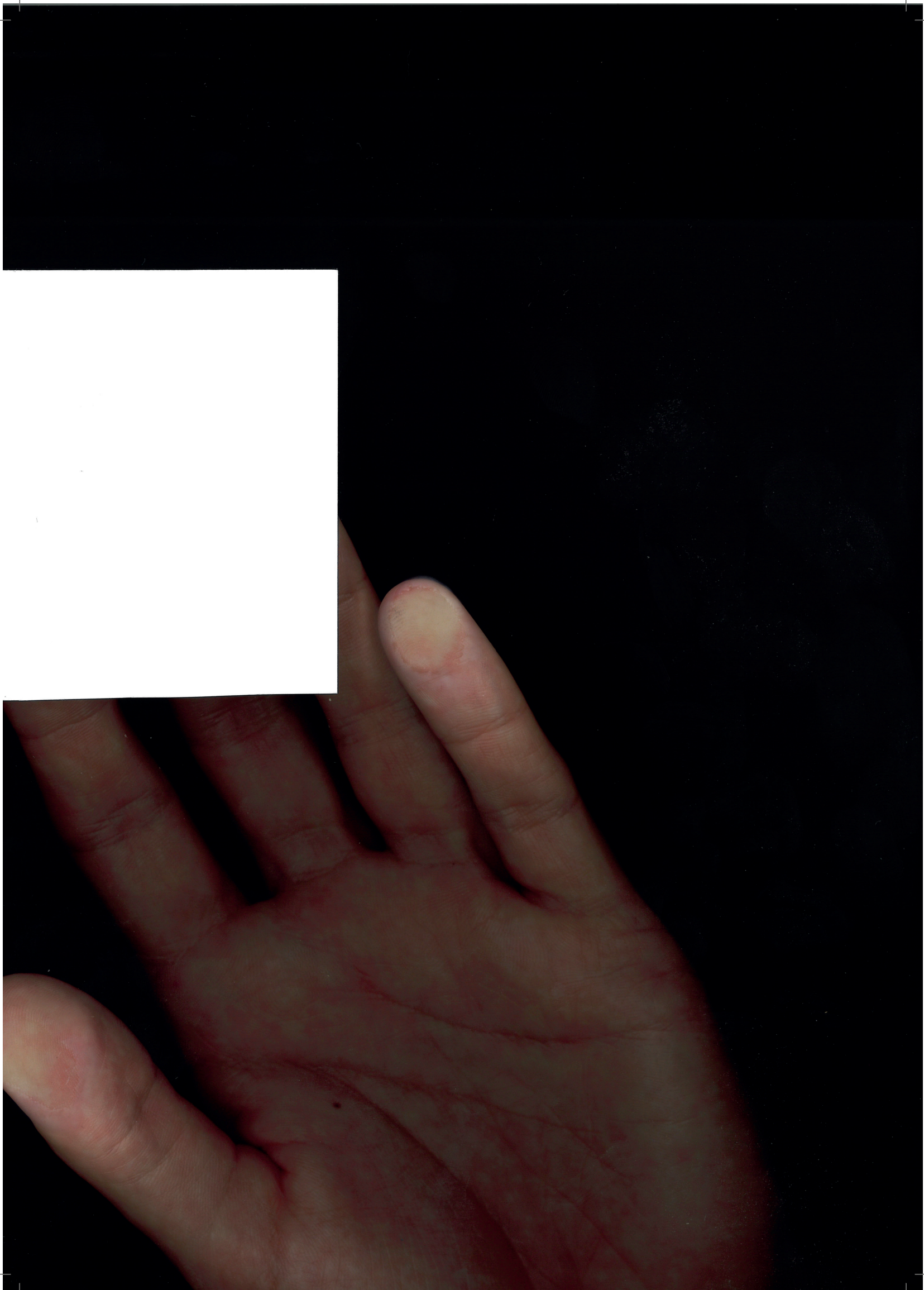




| Fig. 115 |  
Photograph of Zora and Lahsen  
Selki Sidi Buna in her Jaïma in the  
region of Guelta Zemmur, Western  
Sahara. Photograph by the author.











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## List of figures and credits:

Introduction and cover:

| Fig. I1 | Photograph of Lahsen Selki Sidi Buna observing the crumbling foundations of a sand-brick construction, in the refugee camp of Dajla, abandoned due to the advance of the desert. March 2020. Photograph by the author.

Credits: Julien Lafontaine Carboni.

| Fig. I2 | Diagram of the research displaying the research objectives, problematic, questions, and hypothesis on a field similar to a map. This analogy allows us to think of the relations between the research objectives, problematic, questions, and hypotheses not as causal and direct, but instead as fields. Proximity brings about perspectives on other objects without being the only way to make contact with it. This condition also carries the possibility of deepening the field between elements, adding new questions, hypotheses, objectives that are latent in the present configuration. It also invites you, the reader, to annotate and add new dimensions to the current state while setting out ways to enter the manuscript non-linearly if you wish to do so. The positions presented are relative, meaning that other configurations could be further proposed. Abbreviations: Pb: problematic; RO: research objective; RQ: research question; RH; research hypothesis; CHx: Chapter.

Credits: Julien Lafontaine Carboni.

| Fig. I3 | Photograph taken during the course Atlas Poliphilo, in Spring 2018. This workshop was organized after site visits. The boards were used a way to navigate the multiplicities of human and non-human bodies encountered, and to open up narrative threads and possible configurations—on the board and in return, on the potentialities of the territories. Credit: ALICE.

Credits: Julien Lafontaine Carboni.

| Fig. I4 | Page of Simondon, Gilbert. *Du Mode d'existence Des Objets Techniques*. Philosophie / Institut Catholique de Paris, Faculté de Philosophie. Paris: Aubier, 2001. In this work, Gilbert Simondon analyzes the individuation of technical objects and how they evolve. In the line of André Leroi-Gourhan, he argues that they go through major and minor inventions in a process of concretization, in which they are becoming more and more concrete—i.e., more and more fine-tuned within their own mechanisms and relations with the technical environment. These inventions possess in his theory a certain independence from human subjects, as they have their own internal determinations that are achieved independently from the human subject that operates. It is for the human operator to listen to technical expressiveness and determination.

Credits: Julien Lafontaine Carboni.

## Chapter A:

| Fig. A1 | Snapshot of the film of Harun Farocki, *Vergleich über ein Drittes* (Comparaison via a third), 61min, 2007 (seen at <https://vimeo.com/225091024>, on the 20th of October 2020).

Credits: Musée cantonal des beaux-arts de Lausanne.

| Fig. A2 | Simondon, Gilbert. *L'individuation à la lumière des notions de forme et d'information*. Krisis. Grenoble: Millon, 2005:51.

Credits: Julien Lafontaine Carboni.

| Fig. A3 | Bataille, Georges. "Architecture-Définition." *Documents* 2 (Mai 1929): 117.

Credits: Bibliothèque Nationale de France.

| Fig. A4 | Page from Cheng, Irene, Charles L Davis, and Mabel O Wilson. *Race and Modern Architecture: A Critical History from the Enlightenment to the Present*. University of Pittsburgh Press, 2020, presenting the Tree of Architecture of Bannister Fletcher, in *A History of Architecture on a Comparative Method*, 1905 edition.

Credits: Julien Lafontaine Carboni.

| Fig. A5 | Page from Cheng, Irene, Charles L Davis, and Mabel O Wilson. *Race and Modern Architecture: A Critical History from the Enlightenment to the Present*. University of Pittsburgh Press, 2020, presenting the drawings from Eugène Viollet-le-Duc, in *Histoire de l'habitation humaine*, 1875.

Credits: Julien Lafontaine Carboni.

| Fig. A6 | Page from Evans, Robin. *Translations from Drawing to Building*. *AA Documents* 2. Cambridge, Mass: MIT Press, 1997, figuring the two myths of the origins of painting/drawing, Karl F. Schinkel, *The Origin of Painting*, 1830 and David Allan, *The Origin of Painting*, 1773.

Credits: Julien Lafontaine Carboni.

## Chapter B:

| Fig. B1 | Drawing of a Morning Meeting in the refugee camps in 1976. Source: Manfred O Hinz, '3WM Interview mit Gunther Hiliger', *Terre des Hommes* (1977): VIII. Found in the Archives of the Ministry of Information of the SADR, redrawn by the author. I took the decision to redraw the photograph I found in the Archives for two reasons. Firstly, following the research of Ariella Azoulay about the imperial shutter in *Civil imagination: A Political Ontology of Photography*, I questioned myself about the abundance of photographic material in the archives that were all taken by international and foreign observers. The redrawing of the photographic materials allowed me to think about and enact a form of delay, a temporal short-circuit in the imperial shutter. In transforming the texture of the material, I had to take the time to read the photograph, individuate each of the people of the photograph, and understand their role and dialogues. Furthermore, it allowed the drawing to enter the discussions, not the photograph and all the bodies and histories, hidden, concealed or not, that participated in the photographic act. Secondly, and most urgently, contact with the Archivist became much more difficult since the armed conflict restarted between the Moroccan Army and the Polisario Front in the liberated territories. As such, for ethical reasons, I consider that the oral authorization from the Archivist in the camps did not constitute sufficient consent.

Credits: Julien Lafontaine Carboni.



| Fig. B2 | Photography of a performance organized by Joanne Nussbaum, Nathan Voyame, and Todor Manev during the edition 2019 of the Atlas Poliphilo in Vernier, Geneva, an Unité d'enseignement of the ENAC at EPFL, proposed by Aurélie Dupuis, Julien Lafontaine Carboni and Dieter Dietz.

Credits: ALICE, EPFL.

#### Chapter C:

| Fig. C1 | The Jaïma. Disposition of the interior space and relations to other tents in the camp between 1980 and 1991. Diagram made with Lahsen Selki Sidi Buna during an interview with Gurba M. L. on the 8th of March 2020. We can see the women's object on the west side of the tent, the position of the kitchen on the East, with the fabric extension. Lahsen Selki Sidi Buna and Julien Lafontaine Carboni.

Credits: Julien Lafontaine Carboni.

| Fig. C2 | Interview with Gurba M. L. Spatialities and materialities that supported our discussion.

Credits: Julien Lafontaine Carboni.

| Fig. C3 | The Tent: Layout of the interior space. Diagram drawn by the author according to Sophie Caratini's anthropological studies of the Rgaybat, the main Qabila that constituted the Sahrawi population. We can see the feminine and masculine orientations of objects through the tent and the position of bodies. In Sophie Caratini. *Les Rgaybāt: 1610 - 1934. 2: Territoire et société* (Paris: Éd. L'Harmattan, 1989).

Credits: Julien Lafontaine Carboni.

| Fig. C4 | Partial view of a Frīq with two Jaïmas and other drawings and photography from Caro Baroja. Source: Baroja, J. C. (1955). *Estudios saharianos*. Instituto de Estudios Africanos.

Credits: Julien Lafontaine Carboni.

| Fig. C5 | View of Dajla, where the tents of NGOs, sand-brick constructions and concrete block constructions are interwoven. We see a garden in the background, of mostly dates and tomatoes, and further, the ruins of one of the first sand-brick buildings of Dajla, built by women in the eighties. Photography by the author, March 2020.

Credits: Julien Lafontaine Carboni.

| Fig. C6 | Official design documents of the "Tuareg Tent" produced by UNHCR Shelter and Settlement Section UNHCR, "Shelter Design Catalogue," January 2016, <https://cms.emergency.unhcr.org/documents/11982/57181/Shelter+Design+Catalogue+January+2016/a891fdb2-4ef9-42d9-bf0f-c12002b3652e>.

Credits: UNHCR.

| Fig. C7 | Women digging and mixing sand with water to prepare the making of bricks, probably early eighties. Source: Archive of the ministry of information of the SADR.

Credits: Archives of the Ministry of Information, SADR.

| Fig. C8 | Diagram figuring the actual plane of the actual P, the sensory-motor body S, and the cone of the pure memory, or the virtual. S is also a point in a spatio-temporal continuum that actualizes the virtual onto the plan of the actual. In Bergson, Henri. *Matter and Memory*. New York: Zone Books, 1988:162.

Credits: Julien Lafontaine Carboni.

| Fig. C9 | Snapshots of El Montassir, Abdessamad. Galb'Echaouf, 2020.

Credits: Abdessamad El Montassir.

| Fig. C10 | The Jaïma. Disposition of the interior space and relations to other tents in the camp between 1980 and 1991. Diagram made with Lahsen Selki Sidi Buna during an interview with Gorba M. L. on the 8th of March 2020. We can see the women's object on the west side of the tent, the position of the kitchen on the East, with the fabric extension.

Credits: Julien Lafontaine Carboni.

Interlude:

| Fig. I5 | Photograph of a sketch by Lahsen Selki Sidi Buna made during a walk in the camp of Dajla when discussing the original layout of the camps. The squares are figuring barrios arranged around a protocol—administrative building.

Credits: Julien Lafontaine Carboni.

| Fig. I6 | Herds of camels and goats of the archives of figurations. The herds are moving through the region of the refugee camps of Dajla, where one can find similar climatic conditions to several areas of Western Sahara, including underground streams, several oases, and a similar fauna and flora. They regularly move through these territories with the staff of the archives.

Credits: Julien Lafontaine Carboni.

| Fig. I7 | Jaïmas' weaving workshop. The traditional Jaïmas were composed of several bands of Hessian assembled and sewed together. The weaving loom used by the Sahrawi is specific and requires at least two women working together. As the comb is in the middle, the fabric is woven from the two extremities to the center. A one-meter wide piece of fabric can take between one and three months to be spun and woven. To achieve this, the women work according to the tradition of the Etwiza, a form of collective work conducted by Sahrawis when several people are needed. In exchange for their work, a family provides food, drink, and shelter to the people helping. Through this social bond of collective work, the Sahrawi Qabilas built solidarity between families for several centuries (solidarity primarily supported by networks of women) and succeeded in creating thousands of wells and other infrastructures in Western Sahara.

Credits: Julien Lafontaine Carboni.

| Fig. I8 | Sand-brick workshop. When arriving in the refugee camps, women used their nights to manufacture sand bricks and build hospitals, schools, and other public infrastructure, in reference to the Etwiza. Some sand buildings remain in ruins, notably in the refugee camp of Dajla. This workshop aims at reenacting the construction and the decision-making process developed during these moments of national construction, fostering solidarities between families and Qabilas during the harsh times of armed conflict.

Credits: Julien Lafontaine Carboni.

| Fig. I9 | Carpet-weaving workshop. The weaving loom for carpets is different to that used for the Jaïma. They are vertical, similar to the ones used for tapestry or by Berber women. The Sahrawi art of carpet-weaving is both an art of cultivating solidarity and social bonds between women -traditionally, it is an activity forbidden to men—and a real figurative language to narrate Sahrawi history. As such, each carpet narrates histories and each fabrication is a social event.

Credits: Julien Lafontaine Carboni.

| Fig. I10 | Gardens of the archive in Dajla. These gardens are cultivated with two principal aims. The first one is that most of the Sahrawi families, notably the Rgaybat, possessed some land near river beds and went there from time to time when the rain fell. On these occasions, they settled for some time in order to cultivate seeds, burying

some of them for the coming years and bringing the rest with them. On the other hand, knowledge of flora is necessary for moving through Western Sahara, as it gives information on the presence (or absence) of water and its depths, the presence of salt (essential for camel breeding), and myriads of information necessary to travel safely and in abundance.

Credits: Julien Lafontaine Carboni.

| Fig. I11 | Wool spinning workshop. To manufacture carpets and the Hessian of the Jaïmas, the Sahrawi craftswomen mix and spin goats and camels' hair. For the Hessian, the mix is about 30 percent of goats' hair and 70 percent of camels' hair. Spinning is a fundamentally collective enterprise as it is a long and challenging process to obtain a high-quality thread. Furthermore, these activities were primarily related to the preparation of a wedding, for which the bride must possess her own Jaïmas and carpets.

Credits: Julien Lafontaine Carboni.

| Fig. I12 | Assembly of the Jaïma. This special event is always carried out with several Jaïmas, placing the emphasis once more on the constellation between the tents and their spatial relations. Their relative positions depend on the context (climatic, economic, familial, and political), which is a fundamental part of the discussion and event. The dismounting of the tents is also an opportunity to observe the traces left by former settlements (positions of stones, specific texture of the sand, and other traces), as it is a whole part of the Sahrawi spatial knowledge. Some elderly people in the refugee camps pretend that their fathers could tell the name of a camel and to whom it belongs several years after she walked in the sand.

Credits: Julien Lafontaine Carboni.

| Fig. I13 | Ed Jal site. In between several sites of the archival network, Ed Jal became a privileged site for encounters and discussion about life in the refugee camps during the armed conflict and about the exodus from Western Sahara. Several Jaïmas are permanently installed there during the spring season.

Credits: Julien Lafontaine Carboni.

#### Chapter C':

| Fig. C'1 | Photograph taken during our visit to the site of Ed Jal, a former refugee camp abandoned at the beginning of the eighties after a flood carried away the riverbed. The shadow on the right belongs to Lahsen Selki Sidi Buna, and one on the left is mine. I took the photograph in February 2020.

Credits: Julien Lafontaine Carboni.

| Fig. C'2 | Sketch made on site of what I perceived from the center of the riverbed. At the south is the access ramp, at the west, the poultry farms, some sand pits are drawn, the lines in the sand, and the flag base.

Credits: Julien Lafontaine Carboni.

| Fig. C'3 | Photography of the map I used in the Sahrawi refugee camps, annotated with information of the different interviews. March 2020.

Credits: Julien Lafontaine Carboni.

| Fig. C'4 | Map of some of the movements between camps and sites that I recorded after the discussions I had in the refugee camps. The map is neither exhaustive nor finished, as the pandemic cut short my research trip.

Credits: Julien Lafontaine Carboni.

| Fig. C'5 | Thomas Huber. Die Bibliothek. 1988. Farbiger Lichtdruck auf Hahnemühle (Wasserzeichen). 39 x 77,5cm (65,5 x 107cm).

Credits: Thomas Huber.



## Chapter D:

| Fig. D1 | Board A. Study of the uses and practices of inscription and rituals of inauguration of grid-patterns in Etruscan Culture, early and mid-Roman Republican period, and by land surveyors in late Republic and imperial period.

Credits: Julien Lafontaine Carboni.

| Fig. D2 | Etruscan Bronze Mirror of Chalcas the Seer Reading a Liver. Vatican: Gregorian Museum, Rome, cat # 12,240.

Credits: Gregorian Museum, Vatican.

| Fig. D3 | Speculative diagram created by Gottarelli, hypothesizing the links between sites, elements and gestures of the haruspices. In Gottarelli, Antonio. “Templum Solare e Città Fondata: La Connessione Astronomica Della Forma Urbana Della Città Etrusca Di Marzabotto (III).” *Alma Mater Studiorum—Università Di Bologna*, 2005:134.

Credits: Antonio Gottarelli.

| Fig. D4 | Podium D of Marzabotto. Source: Museo Nazionale Etrusco di Marzabotto. Accessed on 21.10.21, <http://www.archeobologna.beniculturali.it/marzabotto/note.htm>.

Credits: Museo Nazionale Etrusco di Marzabotto.

| Fig. D5 | Piacenza Liver, Bronze. Model of sheep liver found in Settima di Gossolengo, object for divination for haruspices. End of the II B.C. Palazzo Farnese Civic Museum. [ibcmultimedia.it](http://ibcmultimedia.it)

Credits: Palazzo Farnese Civic Museum.

| Fig. D6 | Plan of Marzabotto presented in Gottarelli, A. 2010. “Templum Solare e Culti Di Fondazione. Marzabotto, Roma, Este: Appunti per Una Aritmo-Geometria Del Rito (IV).” *Alma Mater Studiorum—Università Di Bologna*.

Credits: Antonio Gottarelli.

| Fig. D7 | Gottarelli, A. 2010. “Templum Solare e Culti Di Fondazione. Marzabotto, Roma, Este: Appunti per Una Aritmo-Geometria Del Rito (IV).” *Alma Mater Studiorum—Università Di Bologna*.

Credits: Antonio Gottarelli.

| Fig. D8 | Plan of Cosa and surrounding ager (extending on the northeast). In Brown, Frank Edward, Emeline Richardson, and Lawrence Richardson. *Cosa III: The Buildings of the Forum: Colony, Municipium, and Village. Memoirs of the American Academy in Rome*, v. 37. University Park, Pa: Published for the American Academy in Rome by Pennsylvania State University Press, 1993.

Credits: American Academy in Rome.

| Fig. D9 | Tabula Peutingeriana. Reproduction dating back to the XIIth century of a map which is a cumulation of different maps from the end of the 1st century to the 5th. Network of the whole known world. Source: Wikimedia commons.

Credits: Wikimedia Commons.

| Fig. D10 | Reconstruction of the grid inscribed at Orange in the South of France. Reconstitution from the archaeological data of the Orange Cadastre, after A. Piganiol.

Credits: Julien Lafontaine Carboni.

## Premises of Chapter E:

Fig. E1 | ‘Do not knock’, short essay from the Adorno, Theodor W., and E. F. N. Jephcott. *Minima Moralia: Reflections from Damaged Life*. Verso 2020 edition. Radical Thinkers. London ; New York: Verso, 2020:43-4.

Credits: Julien Lafontaine Carboni.

| Fig. E2 | Drawing of the Act 2 Scene 2 of King Lear in the Globe Theater, analyzing the role of physical agents in the play, according to the theories of distributed cognition applied by Evelyn Tribble to the context of the Globe theater in London.  
Credits: Julien Lafontaine Carboni.

#### Chapter E:

| Fig. E3 | Redrawing of a photography of the National Hospital at the end of the construction site built from 1976 to 1978 in between the actual location of the camp of Smara and Awserd. The hospital was the first building made by the Sahrawi women in the refugee camps. At this time, women were highly organized; cells of 9 to 12 people were the basic political unit through which the information was spread, and the political decisions were made. Along with the political cells, women were organized in committees, in charge of health, education, social assistance, justice, or craftwomanship. At night, when the children were sleeping, around 11 p.m., they were used to meet, discuss, and debate how they could ameliorate the camp's living conditions. Souilma B., a woman I had the chance to discuss with, remembered one night when a woman had the idea to fabricate bricks out of the sand. Sahrawi women did not have any kind of construction knowledge. Nevertheless, for years, when all the daily tasks were accomplished and the children were sleeping, they met to mold bricks. At the moment they accumulated enough to mount walls, they started to outline in the sand the plan of the hospital at full scale (fig.2) Souilma told us that they were no preliminary plan or paper drawing. Directly on the ground were debated the hospital spaces according to the need of the health committee and external medical aid; until the end of the building were added more rooms and the general layout could shift according to the actual construction and the evolution of the need. It is not yet clear how the construction site was managed. From the discussion we had that the only work division was between the molders and the builders; the plan was issued from collective discussions without hierarchical distinctions. The hospital was built in several months and last for years, permitting the health conditions to be tremendously fostered. Nowadays, only some sand pile subsists; the bricks melted under the rain, and women built new health dispensaries in each camp. As the first public infrastructure, this hospital is the evidence of the sociocultural revolution in terms of the apparition of a public sphere embodying the common and the new spatialities that emerged from collective discussions and imagination.  
Credits: Julien Lafontaine Carboni.

| Fig. E4 | Snapshot of the film of Harun Farocki, Vergleich über ein Drittes (Comparaison via a third), 61min, 2007 (seen at <https://vimeo.com/225091024>, on the 20th of October 2020).  
Credits: Musée cantonal des beaux-arts de Lausanne.

| Fig. E5 | The Jaïma. Disposition of the interior space and relations to other tents in the camp between 1980 and 1991. Diagram made with Lahsen Selki Sidi Buna during an interview with Gorba M. L. on the 8th of March 2020. We can see the women's object on the west side of the tent, the position of the kitchen on the East, with the fabric extension. Lahsen Selki Sidi Buna and Julien Lafontaine Carboni.  
Credits: Julien Lafontaine Carboni.

| Fig. E6 | Drawing of a Morning Meeting in the refugee camps in 1976. Source: Manfred O Hinz, '3WM Interview mit Gunther Hiliger', *Terre des Hommes* (1977): VIII. Found in the Archives of the Ministry of Information of the SADR, redrawn by the author. I took the decision to redraw the photograph I found in the Archives for two reasons. Firstly, following the research of Ariella Azoulay about the imperial shutter in *Civil imagination: A Political Ontology of Photography*, I questioned myself about

the abundance of photographic material in the archives that were all taken by international and foreign observers. The redrawing of the photographic materials allowed me to think about and enact a form of delay, a temporal short-circuit in the imperial shutter. In transforming the texture of the material, I had to take the time to read the photograph, individuate each of the people of the photograph, and understand their role and dialogues. Furthermore, it allowed the drawing to enter the discussions, not the photograph and all the bodies and histories, hidden, concealed or not, that participated in the photographic act. Secondly, and most urgently, contact with the Archivist became much more difficult since the armed conflict restarted between the Moroccan Army and the Polisario Front in the liberated territories. As such, for ethical reasons, I consider that the oral authorization from the Archivist in the camps did not constitute sufficient consent.

Credits: Julien Lafontaine Carboni.

#### Conclusion:

| Fig. I14 | The day before I had to leave for the airport, Lahsen Selki Sidi Buna, Mohamed Ali Laman and I were in the refugee camp of Dajla to conduct some interviews for the Oral memory archiving project. When the heat of the day dropped toward sunset, Lahsen offered to take me to an abandoned neighborhood to the South East of the camp. Dajla is on the edge of the desert. As the desert moved north, the Jaïmas were slowly engulfed by the dunes. When they left the site for a somewhere safer, the population deconstructed their buildings, brought the bricks which remained in good shape, and left only the foundations, which began to merge with the ground.

The only building still standing was the protocol, an administrative and political center of the neighborhood. Built entirely from sand bricks, it is slowly decaying from the force of the wind and the rare occasions of rainfall. It was constructed in the eighties by women to provide the population an infrastructure to administrate the camps, distribute international support, and host discussions for the organization of everyday life. A series of square rooms with domed roofs create a circular courtyard from which all the spaces are accessed. To the North, two larger rooms were used for craft and education. Lahsen argued that the design was developed to embody the ideals of equality of the newly born state in exile. In this perspective, women decided to configure the space around a courtyard that could host round meetings with almost the entire neighborhood population. Taken in March 2020. Photograph by the author.

Credits: Julien Lafontaine Carboni.

| Fig. I15 | Photograph of Zora and Lahsen Selki Sidi Buna in her Jaïma in the region of Guelta Zemmur, Western Sahara. Photograph by the author.

Credits: Julien Lafontaine Carboni.

#### Annex:

| Fig. I16 | Photography of the room for digitization of video material of the Sahrawi Archives of the Ministry of Information, in the refugee camp of Rabuni. The films were mostly produced during the first years of the camps. Unfortunately, the Archives do not possess the material to read and protect them.

Credits: Julien Lafontaine Carboni.







| Fig. 116 | Photography of the room for digitization of video material of the Sahrawi Archives of the Ministry of Information, in the refugee camp of Rabuni. The films were mostly produced during the first years of the camps. Unfortunately, the Archives do not possess the material to read and protect them.





Audiovisual  
2x6

Audiovisual  
6x5+2

Annex





## [Annex] Hylomorphic understanding of matter and form

*This text was originally situated in the chapter A, before the genealogy of architectural hylomorphism. Its aim was to introduce the concept of hylomorphism in classical philosophy, and how it migrated in the metaphysics of the Renaissance, notably through Descartes. I decided to relegate it to the annex as the focus of the chapter A is on architectural hylomorphism, and not on hylomorphism in general. This section then allows the readers to navigate more in-depth in the concept, and especially in the context of its production.*

The production of physical and metaphysical systems is highly political; even if they do not directly address political issues, both their social context of production (organization of labour and the role of the philosopher/intellectual in the society) and the technical and technological systems enact and serve as (implicit) model for the metaphysical organization of the world<sup>1</sup>. In the history of Western thought, hylomorphism and the split between matter and form, as one of the ‘foundational binary opposition’<sup>2</sup> laid out by Plato and Aristotle, are deeply embedded and entrenched in the philosophical tradition and in the division of labour and social classes.

Hylomorphism was theorized by Aristotle in his *Metaphysics*, particularly in the book *Zeta*. The scheme that he used to describe the relationship between form and matter to define the substance of the world is technologically based. The technical operations of the production of a bronze sphere served him as a model that he attempted to universalize to every production and every individual. Thus, as we will see, the same scheme is organizing the relation between the soul and the body, and the individuation and growth of biological (vegetal and animal) being. He says:

‘To produce a this-thing here, after all, is to produce a this-thing-here-from, generally speaking, the substrate. What I am driving at is that producing a bronze ball is not producing the ball or sphere but rather another thing, which is as this form in something else. For if there is production here, it must *ex hypothesi* be production *from* something. For instance, a bronze sphere is produced, but this is in such a way that this-thing-here, which is a sphere, is produced from this-thing-here, which is bronze. If, however, this itself is the output of a production, then this production will take place in the same way and this will clearly generate an infinite regress.

What all this shows is that:

- (i) the form (shape in object of perception - call it what you will) is not produced,
- (ii) there is no production of it, and
- (iii) neither does the what-it-was-to-be-that-thing (it is this that is realized in something else, by dint of skill, nature or ability)

However, that there is a bronze sphere is an output of production. The production is from bronze and sphere -the form is imported into this study and the result is a bronze sphere.’<sup>3</sup>

1 Protevi, John. *Political Physics: Deleuze, Derrida and the Body Politic*. Transversals: New Directions in Philosophy Series. London: Athlone Press, 2001.

2 Lloyd Thomas, Katie, éd. *Material matters: architecture and material practice*. London ; New York: Routledge, 2007:3

3 Aristotle, et Hugh Lawson-Tancred. *Metaphysics*. Penguin Classics. London ; New York: Penguin Books, 1998: *Zeta* 7, 1033a-b:194.

In this description of the individuation process of the bronze sphere the form of the sphere is imported into the substrate. It is no coincidence that the matter used as a model is bronze. Bronze is liquified and casted into a mold to take shape; this technical operation clearly divides the form-taking process from the lineaments and accidents of the matter before this process. The two poles of forms and matter are embodied by the mold (sphere) and the liquid, indeterminate and passive substrate (bronze). Individuation and production is thus simply the bringing together of form (*morphe*) and matter (*hyle*).

‘A part, then, of productive processes is called thinking and another part is called making. That which is from the principle and form is called thinking and that from the last stage of the thinking process is called making. And in fact each of the intermediate stages in the process is produced in the same way.’<sup>4</sup>

Consequently, the form is thought before the form-taking process and induces a labour of thinking separated from the labour of making. It is not that the form pre-exists; Aristotle and Plato separated exactly on this point, as the theory of Aristotle is inductive. Nevertheless, the bronze is flexible and malleable and requires a plan, an ordering that is thought upstream the imposition. Furthermore, he recognized that ‘form is not a product, is not confined to the context of substance’<sup>5</sup>, thus allowing and legitimizing the labour on forms totally separated from substance and matter. For example, a building ‘is produced from a building to the extent that it is produced by thought, in that the skill is the form of the building’<sup>6</sup>. And, ‘conformably with this the building is said to be ‘bricked’ not ‘bricks’. In fact, we should not strictly even say, simply, that the statue comes from wood and the building from bricks, given that production should be from what changes and not from what persists’<sup>7</sup>. In this account, matter is completely inert and passive. It possesses no agency in the processes of form-taking and is submitted to the thinking and orders of ideas. Moreover, matter is even deprived of the legitimacy of being quoted as a part of the ontology of the building, entirely silenced by the fact that it persists through the production. The only agency, called by Aristotle effect -an indirect agency-, gave to matter is that ‘for each of these groups [productions by nature or by skill] is capable either of existing or not, and this is the effect of the matter in them’<sup>8</sup>. Aristotle also proposed this model to articulate and explain a wider array of individuation processes:

‘Natural compositions do not differ radically from this. For, on the one hand, the productive effect of the seed is not different from that from skill, given that the seed possesses the form potentially and that that from which it comes shares its name, in a way, with the product. In a way, because it is not to be supposed that the name of producer and product will always be exactly the same, on the lines of ‘a human being begets a human being’, since we can perfectly well say ‘a woman is from a man’.’<sup>9</sup>

In nature, the form-taking process requires the existence of species-form, that exists in a similar manner to the skill of the planner. Matter possesses the same agency, an inert and malleable substrate ordered by external will. The process of production cannot be named making as it is the case for the artifactual production but is still outlined in the same fashion as the bronze sphere casting is the scheme that structures the other. In the same movement, Aristotle proposes that

‘in the case of animals, it is the soul (the substance of the living thing) that is the substance as specified in the account, the form and the what-it-is-to-be-that-thing for a body of this kind. [...] The body, on the other hand, and its parts will be posterior to the substance that is the soul, and it will be, not the substance, but the composite that is divided into them as into matter.’<sup>10</sup>

4 Aristotle, et Hugh Lawson-Tancred. *Metaphysics*. 1998: Zeta 7, 1032b:191.

5 Aristotle, et Hugh Lawson-Tancred. *Metaphysics*. 1998: Zeta 9, 1034a-b:199.

6 Aristotle, et Hugh Lawson-Tancred. *Metaphysics*. 1998: Zeta 9, 1034a:198.

7 Aristotle, et Hugh Lawson-Tancred. *Metaphysics*. 1998: Zeta 7, 1033a:192.

8 Aristotle, et Hugh Lawson-Tancred. *Metaphysics*. 1998: Zeta 7, 1033a:192.

9 Aristotle, et Hugh Lawson-Tancred. *Metaphysics*. 1998: Zeta 9, 1034a-b:199.

10 Aristotle, et Hugh Lawson-Tancred. *Metaphysics*. 1998: Zeta 9, 1035b:203.



11 Simondon, Gilbert.  
L'individuation à la lumière des  
notions de forme et d'information.  
Krisis. Grenoble: Millon, 2005:50

12 Simondon, Gilbert.  
L'individuation à la lumière des  
notions de forme et d'information.  
Krisis. Grenoble: Millon, 2005:46.

13 Lloyd Thomas, Katie, éd.  
Material matters: architecture and  
material practice. London ; New  
York: Routledge, 2007:3

14 Protevi, John. Political  
Physics: Deleuze, Derrida and the  
Body Politic. Transversals: New  
Directions in Philosophy Series.  
London: Athlone Press, 2001:120.

15 Protevi, John. Political Physics:  
Deleuze, Derrida and the Body  
Politic. 2001:120.

16 Protevi, John. Political Physics:  
Deleuze, Derrida and the Body  
Politic. 2001:120.

17 Plato, Robin Waterfield,  
Andrew Gregory, and Plato.  
Timaeus and Critias. Oxford  
World's Classics. Oxford ; New  
York: Oxford University Press,  
2008:22.

18 The root *arkhé* served to form  
several key terms in politics, physics  
and Architecture. The archon is  
the office of the highest Athenian  
political order, as it was the case  
in the Roman Colonies. The  
archon, the ruler and originator  
of order was in charge of keeping  
and ruling over the documents  
(of the law, on property...), giving  
its name to the archive, as it was  
underlined by Derrida in *Archive  
Fever*, emphasizing on the analogy  
between the ruler and the writer of  
History. The term also composed  
the word architecture together with  
*tekhton*, translated as the structure,  
the order or the carpentry. The  
double meaning of the two words  
permits to translate the root of  
the word architecture both as the  
master carpenter -as it was literally  
the case in the Middle Ages in  
Europe- and as the origin of order/  
order of the power as it is the case  
in the Classical Age and anew  
at the Renaissance. This lexical  
ambiguity embodies perfectly an  
ongoing debate in the field on the  
role of the architect in the society  
and its relation to power.

19 Protevi, John. Political Physics:  
Deleuze, Derrida and the Body  
Politic. 2001:137.

20 Plato, and Robin Waterfield.  
Republic. Reissued. The Oxford  
World's Classics. Oxford New  
York: Oxford University Press,  
1998:590d, 341.

In this way, the dualism of substance (the mind/body problem) is already outlined as a potential in hylomorphism<sup>11</sup>. The body is liquid, animated by the soul -which is given the status of form, and thus, of the reason, the plan or entelechy.

This series of consideration brought in by the hylomorphic scheme all induce the same mechanism. This is precisely the strength of the model; its capacity to be universal. Nevertheless, this universalization based on a technical operation created what Simondon called a zone obscure, a dark zone:

‘Le schème hylémorphique ne retient que les extrémités de ces deux demi-chaînes que l’opération technique élabore; le schématisme de l’opération elle-même est voilé, ignoré. Il y a un trou dans la représentation hylémorphique, faisant disparaître la véritable médiation, l’opération elle-même qui rattache l’une à l’autre les deux demi-chaînes en instituant un système énergétique, un état qui évolue et doit exister effectivement pour qu’un objet apparaisse avec son *eccéité*.’<sup>12</sup>

In this zone resides the agency of forced bodies and the agency of matter , -and of its virtualities. In this model, there is no possibility of differentiation<sup>13</sup>. The bronze spheres are all the same and cannot be individualized.

Even if Plato never uses hylomorphism as a term to define individuation processes (technical, biological or social) and develops an architectonic vision focusing on ‘the relation of form to finished product (the copy, the instance of the form)’<sup>14</sup> as a scheme to his model, a looser definition of hylomorphism can ‘cover both the Platonic and the Aristotelian instances’<sup>15</sup> -and, as we will discuss thereafter, the model of Descartes. This definition of hylomorphism grounds their commonality on the dark zone fabricated by these schemes. Both are setting a common ‘external source of order in psychic and somatic systems’<sup>16</sup> in the case of the body, and an external source of order in matter -the *arkhe* or the form.

The key to understand the theory of individuation of Platon, is to outline the existence of an external order, that can be depending on the individual, psychic or technical, that imposes a form -an ideal form- on a chaotic matter. This externality is always identified with the origin, the oldest principle or elements: ‘But in fact he made soul prior and senior, in terms of both birth and excellence, since it was to be the mistress — the ruler, with the body as its subject.’<sup>17</sup> In Ancient Greek, the term *arkhé*, is translated in English as the origin, but also, the power, the ruler<sup>18</sup>. On this double-meaning rely the association of Plato between the origin and the principle. In this account, the matter is always ‘recalcitrant to an ideal to be realized’<sup>19</sup>; it resists the perfection of the *tekhné*, of the logos and of the ideal forms. Plato developed an isomorphism -analogy of structure- between the body and the soul, the soul and human in the household, the household in the city, and the city in the cosmos; this isomorphism is also conducted in his conceptualization of the productive process, in the production of form.

The scheme is articulated around the opposition between a logos, a rational part that must rule over an irrational part for the good sake of both. He argues for the necessary submission of the good human to the Laws of the good city:

‘we’re saying that subjection to the principle of divine intelligence is to everyone’s advantage. It’s best if this principle is part of a person’s own nature, but if it isn’t, it can be imposed from outside, to foster as much unanimity and compatibility between us as might be possible when we’re all governed by the same principle.’<sup>20</sup>

Plato developed several theories of the Ideal City and Government. One is based on a complete *tabula rasa* (Republic and Statesman) that relies only on the knowledge and *tekhné* of the ruler and legislator; the other one (Laws) is taking into account a set of customs and habits, and an existing law and Council. In the Laws the matter to be molded following an external source of order is the customs of the inhabitants. Plato supposes that

‘the happiest people, and those who reach the best destination, are the ones who have cultivated the goodness of an ordinary citizen- what is called self-control and integrity- which is acquired by habit and practice, without the help of philosophy and reason.. they will probably pass into some kind of social and disciplined creature like bees, wasps, and ants.’<sup>21</sup>

To raise good citizens, one have to ground their practices in philosophy and reason from outside. Thus, ‘the disciplining of the body politic in the registers of man, household and city operates below the level of the political legislation, reinforcing the need for the *tabula rasa* which enables philosophic control of psychic and somatic education.’<sup>22</sup> Education and imposition of good practices are the means that the legislator and ruler of the ideal republic of Plato should use to make happy his people. For that purpose, in the Laws, Plato recognizes the role of the handworkers and caregivers. They possess a somatic knowledge and/or an artisanal sensibility and under the direction of the philosopher king, they can mold the next generation to harmonize them with the city. Here, and it is the case in the whole platonic philosophy, the artisanal sensibility is recognized but not given the status of *tekhné*, as it is reserved for the one who teaches, who is able of the supplementary *logos*, a real form of knowledge. Nevertheless, their work stays in the background as the ‘folly of nurses and mothers’<sup>23</sup>.

For Plato, the body is the point of contact between the cosmos and the soul. The soul has to control and rule over the body, to temperate it, as it is the non-reasonable part of the couple. In the same way, the soul has to be molded by the good customs thanks to the caregiver and/or educator. The perfect body for Plato is the philosopher’s body, which has fallen into the background and stays as silent as possible;

‘Plato knows perfectly well, event though he sounds like he regrets the fact at times (e.g. Plato, *Phaedo*, 66d), that while living the philosopher will always be embodied: the key is to have a certain kind of body, a philosophic one whose passions and pleasures come from knowing (Plato, *Republic*, 485d).’<sup>24</sup>

The body is guilty of a somatic chaos that has to be remediated and kept quiet. In his point on medicine, as emphasized by Protevi, ‘we read that doctors ‘give order [*kosmouisi*] and discipline to the body’ (*Gorgias*, 504a). Here is an explicit example of a technical origin to the order of a somatic body plagued by a tendency to disorder.’<sup>25</sup> The doctor fixes irregular diseases and wounds, while education fixes and regulates customs. In this sense, before the practice of gymnastics, Plato advises to use music to shape the soul of the children, and harmonize it before the possibility of the *logos*. While the care of the body and the soul is essential, Plato only lays out what should be done in terms of patterns or norms, while leaving ‘to the artisans what he assumes will be the imposition of this pattern in a plastic matter’<sup>26</sup>.

In the end, while the model of Aristotle doesn’t ground the external source of order in a *tekhné*, both are constructing a metaphysical system that opposes the craft.women knowledge and the knowledge of the thinker or ruler. In Plato, the *tekhné* of the *arkhé* can be of two types, as the isomorphism between the soul and the man, etc., cannot be fully analogue to the order of the cosmos; ‘But I will assume that things which people call

21 Plato, *Phaedo*, 82a quoted by Protevi, John. *Political Physics: Deleuze, Derrida and the Body Politic*. 2001:138.

22 Protevi, John. *Political Physics: Deleuze, Derrida and the Body Politic*. 2001:139.

23 ‘The view that, in the case of hands, right and left are by nature different in respect of their utility for special acts ; but, as a matter of fact, in ‘the case of the feet and the lower limbs there is plainly no difference in working capacity ; and it is due to the folly of nurses and mothers that we have all become limping, so to say, in our hands.’ Plato, and Robert Gregg Bury. *Plato: In Twelve Volumes. 11: Laws: Books VII - XII*. Reprinted. The Loeb Classical Library 192. Cambridge, Mass.: Harvard Univ. Press, 2004:794e,25.

24 Protevi, John. *Political Physics: Deleuze, Derrida and the Body Politic*. 2001:125.

25 Protevi, John. *Political Physics: Deleuze, Derrida and the Body Politic*. 2001:126.

26 Protevi, John. *Political Physics: Deleuze, Derrida and the Body Politic*. 2001:128.

27 Plato, and Harold North Fowler. *Plato: In Twelve Volumes. 7: Theaetetus. Sophist.* Reprinted. The Loeb Classical Library 123. Cambridge, Mass.: Harvard Univ. Press, 2006:265e,449.

28 Vitruvius. *Vitruvius: "Ten Books on Architecture."* New Ed. New York: Cambridge University Press, 2001:I.1.1,21.

29 Koyré, Alexandre, and Raissa Tarr. *Du monde clos à l'univers infini.* Collection Tel 129. Paris: Gallimard, 1973:127-8.

natural are made by divine art, and things put together by man out of those as materials are made by human art, and that there are accordingly two kinds of art, the one human and the other divine.<sup>27</sup> The divine *tekhné* is directly associated with the Demiurge of Plato, and reproduces the architectonical planning of the world in its ideal forms, as the King philosopher would do with his city. The opposition of matter and form that structured the discourse of Aristotle also entirely enacted the proposition of Plato, giving the primacy to an idealist approach of physics and the world. In both view, matter is inert and plastic; it doesn't possess any ability to self-organization and requires the imposition from outside of a form. Analogically, the labourer and her body (women, craft.women, slaves, etc...) aren't granted any form of knowledge and capacity to organize.

The two metaphysical system presented above did have a strong impact on the organisation of society, as it did in the other way. The scientific epistemology underlined by both of the systems are defining the episteme of the architectural practice; in this sense, we would argue that the relationship between architecture and power do not (exclusively) rely on moral, ethics or engagement, but on the epistemological and physical paradigm in which the architect is operating. In the same movement, this process is reproduced in the writing of architectural History by valuing certain forms of knowledge and practices in disregard of others. As an example of this entanglement, in *Ten Books on Architecture*, the Roman Architect Vitruvius described the role of the architect in its relation to techniques and to society perpetuating the Aristotle's contempt for matter and labourer by a manifest use of the hylomorphic scheme. He defines the skills of the architect as such:

'The architect's expertise is enhanced by many disciplines and various sorts of specialized knowledge; all the works executed using these other skills are evaluated by his seasoned judgement. This expertise is born both of practice and reasoning. Practice is the constant, repeated exercise of the hands by which the work is brought to completion in whatever medium is required for the proposed design. Reasoning, however, is what can demonstrate and explain the proportions of completed works skillfully and systematically.'<sup>28</sup>

For Vitruvius, practice is also defined as a 'conversion of the material according to the original design', which emphasizes its role as a creator of harmony through forms and proportions. The logos in the shape of thinking forms and designs here relegates matter, laborers and embodied knowledge to the dark zone of silencing, as the architectural and spatial knowledge is situated in the mold/form of the architect and planner.

The scientific revolutions of the Renaissance are a key moment, when is crystallized anew this entanglement of the philosophical and epistemological tradition with architecture, sustaining a new form of hylomorphism. The rediscovery of Aristotle's and Plato's writing infused the birth of modern cosmology; particularly, the work of Descartes embodies this return of hylomorphism in western philosophical thought. It is one of the most complete and certainly one of the most influential writer of his time. He has been a central reference for metaphysical investigation since its publication, and remains a paradigmatic reality in occidental scientific culture, regularly discussed and thoroughly analyzed. As underlined by Alexandre Koyré: 'Quoi qu'il en soit, ce fut Descartes (et non pas Bruno ou Galilée) qui formula clairement et distinctement les principes de la science nouvelle et de la nouvelle cosmologie mathématique, son rêve de *reductione scientiae ad geometriam*'<sup>29</sup>; He is said to be the father of modern philosophy and the founder of rationalism.



The essential opposition of the metaphysical scheme of Descartes isn't exactly between matter and form; his version is directly inspired and partly borrowed from Aristotle, but nevertheless, reformulated it to fit with his mathematical discoveries and theories. In his *Méditations*, he proposes two types of substance: *res cogitans* and *res extensa*. The second encompasses the matter and the extent in the same substance and defines them as such;

‘The nature of body consists not in weight, hardness, colour, or the like, but simply in extension . . . [T]he nature of matter, or body considered in general, consists not in its being something which is hard or heavy or coloured, or which affects the senses in any way, but simply in its being something which is extended in length, breadth and depth. (CSM I 224, SPW 190, AT VIII A 42)’.<sup>30</sup>

All the properties of a matter or a body that are not its extent and position (as they would in a cartesian coordinate system), are secondary properties of the object. This observation of the matter as volume is due to the use of wax as the paradigmatic matter to understand the relationship between matter and mind. He says:

‘But wait—while I am speaking, it is brought close to the fire. The remains of its flavour evaporate; the smell fades; the colour is changed, the shape is taken away, it grows in size, becomes liquid, becomes warm, it can hardly be touched, and now, if you strike it, it will give off no sound. [...] Certainly, none of those qualities I apprehended by the senses: for whatever came under taste, or smell, or sight, or touch, or hearing, has now changed: but the wax remains. Perhaps the truth of the matter was what I now think it is: namely, that the wax itself was not in fact this sweetness of the honey, or the fragrance of the flowers, or the whiteness, shape, or sonority, but the body which not long ago appeared to me as perceptible in these modes, but now appears in others.’<sup>31</sup>

As in the case of Aristotle, the use of wax as a paradigmatic model for matter and body is no coincidence. Again, the wax is liquid, moldable, undifferentiated and inert to the eyes of Descartes.

Further in his writing, Descartes argues that the matter and the sensuous experience is always misleading; in fact, the experience of the wax and of its multiple sensory touch upon our senses (the smell, the sound, the colour...) cheated us on the metaphysical truth of its reality. As underlined Simmons,

‘At the beginning of the *Meditations*, our sensory experience is regarded as susceptible to illusion, indistinguishable from dreaming, and of uncertain origin. Shortly thereafter the senses are judged to systematically mislead us about the nature of bodies, providing only “obscure” and “confused” perceptions of them through what may be “materially false” ideas. The senses, it seems, can’t even acquaint us properly with a little piece of wax! The intellect, rather than the senses, is the epistemic hero of the *Meditations*, guiding us to such important metaphysical truths as the existence of God, the real distinction between mind and body, and even the true nature of body.’<sup>32</sup>

For Descartes, there is a real doubt about the existence of the *res extensa*, of the physical world, because of this essential illusion of reality of our embodied sensuous experience; and this is the enterprise of the *Méditations*, to prove that the external cause that justify the existence of this material world is God itself. As such, there is a distinction of nature

30 Quoted by Dicker, Georges. *Descartes: An Analytical and Historical Introduction*. 2nd ed. New York: Oxford University Press, 2013:282.

31 Descartes, René, and Michael Moriarty. *Meditations on First Philosophy: With Selections from the Objections and Replies*. Oxford: Oxford University Press, 2008:22.

32 Simmons, Alison. “Sensory Perception of Bodies: Meditation 6.5.” *The Cambridge Companion to Descartes’ Meditations*, 2014, 258.

between the body, that pertains to the realm of the *res extensa* and the mind and soul, that belong to the *res cogitans*, and this is also one of the problem that Descartes tries to resolve in the *Méditations*:

‘And although perhaps (or rather certainly, as I shall shortly claim) I have a body, which is very closely conjoined to me, yet because, on the one hand, I have a clear and distinct idea of myself, in so far as I am a thinking and not an extended thing, and, on the other, a distinct idea of the body, in so far as it is only an extended and not a thinking thing, it is certain that I am really distinct from my body, and can exist without it.’<sup>33</sup>

The soul is then possibly immortal, and the body, the temporary vehicle for the soul, is ‘a kind of machine made up of bones, nerves, muscles, veins, blood, and skin so fitted together that, even if there were no mind within it, it would still have all the movements it currently has that do not result from the command of the will (and hence the mind).’<sup>34</sup> We also have to underline that, according to the misleading nature of the body and its perceptual organs, the understanding of the environment, of forms and shapes, doesn’t belong to the body neither;

‘For since I have now learned that bodies themselves are perceived not, strictly speaking, by the senses or by the imaginative faculty, but by the intellect alone, and that they are not perceived because they are touched or seen, but only because they are understood, I clearly realize [*cognosco*] that nothing can be perceived by me more easily or more clearly than my own mind.’<sup>35</sup>

It means that it is a pure intellectual exercise to understand forms and shapes, and that all the gestures and behaviors of animals are purely machinic reactions; causal reactions pre-written. In this way, the *res extensa* is a continuous undifferentiated field; for Descartes, it exists no such things as space:

‘Matière et espace sont choses identiques et ne peuvent être distingués que par abstraction. Les corps ne sont pas ‘dans l’espace’, mais seulement entre d’autres corps; l’espace qu’ils ‘occupent’ n’est pas quelque chose qui diffère d’eux-mêmes.’<sup>36</sup>

In fact, ‘Le monde de Descartes est un monde mathématiquement rigoureusement uniforme, un monde de géométrie réifiée, dont nos idées claires et distinctes nous donnent une connaissance évidente et certaine.’<sup>37</sup> Bodies and matter lie continuously; the mind and the ideas are clear and precise. Deleuze and Guattari identified the *res extensa* of Descartes as the scientific space par excellence, as the striated royal space; they say:

‘Toutefois, ce n’est pas que le modèle légal ignore les forces, le jeu des forces. On le voit bien dans l’espace homogène qui correspond au compar. L’espace homogène n’est nullement un espace lisse, c’est au contraire la forme de l’espace strié. L’espace des piliers. Il est strié par la chute des corps, les verticales de pesanteur, la distribution de la matière en tranches parallèles, l’écoulement lamellaire ou laminaire de ce qui est flux. Ce sont ces verticales parallèles qui ont formé une dimension indépendante, capable de se communiquer partout, de formaliser toutes les autres dimensions, de strier tout l’espace dans toutes ses directions, et par là, de le rendre homogène. La distance verticale de deux points fournit le mode de comparaison pour la distance horizontale de deux autres point. L’attraction universelle sera en ce sens la loi de toute loi, en tant qu’elle règle la correspondance bi-univoque entre deux corps; et chaque fois que la science découvrira un nouveau champ, elle cherchera à le formaliser sur le mode du champ de la pesanteur.’<sup>38</sup>

33 Descartes, René, and Michael Moriarty. *Meditations on First Philosophy: With Selections from the Objections and Replies*. Oxford: Oxford University Press, 2008:55.

34 Descartes, René, and Michael Moriarty. *Meditations on First Philosophy: With Selections from the Objections and Replies*. Oxford: Oxford University Press, 2008:60.

35 Descartes, René, and Michael Moriarty. *Meditations on First Philosophy: With Selections from the Objections and Replies*. Oxford: Oxford University Press, 2008:24.

36 Koyré, Alexandre, and Raissa Tarr. *Du monde clos à l’univers infini*. Collection Tel 129. Paris: Gallimard, 1973:130.

37 Koyré, Alexandre, and Raissa Tarr. *Du monde clos à l’univers infini*. Collection Tel 129. Paris: Gallimard, 1973:128.

38 Deleuze, Gilles, et Félix Guattari. *Mille plateaux*. Collection « Critique », t. 2. Paris: Éditions de minuit, 1980: 458.

In other words, everything that is not quantifiable in the mathematical system of Descartes is not clear and do not deserve to be taken into account by royal science, as it is a mislead of our senses. Theoretically, Descartes goes further than Plato and Aristotle in the identification of an external order imposed on the physical reality, as even the immanence of the physical world quake under the weight of the cogitans; a complete dominion of the thinking thing over the material world.

‘[I]f a stone is removed from the space or place where it is, we think that its extension has also been removed from that place, since we regard the extension as something particular and inseparable from the stone. But at the same time we think that the extension of the place where the stone used to be remains, and is the same as before.’<sup>39</sup>

As we will see, no traces subsist to this splitting between mind and body. Even if Descartes doesn’t refer to craft, wo.manship -and thus, artisanal sensibility- and production processes in his account of matter, his metaphysical system is completely dominated by an external end, and the power of the thinker above the material world. The obscure zone of the hylomorphic scheme that hide material, virtual and bodily forces is deepened, and lies in the foundation stones of modern sciences. As noted by Ingold, in this motion,

‘Form came to be seen as imposed by an agent with a particular design in mind, while matter, thus rendered passive and inert, became that which was imposed upon. [...]’<sup>40</sup> contemporary discussions of art and technology, and of what it means to make things, continue to reproduce the underlying assumptions of the hylomorphic model, even as they seek to restore the balance between its terms.’<sup>40</sup>

Nowadays, and for decades now, hylomorphism has been denounced as issued from a social stratification<sup>41</sup>. Its hierarchies of knowledge, that separates thinking from making, and valuing one above the other, as much as its hypothesis of an external order imposed upon a moldable reality, embodied by the process of imposing a form on a passive matter -and its consequences on the consideration of body and senses-, are said to originates the obscure zone introduced by Simondon, and prolonging and perpetuating the state power<sup>42</sup> and the social classes.

39 Quoted by Dicker, Georges. *Descartes: An Analytical and Historical Introduction*. 2nd ed. New York: Oxford University Press, 2013:292.

40 Ingold, T. « The Textility of Making ». *Cambridge Journal of Economics* 34, no 1 (1 janvier 2010): 92. <https://doi.org/10.1093/cje/bep042>.

41 Ingold, T. « The Textility of Making ». *Cambridge Journal of Economics* 34, no 1 (1 janvier 2010): 92. <https://doi.org/10.1093/cje/bep042>.

42 In a first time, this critique has been articulated mainly in the field of philosophy. See Deleuze, Gilles, and Félix Guattari. *Mille Plateaux*. Collection “Critique,” t. 2. Paris: Éditions de minuit, 1980. Simondon, Gilbert. *L’individuation à la lumière des notions de forme et d’information*. Krisis. Grenoble: Millon, 2005. Vlastos, Gregory. “Slavery in Plato’s Thought.” *The Philosophical Review* 50, no. 3 (May 1941): 289. <https://doi.org/10.2307/2180538>.

Then, Architectural Historian and theoretician translated it into the field. See, Benjamin, AE. “Plans to Matter: Towards a History of Material Possibility.” In *Material Matters: Architecture and Material Practice*, Routledge, 13–28. London: Routledge, 2006. Grosz, Elizabeth. “Architecture from the Outside.” In *Space, Time, and Perversion*, by Elizabeth Grosz, 125–37, 1st ed. Routledge, 2018. <https://doi.org/10.4324/9781315656564-9>. Ingold, T. “The Textility of Making.” *Cambridge Journal of Economics* 34, no. 1 (January 1, 2010): 91–102. <https://doi.org/10.1093/cje/bep042>. Ingold, Tim. *Making: Anthropology, Archaeology, Art and Architecture*. London ; New York: Routledge, 2013. Lloyd Thomas, Katie, ed. *Material Matters: Architecture and Material Practice*. London ; New York: Routledge, 2007. Protevi, John. *Political Physics: Deleuze, Derrida and the Body Politic*. *Transversals: New Directions in Philosophy Series*. London: Athlone Press, 2001. Simmons, Alison. “Sensory Perception of Bodies: Meditation 6.5.” *The Cambridge Companion to Descartes’ Meditations*, 2014, 258–77.

43 On this Deleuze and Guattari did developed the opposition between a royal science and a nomadic science, both corresponding to two type of space, one striated and one smooth. We will develop thereafter on this topic.



**[Annex] L'individuation de la brique et le schème hylémorphique : Extrait du chapitre premier de L'individuation à la lumière des notions de forme et d'information – Gilbert Simondon**

Le schème technologique fondamental  
s'est révélé l'opérateur des  
questions de l'opération technique.  
dans le mouvement d'abstraction

Hylémorphisme =  
schème technique  
↓  
opérateur de  
l'opération

## Chapitre premier

### Forme et matière

#### I. – FONDEMENTS DU SCHÈME HYLÉMORPHIQUE. TECHNOLOGIE DE LA PRISE DE FORME

##### 1. Les conditions de l'individuation

Les notions de forme et de matière ne peuvent aider à résoudre le problème de l'individuation que si elles sont premières par rapport à sa position. Si par contre on découvrirait que le système hylémorphique exprime et contient le problème de l'individuation, il faudrait, sous peine de s'enfermer dans une pétition de principe, considérer la recherche du principe d'individuation comme logiquement antérieure à la définition de la matière et de la forme.

Il est difficile de considérer les notions de forme et de matière comme des idées innées. Pourtant, au moment où l'on serait tenté de leur assigner une origine technologique, on est arrêté par la remarquable capacité de généralisation que possèdent ces notions. Ce n'est pas seulement l'argile et la brique, le marbre et la statue qui peuvent être pensés selon le schème hylémorphique, mais aussi un grand nombre de faits de formation, de genèse, et de composition, dans le monde vivant et le domaine psychique. La force logique de ce schème est telle qu'Aristote a pu l'utiliser pour soutenir un système universel de classification qui s'applique au réel aussi bien selon la voie logique que selon la voie physique, en assurant l'accord de l'ordre logique et de l'ordre physique, et en autorisant la connaissance inductive. Le rapport même de l'âme et du corps peut être pensé selon le schème hylémorphique.

Une base aussi étroite que celle de l'opération technologique paraît difficilement pouvoir soutenir un paradigme ayant une pareille force d'universalité. Il convient donc, pour examiner le fondement du schème hylémorphique, d'apprécier le sens et la portée du rôle joué dans sa genèse par l'expérience technique.

Le caractère technologique de l'origine d'un schème n'invalide pas ce schème, à la condition toutefois que l'opération qui sert de base à la formation des concepts utilisés passe entièrement et s'exprime sans altération dans le schème abstrait. Si, au contraire, l'abstraction s'effectue de manière infidèle et sommaire, en masquant un des dynamismes fondamentaux de l'opération technique, le schème est faux. Au lieu d'avoir une véritable valeur paradigmatique, il n'est plus qu'une comparaison, un rapprochement plus ou moins rigoureux selon les cas.

Or, dans l'opération technique qui donne naissance à un objet ayant forme et matière, comme une brique d'argile, le dynamisme réel de l'opération est fort éloigné

individuation  
première

de pouvoir être représenté par le couple forme-matière. La forme et la matière du schéma hylémorphique sont une forme et une matière abstraites. L'être défini que l'on peut montrer, cette brique en train de sécher sur cette planche, ne résulte pas de la réunion d'une matière quelconque et d'une forme quelconque. Que l'on prenne du sable fin, qu'on le mouille et qu'on le mette dans un moule à briques : au démoulage, on obtiendra un tas de sable, et non une brique. Que l'on prenne de l'argile et qu'on la passe au laminoir ou à la filière : on n'obtiendra ni plaque ni fils, mais un amoncellement de feuillets brisés et de courts segments cylindriques. L'argile, conçue comme support d'une indéfinie plasticité, est la matière abstraite. Le parallélépipède rectangle, conçu comme forme de la brique, est une forme abstraite. La brique concrète ne résulte pas de l'union de la plasticité de l'argile et du parallélépipède. Pour qu'il puisse y avoir une brique parallélépipédique, un individu existant réellement, il faut qu'une opération technique effective institue une médiation entre une masse déterminée d'argile et cette notion de parallélépipède. Or, l'opération technique de moulage ne se suffit pas à elle-même ; de plus, elle n'institue pas une médiation directe entre une masse déterminée d'argile et la forme abstraite du parallélépipède<sup>1</sup> ; la médiation est préparée par deux chaînes d'opérations préalables qui font converger matière et forme vers une opération commune. Donner une forme à de l'argile, ce n'est pas imposer la forme parallélépipédique à de l'argile brute : c'est tasser de l'argile préparée dans un moule fabriqué. Si on part des deux bouts de la chaîne technologique, le parallélépipède et l'argile dans la carrière, on éprouve l'impression de réaliser, dans l'opération technique, une rencontre entre deux réalités de domaines hétérogènes, et d'instituer une médiation, par communication, entre un ordre interélémentaire, macrophysique, plus grand que l'individu, et un ordre intraélémentaire, microphysique, plus petit que l'individu.

Précisément, dans l'opération technique, c'est la médiation elle-même qu'il faut considérer : elle consiste, dans le cas choisi, à faire qu'un bloc d'argile préparée remplisse sans vide un moule et, après démoulage, sèche en conservant sans fissures ni pulvérulence ce contour défini. Or, la préparation de l'argile et la construction du moule sont déjà une médiation active entre l'argile brute et la forme géométrique imposable. Le moule est construit de manière à pouvoir être ouvert et fermé sans endommager son contenu. Certaines formes de solides, géométriquement concevables, ne sont devenues réalisables qu'avec des artifices très complexes et subtils. L'art de construire les moules est, de nos jours encore, un des aspects les plus délicats de la fonderie. Le moule, d'ailleurs, n'est pas seulement construit ; il est aussi préparé : un revêtement défini, un saupoudrage sec éviteront que l'argile humide n'adhère aux parois au moment du démoulage, en se désagrégeant ou en formant des criques. Pour donner une forme, il faut construire tel moule défini, préparé de telle façon, avec telle espèce de matière. Il existe donc un premier cheminement qui va de la forme géométrique au moule concret, matériel, parallèle à l'argile, existant de la même manière qu'elle, posé à côté d'elle, dans l'ordre de grandeur du manipulable. Quant à l'argile, elle est soumise elle aussi à une préparation ; en tant que matière brute, elle est ce que la pelle soulève du gisement au bord du marécage, avec des

1. C'est-à-dire entre la réalité d'un ordre de grandeur supérieur au futur individu, recelant les conditions énergétiques du moulage, et la réalité-matière, qui est, grain par grain, dans sa disponibilité, d'un ordre de grandeur inférieur à celui du futur individu, la brique réelle.



racines de jonc, des grains de gravier. Séchée, broyée, tamisée, mouillée, longuement pétrie, elle devient cette pâte homogène et consistante ayant une assez grande plasticité pour pouvoir épouser les contours du moule dans lequel on la presse, et assez ferme pour conserver ce contour pendant le temps nécessaire pour que la plasticité disparaisse. En plus de la purification, la préparation de l'argile a pour fin d'obtenir l'homogénéité et le degré d'humidité le mieux choisi pour concilier plasticité et consistance. Il y a dans l'argile brute une aptitude à devenir masse plastique à la dimension de la future brique en raison des propriétés colloïdales des hydrosilicates d'alumine : ce sont ces propriétés colloïdales qui rendent efficaces les gestes de la demi-chaîne technique aboutissant à l'argile préparée ; la réalité moléculaire de l'argile et de l'eau qu'elle absorbe s'ordonne par la préparation de manière à pouvoir se conduire au cours de l'individuation comme une totalité homogène à l'échelon de la brique en train d'apparaître. L'argile préparée est celle en laquelle chaque molécule sera effectivement mise en communication, quelle que soit sa place par rapport aux parois du moule, avec l'ensemble des poussées exercées par ces parois. Chaque molécule intervient au niveau du futur individu, et entre ainsi en communication interactive avec l'ordre de grandeur supérieur à l'individu. De son côté, l'autre demi-chaîne technique descend vers le futur individu ; la forme parallélépipédique n'est pas n'importe quelle forme : elle contient déjà un certain schématisme qui peut diriger la construction du moule, qui est un ensemble d'opérations cohérentes contenues à l'état implicite ; l'argile n'est pas seulement passivement déformable ; elle est activement plastique, parce qu'elle est colloïdale ; sa faculté de recevoir une forme ne se distingue pas de celle de la garder, parce que recevoir et garder ne font qu'un : subir une déformation sans fissure et avec cohérence des chaînes moléculaires. La préparation de l'argile est la constitution de cet état d'égale distribution des molécules, de cet arrangement en chaînes ; la mise en forme est déjà commencée au moment où l'artisan brasse la pâte avant de l'introduire dans le moule. Car la forme n'est pas seulement le fait d'être parallélépipédique ; elle est aussi le fait d'être sans fissure dans le parallélépipède, sans bulle d'air, sans crique : la cohésion fine est le résultat d'une mise en forme ; et cette mise en forme n'est que l'exploitation des caractères colloïdaux de l'argile. Avant toute élaboration, l'argile, dans le marais, est déjà en forme, car elle est déjà colloïdale. Le travail de l'artisan utilise cette forme élémentaire sans laquelle rien ne serait possible, et qui est homogène par rapport à la forme du moule : il y a seulement, dans les deux demi-chaînes techniques, un changement d'échelle. Dans le marécage, l'argile a bien ses propriétés colloïdales, mais elles y sont molécule par molécule, ou grain par grain ; cela est déjà de la forme, et c'est ce qui plus tard maintiendra la brique homogène et bien moulée. La qualité de la matière est source de forme, élément de forme que l'opération technique fait changer d'échelle. Dans l'autre demi-chaîne technique, la forme géométrique se concrétise, devient dimension du moule, bois assemblés, bois saupoudrés ou bois mouillés<sup>2</sup>. L'opération technique prépare deux demi-chaînes de transformations qui se rencontrent en un certain point, lorsque les deux objets élaborés ont des caractères compatibles, sont à la même

2. Le moule, ainsi, n'est pas seulement le moule, mais le terme de la chaîne technique interélémentaire, qui comporte de vastes ensembles enfermant le futur individu (ouvrier, atelier, presse, argile) et contenant de l'énergie potentielle. Le moule totalise et cumule ces relations inter-élémentaires, comme l'argile préparée totalise et cumule les interactions moléculaires intra-élémentaires des hydrosilicates d'alumine.



échelle ; cette mise en relation n'est pas unique et inconditionnelle ; elle peut se faire par étapes ; ce que l'on considère comme la mise en forme unique n'est souvent que le dernier épisode d'une série de transformations ; quand le bloc d'argile reçoit la déformation finale qui lui permet de remplir le moule, ses molécules ne se réorganisent pas totalement et d'un seul coup ; elles se déplacent peu les unes par rapport aux autres ; leur topologie se maintient, il ne s'agit que d'une dernière déformation globale. Or, cette déformation globale n'est pas seulement une mise en forme de l'argile par son contour. L'argile donne une brique parce que cette déformation opère sur des masses dans lesquelles les molécules sont déjà arrangées les unes par rapport aux autres, sans air, sans grain de sable, avec un bon équilibre colloïdal ; si le moule ne gouvernait pas dans une dernière déformation tout cet arrangement antérieur déjà constitué, il ne donnerait aucune forme ; on peut dire que la forme du moule n'opère que sur la forme de l'argile, non sur la matière argile. Le moule limite et stabilise plutôt qu'il n'impose une forme : il donne la fin de la déformation, l'achève en l'interrompant selon un contour défini : il module l'ensemble des filets déjà formés : le geste de l'ouvrier qui remplit le moule et tasse la terre continue le geste antérieur de malaxage, d'étirage, de pétrissage : le moule joue le rôle d'un ensemble fixe de mains modelantes, agissant comme des mains pétrissantes arrêtées. On pourrait faire une brique sans moule, avec les mains, en prolongeant le pétrissage par un façonnage qui le continuerait sans rupture. La matière est matière parce qu'elle recèle une propriété positive qui lui permet d'être modelée. Être modelée, ce n'est pas subir des déplacements arbitraires, mais ordonner sa plasticité selon des forces définies qui stabilisent la déformation. L'opération technique est médiation entre un ensemble interélémentaire et un ensemble intra-élémentaire. La forme pure contient déjà des gestes, et la matière première est capacité de devenir ; les gestes contenus dans la forme rencontrent le devenir de la matière et le modulent. Pour que la matière puisse être modulée dans son devenir, il faut qu'elle soit, comme l'argile au moment où l'ouvrier la presse dans le moule, de la réalité déformable, c'est-à-dire de la réalité qui n'a pas une forme définie, mais toutes les formes indéfiniment, dynamiquement, parce que cette réalité, en même temps qu'elle possède inertie et consistance, est dépositaire de force, au moins pendant un instant, et s'identifie point par point à cette force ; pour que l'argile remplisse le moule, il ne suffit pas qu'elle soit plastique : il faut qu'elle transmette la pression que lui imprime l'ouvrier, et que chaque point de sa masse soit un centre de forces ; l'argile se pousse dans le moule qu'elle remplit ; elle propage avec elle dans sa masse l'énergie de l'ouvrier. Pendant le temps du remplissage, une énergie potentielle s'actualise<sup>3</sup>. Il faut que l'énergie qui pousse l'argile existe, dans le système moule-main-argile, sous forme potentielle, afin que l'argile remplisse tout l'espace vide, se développant dans n'importe quelle direction, arrêtée seulement par les bords du moule. Les parois du moule interviennent alors non pas du tout comme structures géométriques matérialisées, mais point par point en tant que lieux fixes qui ne laissent pas avancer l'argile en expansion et opposent à la pression qu'elle développe une force égale et de sens contraire (principe de la réaction), sans effectuer aucun travail, puisqu'ils ne se déplacent pas. Les parois du moule jouent par rapport à un élément

3. Cette énergie exprime l'état macroscopique du système contenant le futur individu ; elle est d'origine interélémentaire ; or, elle entre en communication interactive avec chaque molécule de la matière, et c'est de cette communication que sort la forme, contemporaine de l'individu.

d'argile le même rôle qu'un élément de cette argile par rapport à un autre élément voisin : la pression d'un élément par rapport à un autre au sein de la masse est presque aussi forte que celle d'un élément de paroi par rapport à un élément de la masse ; la seule différence réside en ce fait que la paroi ne se déplace pas, alors que les éléments de l'argile peuvent se déplacer les uns par rapport aux autres et par rapport aux parois<sup>4</sup>. Une énergie potentielle se traduisant au sein de l'argile par des forces de pression s'actualise pendant le remplissage. La matière véhicule avec elle l'énergie potentielle s'actualisant ; la forme, représentée ici par le moule, joue un rôle informant en exerçant des forces sans travail, forces qui limitent l'actualisation de l'énergie potentielle dont la matière est momentanément porteuse. Cette énergie peut, en effet, s'actualiser selon telle ou telle direction, avec telle ou telle rapidité : la forme limite. La relation entre matière et forme ne se fait donc pas entre matière inerte et forme venant du dehors : il y a opération commune et à un même niveau d'existence entre matière et forme ; ce niveau commun d'existence, c'est celui de la force, provenant d'une énergie momentanément véhiculée par la matière, mais tirée d'un état du système interélémentaire total de dimension supérieure, et exprimant les limitations indivisibles. L'opération technique constitue deux demi-chaînes qui, à partir de la matière brute et de la forme pure, s'achèment l'une vers l'autre et se réunissent. Cette réunion est rendue possible par la congruence dimensionnelle des deux bouts de la chaîne ; les maillons successifs d'élaboration transfèrent des caractères sans en créer de nouveaux : ils établissent seulement des changements d'ordre de grandeur, de niveaux, et d'état (par exemple le passage de l'état moléculaire à l'état molaire, de l'état sec à l'état humide) ; ce qu'il y a au bout de la demi-chaîne matérielle, c'est l'aptitude de la matière à véhiculer point par point une énergie potentielle qui peut provoquer un mouvement en un sens indéterminé ; ce qu'il y a au bout de la demi-chaîne formelle, c'est l'aptitude d'une structure à conditionner un mouvement sans accomplir un travail, par un jeu de forces qui ne déplacent pas leur point d'application. Cette affirmation n'est pas rigoureusement vraie cependant ; pour que le moule puisse limiter l'expansion de la terre plastique et diriger statiquement cette expansion, il faut que les parois du moule développent une force de réaction égale à la poussée de la terre ; la terre reflue et s'écrase, comblant les vides, lorsque la réaction des parois du moule est légèrement plus élevée que les forces qui s'exercent en d'autres sens à l'intérieur de la masse de terre ; quand le moule est rempli complètement, au contraire, les pressions internes sont partout égales aux forces de réaction des parois, si bien qu'aucun mouvement ne peut plus s'opérer. La réaction des parois est donc la force statique qui dirige l'argile au cours du remplissage, en prohibant l'expansion selon certaines directions. Cependant, les forces de réaction ne peuvent exister que par suite d'une très petite flexion élastique des parois ; on peut dire que, du point de vue de la matière, la paroi formelle est la limite à partir de laquelle un déplacement dans un sens déterminé n'est possible qu'au prix d'un très gros accroissement de travail ; mais pour que cette condition de l'accroissement de travail soit efficace, il faut qu'elle commence à être réalisée, avant que l'équilibre ne se rompe et que la matière ne prenne d'autres directions dans lesquelles elle n'est pas limitée, poussée par l'énergie qu'elle véhicule avec elle et actualise en avançant ; il faut donc qu'il existe un

4. Ainsi l'individu se constitue par cet acte de communication, au sein d'une société de particules en interaction réciproque, entre toutes les molécules et l'action de moulage.



léger travail des parois du moule, celui qui correspond au faible déplacement du point d'application des forces de réaction. Mais ce travail *ne s'ajoute pas* à celui que produit l'actualisation de l'énergie véhiculée par l'argile ; il ne s'en retranche pas non plus : il n'interfère pas avec lui ; il peut d'ailleurs être aussi réduit qu'on le veut ; un moule en bois mince se déforme notablement sous la pression brusque de l'argile, puis revient progressivement en place ; un moule en bois épais se déplace moins ; un moule en silex ou en fonte se déplace extrêmement peu. De plus, le travail positif de remise en place compense en grande partie le travail négatif de déformation. Le moule peut avoir une certaine élasticité ; il doit seulement n'être pas plastique. C'est en tant que *forces* que matière et forme sont mises en présence. La seule différence entre le régime de ces forces pour la matière et pour la forme réside en ce que les forces de la matière proviennent d'une énergie véhiculée par la matière et toujours disponible, tandis que les forces de la forme sont des forces qui ne produisent qu'un très faible travail, et interviennent comme limites de l'actualisation de l'énergie de la matière. Ce n'est pas dans l'instant infiniment court, mais dans le devenir, que forme et matière diffèrent ; la forme n'est pas véhicule d'énergie potentielle ; la matière n'est matière informable que parce qu'elle peut être point par point le véhicule d'une énergie qui s'actualise<sup>5</sup> ; le traitement préalable de la matière brute a pour fonction de rendre la matière support homogène d'une énergie potentielle définie ; c'est par cette énergie potentielle que la matière devient ; la forme, elle, ne devient pas. Dans l'opération instantanée, les forces qui sont celles de la matière et les forces qui proviennent de la forme ne diffèrent pas ; elles sont homogènes les unes par rapport aux autres et font partie du même système physique instantané ; mais elles ne font pas partie du même ensemble temporel. Les travaux exercés par les forces de déformation élastique du moule ne sont plus rien après le moulage ; ils se sont annulés, ou se sont dégradés en chaleur, et n'ont rien produit à l'ordre de grandeur du moule. Au contraire, l'énergie potentielle de la matière s'est actualisée à l'ordre de grandeur de la masse d'argile en donnant une répartition des masses élémentaires. Voilà pourquoi le traitement préalable de l'argile prépare cette actualisation : il rend la molécule solidaire des autres molécules, et l'ensemble déformable, pour que chaque parcelle participe également à l'énergie potentielle dont l'actualisation est le moulage ; il est essentiel que toutes les parcelles, sans discontinuité ni privilège, aient les mêmes chances de se déformer dans n'importe quel sens ; un grumeau, une pierre, sont des domaines de non-participation à cette potentialité qui s'actualise en localisant son support : ils sont des singularités parasites.

Le fait qu'il y ait un moule, c'est-à-dire des limites de l'actualisation, crée dans la matière un état de réciprocité des forces conduisant à l'équilibre ; le moule n'agit pas du dehors en imposant une forme ; son action se réverbère dans toute la masse par l'action de molécule à molécule, de parcelle à parcelle ; l'argile en fin de moulage est la masse en laquelle toutes les forces de déformation rencontrent dans tous les sens des forces égales et de sens contraire qui leur font équilibre. *Le moule traduit son exis-*

5. Bien que cette énergie soit une énergie d'état, une énergie du système interélémentaire ; c'est en cette interaction des deux ordres de grandeur, au niveau de l'individu, comme rencontre de forces, que consiste la communication entre ordres de grandeur, sous l'égide d'une singularité, principe de forme, amorce d'individuation. La singularité médiatrice est ici le moule ; en d'autres cas, dans la Nature, elle peut être la pierre qui amorce la dune, le gravier qui est le germe d'une île dans un fleuve charriant des alluvions : elle est de niveau intermédiaire entre la dimension interélémentaire et la dimension intra-élémentaire.



tence au sein de la matière en la faisant tendre vers une condition d'équilibre. Pour que cet équilibre existe il faut qu'en fin d'opération il subsiste une certaine quantité d'énergie potentielle encore inactualisée, contenue dans tout le système. Il ne serait pas exact de dire que la forme joue un rôle statique alors que la matière joue un rôle dynamique ; en fait, pour qu'il y ait système unique de forces, il faut que matière et forme jouent toutes deux un rôle dynamique ; mais cette égalité dynamique n'est vraie que dans l'instant. La forme n'évolue pas, ne se modifie pas, parce qu'elle ne recèle aucune potentialité, alors que la matière évolue. Elle est porteuse de potentialités uniformément répandues et réparties en elle ; l'homogénéité de la matière est l'homogénéité de son devenir possible. Chaque point a autant de chances que tous les autres ; la matière en train de prendre forme est en état de résonance interne complète ; ce qui se passe en un point retentit sur tous les autres, le devenir de chaque molécule retentit sur le devenir de toutes les autres en tous les points et dans toutes les directions ; la matière est ce dont les éléments ne sont pas isolés les uns des autres ni hétérogènes les uns par rapport aux autres ; toute hétérogénéité est condition de non-transmission des forces, donc de non-résonance interne. La plasticité de l'argile est sa capacité d'être en état de résonance interne dès qu'elle est soumise à une pression dans une enceinte. Le moule comme limite est ce par quoi l'état de résonance interne est provoqué, mais le moule n'est pas ce à travers quoi la résonance interne est réalisée ; le moule n'est pas ce qui, au sein de la terre plastique, transmet uniformément en tous sens les pressions et les déplacements. On ne peut pas dire que le moule donne forme ; c'est la terre qui prend forme selon le moule, parce qu'elle communique avec l'ouvrier. La positivité de cette prise de forme appartient à la terre et à l'ouvrier ; elle est cette résonance interne, le travail de cette résonance interne<sup>6</sup>. Le moule intervient comme condition de fermeture, limite, arrêt d'expansion, direction de médiation. L'opération technique institue la résonance interne dans la matière prenant forme, au moyen de conditions énergétiques et de conditions topologiques ; les conditions topologiques peuvent être nommées forme, et les conditions énergétiques expriment le système entier. La résonance interne est un état de système qui exige cette réalisation des conditions énergétiques, des conditions topologiques et des conditions matérielles ; la résonance est échange d'énergie et de mouvements dans une enceinte déterminée, communication entre une matière microphysique et une énergie macrophysique à partir d'une singularité de dimension moyenne, topologiquement définie.

## 2. Validité du schème hylémorphique ; la zone obscure du schème hylémorphique ; généralisation de la notion de prise de forme ; modelage, moulage, modulation

L'opération technique de prise de forme peut donc servir de paradigme pourvu que l'on demande à cette opération d'indiquer les relations véritables qu'elle institue. Or, ces relations ne sont pas établies entre la matière brute et la forme pure, mais entre la matière préparée et la forme matérialisée : l'opération de prise de forme ne suppose pas seulement matière brute et forme, mais aussi énergie ; la forme matérialisée est

6. À cet instant, la matière n'est plus matière préindividuelle, matière moléculaire, mais déjà individu. L'énergie potentielle qui s'actualise exprime un état de système interélémentaire plus vaste que la matière.

une forme qui peut agir comme limite, comme frontière topologique d'un système. La matière préparée est celle qui peut véhiculer les potentiels énergétiques dont la charge la manipulation technique. La forme pure, pour jouer un rôle dans l'opération technique, doit devenir système de points d'application des forces de réaction, pendant que la matière brute devient véhicule homogène d'énergie potentielle. La prise de forme est opération commune de la forme et de la matière dans un système : la condition énergétique est essentielle, et elle n'est pas apportée par la forme seule ; c'est tout le système qui est le siège de l'énergie potentielle, précisément parce que la prise de forme est une opération en profondeur et dans toute la masse, par suite d'un état de réciprocité énergétique de la matière par rapport à elle-même<sup>7</sup>. C'est la répartition de l'énergie qui est déterminante dans la prise de forme, et la convenance mutuelle de la matière et de la forme est relative à la possibilité d'existence et aux caractères de ce système énergétique. [La matière est ce qui véhicule cette énergie et la forme ce qui assure la répartition de cette même énergie. L'unité matière-forme, au moment de la prise de forme, est dans le régime énergétique.]

Le schème hylémorphique ne retient que les extrémités de ces deux demi-chaînes que l'opération technique élabore ; le schématisme de l'opération elle-même est voilé, ignoré. Il y a un trou dans la représentation hylémorphique, faisant disparaître la véritable médiation, l'opération elle-même qui rattache l'une à l'autre les deux demi-chaînes en instituant un système énergétique, un état qui évolue et doit exister effectivement pour qu'un objet apparaisse avec son être. Le schéma hylémorphique correspond à la connaissance d'un homme qui reste à l'extérieur de l'atelier et ne considère que ce qui y entre et ce qui en sort ; pour connaître la véritable relation hylémorphique, il ne suffit pas même de pénétrer dans l'atelier et de travailler avec l'artisan : il faudrait pénétrer dans le moule lui-même pour suivre l'opération de prise de forme aux différents échelons de grandeur de la réalité physique.

Saisie en elle-même, l'opération de prise de forme peut s'effectuer de plusieurs manières, selon différentes modalités apparemment très différentes les unes des autres. La véritable technicité de l'opération de prise de forme dépasse largement les limites conventionnelles qui séparent les métiers et les domaines du travail. Ainsi, il devient possible, par l'étude du régime énergétique de la prise de forme, de rapprocher le moulage d'une brique du fonctionnement d'un relais électronique. Dans un tube électronique de type triode, la « matière » (véhicule d'énergie potentielle qui s'actualise) est le nuage d'électrons sortant de la cathode dans le circuit cathode-anode-effecteur-générateur. La « forme » est ce qui limite cette actualisation de l'énergie potentielle en réserve dans le générateur, c'est-à-dire le champ électrique créé par la différence de potentiel entre la grille de commande et la cathode, qui s'oppose au champ cathode-anode, créé par le générateur lui-même ; ce contre-champ est une limite à l'actualisation de l'énergie potentielle, comme les parois du moule sont une limite pour l'actualisation de l'énergie potentielle du système argile-moule, véhiculée par l'argile dans son déplacement. La différence entre les deux cas réside dans le fait que, pour l'argile, l'opération de prise de forme est finie dans le temps : elle tend, assez lentement (en quelques secondes) vers un état d'équilibre, puis la brique est démoulée ; on utilise l'état d'équilibre en **démoulant** quand il est atteint. Dans le

7. Cette réciprocité cause une permanente disponibilité énergétique : en un espace très limité peut s'effectuer un travail considérable si une singularité y amorce une transformation.



tube électronique, on emploie un support d'énergie (le nuage d'électrons dans un champ) d'une inertie très faible, si bien que l'état d'équilibre (adéquation entre la répartition des électrons et le gradient du champ électrique) est obtenu en un temps extrêmement court par rapport au précédent (quelques milliardièmes de seconde dans un tube de grande dimension, quelques dixièmes de milliardième de seconde dans les tubes de petite dimension). Dans ces conditions, le potentiel de la grille de commande est utilisé comme *moule variable* ; la répartition du support d'énergie selon ce moule est si rapide qu'elle s'effectue sans retard appréciable pour la plupart des applications : le moule variable sert alors à faire varier dans le temps l'actualisation de l'énergie potentielle d'une source ; on ne s'arrête pas lorsque l'équilibre est atteint, on continue en modifiant le moule, c'est-à-dire la tension de grille ; l'actualisation est presque instantanée, il n'y a jamais arrêt pour démoulage, parce que la circulation du support d'énergie équivaut à un *démoulage permanent* ; un modulateur est un *moule temporel continu*. La « matière » y est presque uniquement support d'énergie potentielle ; elle conserve pourtant toujours une inertie définie, qui empêche le modulateur d'être infiniment rapide. Dans le cas du moule à argile, ce qui, au contraire, est techniquement utilisé est l'état d'équilibre que l'on peut conserver en démoulant : on accepte alors une viscosité assez grande de l'argile pour que la forme soit conservée lors du démoulage, bien que cette viscosité ralentisse la prise de forme. Dans un modulateur, on diminue, au contraire, le plus possible la viscosité du porteur d'énergie, car on ne cherche pas à conserver l'état d'équilibre après que les conditions d'équilibre ont cessé : il est plus facile de moduler de l'énergie portée par de l'air comprimé que par de l'eau sous pression, plus facile encore de moduler de l'énergie portée par des électrons en transit que par de l'air comprimé. Le moule et le modulateur sont des cas extrêmes, mais l'opération essentielle de prise de forme s'y accomplit de la même façon ; elle consiste en l'établissement d'un régime énergétique, durable ou non. *Mouler* est *moduler* de manière définitive ; *moduler* est *mouler* de manière continue et perpétuellement variable.

Un grand nombre d'opérations techniques utilisent une prise de forme qui possède des caractères intermédiaires entre la modulation et le moulage ; ainsi, une filière, un laminoir, sont des moules à régime continu, créant par étapes successives (les passes) un profil définitif ; le démoulage y est continu, comme dans un modulateur. On pourrait concevoir un laminoir qui modulerait réellement la matière, et fabriquerait, par exemple, une barre crénelée ou dentée ; les laminoirs qui produisent la tôle striée *modulent* la matière, tandis qu'un laminoir lisse la *modèle* seulement. *Moulage* et *modulation* sont les deux cas limites dont le *modelage* est le cas moyen.

Nous voudrions montrer que le paradigme technologique n'est pas dépourvu de valeur, et qu'il permet jusqu'à un certain point de penser la *genèse* de l'être individualisé, mais à la condition expresse que l'on retienne comme schème essentiel la relation de la matière et de la forme à travers le système énergétique de la prise de forme. Matière et forme doivent être saisies pendant la prise de forme, au moment où l'unité du devenir d'un système énergétique constitue cette relation au niveau de l'homogénéité des forces entre la matière et la forme. Ce qui est essentiel et central, c'est l'opération énergétique, supposant potentialité énergétique et limite de l'actualisation. L'initiative de la genèse de la substance ne revient ni à la matière brute en tant que passive ni à la forme en tant que pure : c'est le système complet qui engendre et il engendre parce qu'il est un système d'actualisation d'énergie poten-



tielle, réunissant dans une médiation active deux réalités, d'ordres de grandeur différents, dans un ordre intermédiaire.

L'individuation, au sens classique du terme, ne peut avoir son principe dans la matière ou dans la forme ; ni la forme ni la matière ne suffisent à la prise de forme. Le véritable principe d'individuation est la genèse elle-même en train de s'opérer, c'est-à-dire le système en train de devenir, pendant que l'énergie s'actualise. Le principe véritable d'individuation ne peut être cherché dans ce qui existe avant que l'individuation ne se produise, ni dans ce qui reste après que l'individuation est accomplie ; c'est le système énergétique qui est individuant dans la mesure où il réalise en lui cette résonance interne de la matière en train de prendre forme, et une médiation entre ordres de grandeur. Le principe d'individuation est la manière unique dont s'établit la résonance interne de *cette* matière en train de prendre *cette* forme. Le principe d'individuation est une opération. Ce qui fait qu'un être est lui-même, différent de tous les autres, ce n'est ni sa matière ni sa forme, mais c'est l'opération par laquelle sa matière a pris forme dans un certain système de résonance interne. Le principe d'individuation de la brique n'est pas la glaise, ni le moule : de ce tas de glaise et de ce moule sortiront d'autres briques que celle-ci, possédant chacune leur *eccéité*, mais c'est l'opération par laquelle la glaise, à un moment donné, dans un système énergétique qui comprenait les moindres détails du moule comme les plus petits tassements de cette terre humide, a pris forme, sous telle poussée, ainsi répartie, ainsi diffusée, ainsi actualisée : il y a eu un moment où l'énergie de la poussée s'est transmise en tous sens de chaque molécule à toutes les autres, de la glaise aux parois et des parois à la glaise : le principe d'individuation est l'opération qui réalise un échange énergétique entre la matière et la forme, jusqu'à ce que l'ensemble aboutisse à un état d'équilibre. On pourrait dire que le principe d'individuation est *l'opération allagmatique commune de la matière et de la forme à travers l'actualisation de l'énergie potentielle*. Cette énergie est énergie d'un système ; elle peut produire des effets en tous les points du système de manière égale, elle est disponible et se communique. Cette opération s'appuie sur la singularité ou les singularités du *hic et nunc* concret ; elle les enveloppe et les amplifie<sup>8</sup>.

### 3. Limites du schème hylémorphique

Toutefois, on ne peut étendre de manière purement analogique le paradigme technologique à la genèse de tous les êtres. L'opération technique est complète en un temps limité ; après l'actualisation, elle laisse un être partiellement individué, plus ou moins stable, qui tire son *eccéité* de cette opération d'individuation ayant constitué sa genèse en un temps très court ; la brique, au bout de quelques années ou de quelques milliers d'années, redevient poussière. L'individuation est complète d'un seul coup ; l'être individué n'est jamais plus parfaitement individué que lorsqu'il sort des mains de l'artisan. Il existe ainsi une certaine extériorité de l'opération d'individuation par rapport à son résultat. Tout au contraire, dans l'être vivant, l'individuation n'est pas produite par une seule opération, bornée dans le temps ; l'être vivant est à lui-même partiellement son propre principe d'individuation ; il continue son individuation, et le

8. Ces singularités réelles, occasion de l'opération commune, peuvent être nommées *information*. La forme est un dispositif pour les produire.

résultat d'une première opération d'individuation, au lieu d'être seulement un résultat qui progressivement se dégrade, devient principe d'une individuation ultérieure. L'opération individuant et l'être individué ne sont pas dans la même relation qu'à l'intérieur du produit de l'effort technique. Le devenir de l'être vivant, au lieu d'être un devenir après individuation, est toujours un devenir entre deux individuations ; l'individuant et l'individué sont dans le vivant en relation allagmatique prolongée. Dans l'objet technique, cette relation allagmatique n'existe qu'un instant, lorsque les deux demi-chaînes sont soudées l'une à l'autre, c'est-à-dire lorsque la matière prend forme : en cet instant, l'individué et l'individuant coïncident ; lorsque cette opération est finie, ils se séparent ; la brique n'emporte pas son moule<sup>9</sup>, et elle se détache de l'ouvrier ou de la machine qui l'a pressée. L'être vivant, après avoir été amorcé, continue à s'individualiser lui-même ; il est à la fois système individuant et résultat partiel d'individuation. Un nouveau régime de résonance interne s'institue dans le vivant dont la technologie ne fournit pas le paradigme : une résonance à travers le temps, créée par la récurrence du résultat remontant vers le principe et devenant principe à son tour. Comme dans l'individuation technique, une permanente résonance interne constitue l'unité organismique. Mais, de plus, à cette résonance du simultané se surimpose une résonance du successif, une allagmatique temporelle. Le principe d'individuation du vivant est toujours une opération, comme la prise de Forme technique, mais cette opération est à deux dimensions, celle de simultanéité, et celle de succession, à travers l'ontogénèse soutenue par la mémoire et l'instinct.

On peut alors se demander si le véritable principe d'individuation n'est pas mieux indiqué par le vivant que par l'opération technique, et si l'opération technique pourrait être connue comme individuant sans le paradigme implicite de la vie qui existe en nous qui connaissons l'opération technique et la pratiquons avec notre schéma corporel, nos habitudes, notre mémoire. Cette question est d'une grande portée philosophique, car elle conduit à se demander si une véritable individuation peut exister en dehors de la vie. Pour le savoir, ce n'est pas l'opération technique, anthropomorphique et par conséquent zoomorphique, qu'il faut étudier, mais les processus de formation naturelle des unités élémentaires que la nature présente en dehors du règne défini comme vivant.

Ainsi, le schéma hylémorphique, sortant de la technologie, est insuffisant sous ses espèces habituelles, parce qu'il ignore le centre même de l'opération technique de prise de forme, et conduit en ce sens à ignorer le rôle joué par les conditions énergétiques dans la prise de forme. De plus, même rétabli et complété sous forme de triade matière-forme-énergie, le schéma hylémorphique risque d'objectiver abusivement un apport du vivant dans l'opération technique ; c'est l'intention fabricatrice qui constitue le système grâce auquel l'échange énergétique s'établit entre matière et énergie dans la prise de forme ; ce système ne fait pas partie de l'objet individué ; or, l'objet individué est pensé par l'homme comme ayant une individualité en tant qu'objet fabriqué, par référence à la fabrication. L'eccéité de cette brique comme brique n'est pas une eccéité absolue, ce n'est pas l'eccéité de cet objet préexistant au fait qu'il est une brique. C'est l'eccéité de l'objet comme brique : elle comporte une référence à l'intention d'usage et, à travers elle, à l'intention fabricatrice, donc au geste humain

9. Elle manifeste seulement les singularités du *hic et nunc* constituant les conditions d'information de son moulage particulier : état d'usure du moule, graviers, irrégularités.



qui a constitué les deux demi-chaînes réunies en système pour l'opération de prise de forme<sup>10</sup>. En ce sens, le schéma hylémorphique n'est peut-être qu'apparemment technologique : il est le reflet des processus vitaux dans une opération abstraitement connue et tirant sa consistance de ce qu'elle est faite par un être vivant pour des êtres vivants. Par là s'expliquerait le très grand pouvoir paradigmatique du schéma hylémorphique : venu de la vie, il y retourne et s'y applique, mais avec un déficit qui vient du fait que la prise de conscience qui l'a explicité l'a saisi à travers le cas particulier abusivement simplifié de la prise de forme technique ; il saisit des types plus que des individus, des exemplaires d'un modèle plus que des réalités. Le dualisme matière-forme, ne saisissant que les termes extrêmes du plus grand et du plus petit que l'individu, laisse dans l'obscurité la réalité qui est du même ordre de grandeur que l'individu produit, et sans laquelle les termes extrêmes resteraient séparés : une opération allagmatique se déployant à partir d'une singularité.

Cependant, il ne suffit pas de critiquer le schéma hylémorphique et de restituer une relation plus exacte dans le déroulement de la prise de forme technique pour découvrir le véritable principe d'individuation. Il ne suffit pas non plus de supposer dans la connaissance que l'on prend de l'opération technique un paradigme en premier lieu biologique : même si la relation matière-forme dans la prise de forme technique est facilement connue (adéquatement ou inadéquatement) grâce au fait que nous sommes des êtres vivants, il n'en reste pas moins que la référence au domaine technique nous est nécessaire pour clarifier, expliciter, objectiver cette notion implicite que le sujet porte avec lui. Si le vital éprouvé est la condition du technique représenté, le technique représenté devient à son tour condition de la connaissance du vital. On est ainsi renvoyé d'un ordre à l'autre, si bien que le schéma hylémorphique semble devoir son universalité principalement au fait qu'il institue une certaine réciprocité entre le domaine vital et le domaine technique. Ce schéma n'est d'ailleurs pas le seul exemple d'une pareille corrélation : l'automatisme sous ses diverses formes a été utilisé avec plus ou moins de succès pour pénétrer les fonctions du vivant au moyen de représentations issues de la technologie, depuis Descartes jusqu'à la cybernétique actuelle. Cependant, une difficulté importante surgit dans l'utilisation du schéma hylémorphique : il n'indique pas ce qui est le principe d'individuation du vivant, précisément parce qu'il accorde aux deux termes une existence antérieure à la relation qui les unit, ou tout au moins parce qu'il ne peut permettre de penser nettement cette relation ; il ne peut représenter que le mélange, ou le rattachement partie par partie ; la manière dont la forme informe la matière n'est pas assez précisée par le schéma hylémorphique. Utiliser le schéma hylémorphique, c'est supposer que le principe d'individuation est dans la forme ou bien dans la matière, mais non dans la relation des deux. Le dualisme des substances – âme et corps – est en germe dans le schéma hylémorphique, et on peut se demander si ce dualisme est bien sorti des techniques.

Pour approfondir cet examen, il est nécessaire de considérer toutes les conditions qui entourent une prise de conscience notionnelle. S'il n'y avait que l'être

10. L'individualité de la brique, ce par quoi cette brique exprime telle opération qui a existé *hic et nunc*, enveloppe les singularités de ce *hic et nunc*, les prolonge, les amplifie ; or, la production technique cherche à réduire la marge de variabilité, d'imprévisibilité. L'information réelle qui module un individu apparaît comme parasite ; elle est ce par quoi l'objet technique reste en quelque mesure inévitablement naturel.



individuel vivant et l'opération technique, le schéma hylémorphique ne pourrait peut-être pas se constituer. En fait, il semble bien que le moyen terme entre le domaine vivant et le domaine technique ait été, à l'origine du schéma hylémorphique, la vie sociale. Ce que le schéma hylémorphique reflète en premier lieu, c'est une représentation socialisée du travail et une représentation également socialisée de l'être vivant individuel ; la coïncidence entre ces deux représentations est le fondement commun de l'extension du schéma d'un domaine à l'autre, et le garant de sa validité dans une culture déterminée. L'opération technique qui *impose une forme à une matière passive et indéterminée* n'est pas seulement une opération abstraite-ment considérée par le spectateur qui voit ce qui entre à l'atelier et ce qui en sort sans connaître l'élaboration proprement dite. C'est essentiellement l'opération commandée par l'homme libre et exécutée par l'esclave ; l'homme libre choisit de la matière, indéterminée parce qu'il suffit de la désigner génériquement par le nom de substance, sans la voir, sans la manipuler, sans l'apprêter : l'objet sera fait de bois, ou de fer, ou en terre. La véritable passivité de la matière est sa disponibilité absolue derrière l'ordre donné que d'autres exécuteront. La passivité est celle de la médiation humaine qui se procurera la matière. La forme correspond à ce que l'homme qui commande a pensé en lui-même et qu'il doit exprimer de manière positive lorsqu'il donne ses ordres : la forme est donc *de l'ordre de l'exprimable* ; elle est éminemment active parce qu'elle est ce que l'on impose à ceux qui manipuleront la matière ; elle est le contenu même de l'ordre, ce *par quoi il gouverne*. Le caractère actif de la forme, le caractère passif de la matière, *répondent* aux conditions de la transmission de l'ordre qui suppose *hiérarchie sociale*. C'est dans le contenu de l'ordre que l'indication de la matière est un indéterminé alors que la forme est détermination, exprimable et logique. C'est aussi à *travers le conditionnement social que l'âme s'oppose au corps* ; ce n'est pas par le corps que l'individu est citoyen, participe aux jugements collectifs, aux croyances communes, se survit dans la mémoire de ses concitoyens : l'âme se distingue du corps comme le citoyen de l'être vivant humain. La distinction entre la forme et la matière, entre l'âme et le corps, reflète une cité qui contient des citoyens par opposition aux esclaves. On doit bien remarquer cependant que les deux schèmes, technologique et civique, s'ils s'accordent pour distinguer les deux termes, ne leur assignent pas le même rôle dans les deux couples : l'âme n'est pas pure activité, pleine détermination, alors que le corps serait passivité et indétermination. Le citoyen est individué comme corps, mais il est aussi individué comme âme.

Les vicissitudes du schéma hylémorphique proviennent du fait qu'il n'est ni directement technologique ni directement vital : il est de l'opération technologique et de la réalité vitale médiatisées par le social, c'est-à-dire par les conditions déjà données – dans la communication interindividuelle – d'une réception efficace d'information, en l'espèce l'ordre de fabrication. Cette communication entre deux réalités sociales, cette opération de réception qui est la condition de l'opération technique, masque ce qui, au sein de l'opération technique, permet aux termes extrêmes – forme et matière – d'entrer en communication interactive : l'information, la singularité du « *hic et nunc* » de l'opération, événement pur à la dimension de l'individu en train d'apparaître.

## [Annex] Magnitudes of Sahrawi nomadism throughout colonialism and refugeehood

Juan Carlos Gimeno Martín <sup>44</sup>, Julien Lafontaine Carboni<sup>44 46</sup>

### Keywords

Sahrawi Refugee camps; Motions and Spatialities; Immobile Nomadism; Protracted Refugeehood

### Abstract

The nomadic/sedentary binary has been criticized as a Western construction. Its deconstruction is particularly necessary in contexts where nomadic populations become refugees for climatic, political, and/or economic reasons. This has been the case for the Sahrawi exiles in Algeria since the territorial invasion and occupation, which began in 1975. On several occasions, the Sahrawi refugee camps near Tindouf have been analyzed in relation to prior nomadic encampments. By analyzing both the quotidian and the more exceptional movements of the Sahrawi throughout the twentieth century and their forms of settlement in the refugee camps, we will consider the various magnitudes of nomadism at play in this context. There is an urgent need to consider several temporal and geographic scales in this analysis of nomadism—from temporal duration to population movements—and to understand the sedentarization process of the camps as a temporary survival.

### Introduction

The nomadic/sedentary binary, which opposes the desert, the mobile, and the primitive to the civilized, the urban, and the state, has come under question as a cultural construction that the West has imposed on the rest of the world (Wilson 2014; Marx 2006; Isidoros 2018). The deconstruction of this binary is all the more necessary in contexts where nomadic populations have become refugees for climatic, political, and/or economic reasons, twentieth-century examples of which include Somali refugees in Kenya, Malian Tuaregs in Mauritania, and Sahrawis in refugee camps in Algeria. Nomadism is associated with constant movements, independent domestic productions, and thus a highly specialized way of life and array of knowledge. Nevertheless, in some instances, the magnitude of the distances covered by nomadic populations is less significant than the Western gaze tends to imagine, and temporary sedentarization has been proven to be an adaptation strategy (Salzman 1980).

On several occasions, the camps near Tindouf have been compared to the nomadic forms of pastoral life that existed prior to the conflict with Morocco (Wilson 2014; Caratini,

<sup>44</sup> Universidad Autónoma de Madrid, Departamento de Antropología Social y Pensamiento Filosófico Español. A previous version of this text was published (in Spanish) in 2021 in the journal *Tabula Rasa* with the title “Inmóviles, pero no quietos. La sedentarización de los saharauis como estrategia de adaptación y respuesta a la supervivencia. Sobre la posibilidad de un nomadismo inmóvil.”

<sup>45</sup> ALICE, Swiss Federal Institute of Technology of Lausanne, Faculty of Natural, Architectural and Built Environment, Institute of Architecture.

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47 According to Bahia Mahmud Awah (see reference below), the conflict between qabā'il were frequent. These conflicts concerned the dominion over pasturelands. Nevertheless, until the beginning of the colonial period, the conflict between the diverse qabā'il disappeared, or were orchestrated by the colonial administration in order to gain power over the population. See Bárbulo, T., 2017, *La historia prohibida del Sáhara español: Las claves del conflicto que condiciona las relaciones entre España y el Magreb*. Madrid: Destino.

48 As the Ayt Arba'in was coordinating several qabā'il the limits between the pasturelands of each qabila was defined and helped to preserve peace. Accordingly, the external boundaries of their territories were defined, even if regularly subject to conflicts with other populations, which each time demanded the Ayt Arba'in to meet in order to organise a common response. See in Awah, B. M., 2017, *La entidad política Precolonial Saharaui*. Madrid: Bubok Publishing.

2003). Within this context, we would like to consider the variety of the movements and the different magnitudes of Sahrawi nomadism. The Sahrawi's forced loss of mobility due to protracted conflicts and their subsequent refugee status have given rise to a temporary resistance and survival strategy involving the unification of the qabā'il (former political units based on lineage) in a "coalescence" of sorts (Isidoros 2018). As we will argue, in order to understand nomadism in this context, it is necessary to approach the phenomenon from various temporal and geographic scales or perspectives, from the movements of the individual body, its gestures, to the distance of the movements of the populations. This widening of perspective is necessary if we are to avoid imposing Western scales of analysis, thus reproducing epistemic violence toward Sahrawi society (Spivak 1988).

We will first discuss the significant elements of the firgan (sing. frig), the traditional Sahrawi encampments, across various scales of time and motion and in the context of French and Spanish colonization, revealing temporary "sedentarization" as an adaptive strategy stemming from traditional Sahrawi nomadic practices. We will then introduce elements that allow us to draw an analogy between the refugee camps and Sahrawi firgan. Next, in light of accounts gathered by different twentieth-century anthropologists, we will present, given the various regimes and temporalities of motion within Sahrawi pastoral nomadism prior to the conflict, the history of the Sahrawi refugee camps from 1975 to 1991, unveiling its temporal and spatial complexity. As a means of conclusion, based on the various debates that have shaken Sahrawi society since the 1990s and in relation to the non-linear histories of the camps, we will outline the apparently paradoxical immobilization of a specific part of the Sahrawi population as a form of nomadic movement, the apparent immobility of which derives from reliance on a particular (and ultimately limiting) temporal and geographic scale. This narrative is accompanied by numerous visual documents from the archives of the Sahrawi Ministry of Information, the work of anthropologists (in particular Caro Baroja 1955, Caratini 1989), and our own documents.

### **Sahrawi spatio-temporal organization in the twentieth century: Movements and gestures**

The territories inhabited by the populations that composed the Sahrawi nation at the time of the revolution and the creation of the SADR extends from the Senegal River to Southern Morocco and from Southern Algeria to the North, from the Atlantic Ocean in the West to Mali, and through present-day Mauritania. The population was composed of several qabā'il (sing. qabila), imprecisely translated as "tribes" in most Western scholarship (see Caratini 2003, Isidoros 2018, Wilson 2014). Until the Spanish invasion of the Western Sahara and the French colonization of Mauritania, Algeria, and Morocco, the qabā'il shared this territory more or less peacefully,<sup>47</sup> coordinated until the sixteenth century by a pan-tribal political organization called the Ayt Arba'in, with a defined border,<sup>48</sup> which disappeared under colonialism.

These different qabā'il possessed cultural habits on which present Sahrawi identity and nationhood projects are grounded. The spatial and temporal organization of the qabā'il and their smaller familial units all followed regular patterns that favored nomadic practices in the Saharan Desert's harsh conditions. To understand the spatialities associated with the Sahrawi territory and the habits of its populations, including under diverse colonial regimes, we must closely analyze the movements of the populations at each time scale. In Sahrawi nomadic practices, the territory is constantly re-enacted through motions and



gestures that are deeply anchored and entrenched in the culture as survival techniques; each situation, location and season is associated with different forms of encampment and daily territorial organizations. By following the evolution of these motions and gestures, we can better understand how both colonialism and the protracted refugeehood of the Sahrawi have affected their nomadic mode of life.

## **Motions of tents and people**

### *Daily Motions*

Under the colonial regimes and in pre-colonial times, the camps were usually organized into *firgan* (sg. *frig*; Fig. 1), camps hosting people with familial ties, with slaves, and sometimes with blacksmiths. The spatial boundaries of the *frig* were a half-day's walk, which means that one could visit another tent and be back by sunset for the evening prayer (Caratini 1989). The tents were more or less aligned, depending on the distance between each tent, to respect the privacy of each household; the *khayma* (pl. *khyam*), the traditional wool tent, was open to the north and to the south, with the east and west sides touching the ground. The familial ties established a genealogical hierarchy between the different members, and thus with regard to the tents' positions, the elderly living at the center of the encampment.

This model was the most common kind of encampment when the population was pasturing their livestock. Its low density allowed the entire *qabila* to spread and take advantage of the pastureland. The *firgan* moved several times during the year in search of water and food for their herds, from October to May/June (according to the evolving conditions and resources) (Map.1).

In her anthropological research with the Rgaybat (demographically the largest *qabila* of the region), Caratini described the spatialities in which each individual moved around the *frig*. These motions are highly gendered and depend on age. Women stayed close to the tent (a maximum of 10 km away) to accomplish the domestic tasks and to care for the young, watching over the family's goods and transforming raw products into food and crafts. They were also in charge of smaller livestock (mainly goats), with the help of the children.

From 10 to 50 km away from the tent, at the limits of the *frig*, men (including free young men and young slaves) conducted their own activities. Here, their tasks were mainly related to caring for female camels in nearby pastures and bringing them back each night. The dawn and sunset prayer determined the time of departure and return.

Then, from 50 to 100 km away from the tent, male slaves, hired shepherds and free young men took care of the male camels in the peripheral pastureland. Given their distance from the encampment, they didn't return to the tent every night, and sometimes only occasionally (less than once a month).

Finally, the space beyond 100 km from the tent was a masculine space dedicated to economic trade and political decisions. This was both a highly "domestic" space (involving the use of tents) and a de-centered political space (involving significant movements through the territory). This set of motions, organized around the *frig*, took place during rainy and temperate times of the year, when gathering around wells was not necessary (Fig. 2).

### Seasonal Motions

In response to political, climatic, economic, and safety reasons, the encampment took on new forms. However, these more significant tent groupings (between 50 and 150, according to Caratini) disappeared at the beginning of the twentieth century, undoubtedly because of the dissolution of the Ayt Arba'in, a war council, and its fragmentation when it made contact with the colonial authorities, which fostered the dissension between the qabā'il and the shaykhs (Bárbulo 2002).

During the summer (when the population usually gathered around wells) or when the Ayt Arba'in was summoned, the tents were arranged in the form of a mahsar (pl. mhasir; see Fig. 3). This consisted of several firgan, with the tent of the shaykh, the most influential elder, at the center of the encampment. The parallel perspective permitted a clear view, which allowed the population to spot potential enemies from far. In the summer, encampments could host four mhasir—situated at the northeast end of the area, the other at the northwest corner, etc.—each orientated toward the pastureland. Thus, the motions of the members of a family were quite similar, transforming the circles into quadrants.

When family members approached cities or unsecured land for economic reasons, or when the density of the population was higher, the Sahrawis arranged the tents in a circular form (anawal; see Fig. 4). This allowed them to protect the herd from thieves at night. The circle was closed with a simple barrier after all the goats and camels had returned. A guard ensured that the tents and animals were safe. Caratini also argues that the anawal may correspond to a time of higher equality between the households (economically and politically)—a period where there were no dependent families—as the circle eliminates the spatial hierarchies characteristic of the frig and the mahsar. As recounted by Rabiia Eslaiman Ijjar, an influential women living in the Dakhla refugee camp, the circle as a spatial and formal way to create equality between the members of a community is central to Sahrawi culture. It is used as a symbol in jewelry and other art forms and to create equality between guests and hosts in the quotidian ritual of tea making. The first “protocols” (administrative buildings) that women built in the refugee camps in the 1980s took this design, evoking the equality of all in the SADR (Fig. 5). In the anawal, the everyday spatialities of motion were much denser than in other forms of encampment, as the risks were greater.

### Life Motions

Over the years, the Sahrawi populations moved across a vast territory (Map. 2). Both “wedding-scapes” (Solana Moreno 2017; **drawing on Appadurai**) and economic conditions influenced these motions, the magnitudes of which were highly affected by the colonial border defined at the Berlin Conference. While the extent of the men's movements was broader due to the types of tasks they were assigned, the women were far from sedentary. No patterns can be extracted from the work of Caro Baroja or from our discussions with the elderly in the Sahrawi refugee camps. Nevertheless, despite its refugee status, the Sahrawi population remains extremely mobile (with notable transits towards Mauritania and northern Algeria), and this mobility grew with increased access to countries such as Spain, Syria, and Cuba.

During periods of war or territorial conflicts between qabā'il, the members of a qabila would reunite in several mahsar called a halla—the camp of the emir/shaykh, the space of political decision-making. These spatialities allowed the Ayt Arba'in to meet and organize the defense of the camps and herds. In an Ayt Arba'in, all of the factions of the qabā'il were represented. A muqaddam was elected to “preside” over the assembly and took honorific responsibility for deciding cases of internal disagreement. Beyond the merely defensive role of the council, the Ayt Arba'in also organized the use of wells and pastureland and the spatial arrangement of each encampment. This setting was beneficial as it permitted a common response to an immediate threat without the need for centralized and permanent power. While the Ayt Arba'in is the name for the council that summons different qabā'il, the same system existed on a smaller scale when a coordinated response was needed in a regular mahsar.

The Ayt Arba'in also produced a series of “laws” standardizing the sentences for each crime. In an interview in May 2016, the poet Mohamed Lamin<sup>49</sup> gave us a copy of a manuscript written by his grandfather, Mulay Brahim Ben Omar, a judge and scribe for the “Council of Forty.” In his book, Mohamed Ali Laman<sup>50</sup> translates the text as follows:

And I am going to focus here on the laws and measures that were adopted by the Council of Forty, which were mandatory for the organization of the social life of the population and which took the form of defined orders, among which we can cite:

1. Whoever helps or takes sides, even for his father or brother or any other person, must provide dinner and lunch to each of the members of the Council of Forty separately.
2. Whoever threatens a person with a sword shall be punished with five mazakil (pesos).
3. Whoever threatens someone with a gun, his sanction will be five pesos.
  - If he hurts, he will have to pay with a two-year-old camel.
  - And if he causes death, he has to pay compensation.<sup>51</sup>

### **Spanish Colonialism**

The borders established between the Spanish- and the French-dominated area limited nomadic practices, particularly in periods of drought. In these times, the peripheral pastureland was essential to free grazing and to providing enough resources for the herds and the people. Insofar as they prohibited the movements of the Sahrawis, the borders intensified the consequences of drought. Beyond this, the borders gained a strategic and political significance for the Sahrawis when they fought against the French Army, which had invaded the Sahara from the Mauritanian side (Eastern Border)<sup>52</sup>. They could withdraw across the Spanish border, where they were protected by the Spanish metropolitan decision to prohibit the persecution of Sahrawi dissidents in the Spanish Sahara (Martínez Milán 2003). The fighting ended in 1934, the year called “Melga Lahkama” (literally, a meeting of governments) by the Sahrawi.

52 Since the Berlin Conference in 1885, the French Army stopped its operations at the Rio which marked the border between the Spanish Sahara and Mauritania. The fight between the Saharan Resistance and the Maures against the French armies were regular. In 1932, after a terrific loss of the Nomadic Groups of

the French Army, attacked by the Saharan Resistance in the post of Moutounsi near Nouakchott, the French state decided to prepare a plan to definitely map and conquer the part of the Sahara they did not occupy yet. In the following years, the meharis groups were able to produce cartographies of the Northern part of Mauritania and

Southern part of Western Sahara, and to operate then more fruitfully to control the territory. See Caratini, S., 2003, ‘Le blanc de la carte: Pratiques et représentations des officiers méharistes du Nord de la Mauritanie en 1933-35.’ In *La République des Sables. Anthropologie d’une Révolution*. Paris, L’Harmattan.

49 Mohamed Lamin Mehdi Mulay Zein participated in the attack on Nouakchott, a legendary assault in the struggle for Sahrawi independence in which Luuli Mustafá Sayed died in June 1976. He was wounded and imprisoned in Mauritania.

50 The book, entitled *Western Sahara, Society and Culture*, written in Arabic, is now being translated into Spanish for publication.

51 Followed by: 4. Whoever unjustly seizes the fortune of his neighbor without his consent will be sanctioned, and those who are accomplices will be given a camel of two years for each and must return everything that was stolen.

5. And whoever denies justice to anyone who asks for it, ten pesos.

Whoever enters someone’s khayma to corrupt, as the corrupt do with women, a pregnant camel; whoever is found to have committed infidelity with a foreigner must give five pesos each as long as they have not been found in the same bed, otherwise each must give a pregnant camel and will receive one hundred lashes, in addition to the punishments provided for in the law.

7. Anyone who breaks an agreement with a Muslim, whoever he may be, or who has broken the Qur’ān, as well as those who helped him, must each hand over ten pregnant camels and return to the victim his belongings or whatever was taken from him.

8. Whoever strikes his neighbor must hand over a two-year-old camel, and if he leaves a black eye he must hand over another two-year-old camel and must provide dinner to the Council of Forty.

Any clan that helps another clan to break the law shall be punished by delivering ten pregnant camels.

9. Any person who plunders his neighbor’s belongings, whether found elsewhere or in his place of origin, must pay one hundred pesos of silver and must return what he has consumed or plundered to its owner.

10. Any person who, in self-defense, causes the death of a member of a tribe, if the victim is proven to be guilty of assault, shall not assume any penalty, and the tribe shall be responsible for compensation.’ Laman, M. A. (under translation and publication). *Sahara Occidental*. Sociedad y Cultura. Translation in english by the authors.



After the conflict between the French and the Spanish armies ceased, the Anawal and the mahsar completely disappeared from everyday encampment models. The frig developed markedly insofar as the direct threats to tents and herds had disappeared, as the Spanish enacted institutions to create a dialogue between the qabā'il from the Western Sahara and to find consensus through centralization (which they would later use to provoke dissent; see Bárbulo 2002). Without the need to protect themselves from robbery or attack, the familial units navigated more freely across the land, rendering the mahsar and the anawal obsolete and leading to the emergence of trans-qabā'il firgan (as noted by Molina Campuzano in Wilson 1954: 8).

At this time, the colonial cities in Spanish Sahara were small. Until 1934, the Spanish Army couldn't reach Smara; only border checkpoints and the homes of the "indigenous soldiers" existed. These positions were abandoned by the Spanish authorities during the war in 1957–1958 (see the chapter by López Bargados in this volume) so that Spain could concentrate its forces in the cities. As a consequence of the terrible droughts at the end of 1950 and the beginning of 1960, in addition to Spain's contribution to sedentarization, the immobilization of the Sahrawi and their settlement around colonial cities developed rapidly. Through a process that can hardly be called "sedentarization," the families maintained urban-rural lifestyles, living for part of the year in the bādiyya (pastureland/"countryside") and investing in farming resources.

Nevertheless, another type of camp emerged, prompted by Spanish policies (Bengochea Tirado 2019; Fig. 6, 7). Their location was imposed, and thus the camps were not organized as Mahsar (around the presence of an elder). During colonization, Spain aimed to sedentarize the Sahrawi population so as to "educate" them and better control them (Portillo 2019). As such, they used a Sahrawi workforce to build roads and extract resources (such as phosphates from the mines of Bucraa). In this photographic series (fig. 6, 7), we see the parallel development of colonial cities/military installations and the growth of Sahrawi encampments on their margins (Hodges 1983: 130–132).

In the 1960s, on the site of the first encampment, the Spanish government installed housing programs, hoping to fully sedentarize the population (Rodríguez and Barrado Timon 2015), accompanied by different institutions aiming to "civilize" the population based on the Spanish model (Bengochea Tirado 2019). The cities of the Western Sahara grew significantly, and a large segment of the Sahrawi population moved to find work and food due to severe droughts coupled with the spreading of a disease that killed entire herds of camels. Nevertheless, the Sahrawis commonly said that men were living in the cities to work but that the women and the extended family remained in the pasturelands. The Spanish census of 1974, used by MINURSO as a basis for the preparation of a list of voters for the promised independence referendum, is still debated, particularly with regard to the percentage of "sedentarized" Sahrawis it reports, even if it is generally accepted that the majority of them were still labeled as nomadic.

### ***The Um Dreyga Encampments***

From 1970, a large part of the Sahrawi population who lived near the colonial cities left for Um Dreyga, a riverbed in the center of the colony of Western Sahara. Following repression by the Spanish Army against civil movements and strikes for independence, which began in El Aaiún from June 14 to 20, 1970, the population was worried about a possible invasion of Mauritania from the south and of Morocco from the north, as both claimed sovereignty over the territory. Thus, from 1970 to 1975, until the phosphate bombing of the civil population by the Moroccan army, whole families began to install themselves in this region, where wells had been dug. According to Rabiia Eslaiman Ijjar

and Gurba Mohamed Lehbib, two elderly women with whom we spoke in the refugee camps and who lived in the camps of Um Dreyga, the families settled quite freely along the riverbed, in the form of *firgan*. As most had left some of their goods behind, the tents were largely made of light white cotton structures customarily used for newlyweds. Their construction was faster and easier, and as most of the herds had died out by then, women didn't have enough camel hair to manufacture the traditional *khayma*.

Prior to this, Um Dreyga had been largely uninhabited, as the available water was too deep underground and mostly inaccessible through the techniques available to the Sahrawi. Thanks to Spanish pumps and tools, they could dig new wells and survive in the area for several years. When the Spanish Army left without warning, Mauritania and Morocco invaded Western Sahara, and thousands of people from all cities joined the camp. According to our information, these camps were highly dense and lasted until the Polisario Front left for the region of Tindouf. Um Dreyga, like Tifariti and other Sahrawi encampments, was bombed with napalm and white phosphates by the Moroccan air force in February 1976 (Martín Beristain 2015: 17-28).

Throughout the first three quarters of the twentieth century, the forms of encampment and movement of the Sahrawi nomadic population evolved significantly due to climatic conditions on the one hand and as a consequence of Spanish and French colonialism on the other. As such, the motions and gestures implied in Sahrawi nomadism were multiple and heterogeneous. The Sahrawis currently living in the refugee camps are claiming their right to nomadism (as well as their right to call themselves nomads), even though they have been physically immobilized for over 40 years. In the face of international observers' "fascination" with the refugee camps, which have become increasingly subject to the Western gaze, we must further consider the possibility of "immobile nomadism," which would seem to characterize the current mode of life of Sahrawi refugees.

### **An Immobile Nomadism?**

Is the settling of the Sahrawi in the refugee camps an evolution of their form of nomadism? Does nomadism cease to exist in contexts of immobilization? The SADR, like the Sahrawi refugees, claims a right to call its people nomads, despite their protracted refugeehood. Along these lines, some scholars have argued that the refugee camps were built on the model of the nomadic encampment, and thus that this forced "sedentarization" is a temporary adaptive strategy (Marx 1980) to deal with the present situation (see in particular Isidoros 2018). We wish to contribute to this debate by first dismantling the assumption that the refugee camps have a linear history of development, unveiling the multiplicity of motions across the hamada of Tindouf and between the camps, and then by introducing insights from internal debates within Sahrawi society on the politics of the camps' materialities.

#### ***The Analogy between the Refugee Camps and the *frig*: Realities and Limits***

The relationship between nomadism and sedentarization had been shown to be more complex than it first appears. There is no progress from nomadism to sedentarism, from mobility to settlement, as the use of the pejorative term "tribe" associated with nomadism implies. An extensive literature has attempted to deconstruct this opposition (see, among others, Humphrey and Sneath 1999; Marx 2006; focusing more closely on the Mauritanian and Sahrawi contexts, see Bonte 2007; Villasante de Beauvais 1998; Mundy 2007; López Bargados 2003). Sedentary and nomadic communities are interdependent,

the one developing on the margins of the other. The transition from a nomadic way of life to a sedentarized one involves a broader type of socio-cultural change than mere immobilization (Salzman 1980), is reversible, and contains ambiguities (Marx 1980).

The Sahrawis have been involved in this dynamic throughout their history, from movements of significant magnitude to partial immobility, the sedentarization process being emphasized by the politics of Spanish colonialism. Long engaged in trans-Saharan trade routes and the development of several *ksur* (economic centers on the routes), in parallel with the *qabā'il* from Mauritania, the Sahrawi population has historically settled several times as a tactical strategy for survival, as in Um Dreyga.

One particularity of the new Sahrawi state is that the structure created to govern the camps is not unfamiliar to the system of the *Ayt Arba'in* (Mahmud Awah 2017) and that the election of the national parliament or council of elders suggests that “the visual image is different, but the idea remains the same” (Isidoros 2018: 233). Thus, the adoption of a Western nation-state model is mainly tied to an imported vocabulary, as the Sahrawi State model is grounded in an image of a detribalized nomadic ideal.

Alice Wilson has emphasized the ambiguity of the Sahrawi encampments, which lie somewhere between being refugee camps and being nomadic encampments (2014). While several of their features suggest their standing as “traditional” refugee camps—such as the constraint of movement due to conflict (an extension of the restrictions posed by colonial borders), political control over the populations, and the disappearance of the domestic mode of production characteristic of Sahrawi nomadic pastoralism—Wilson notes, following Caratini, that the layout of the camps can be interpreted as *firgan* situated between the square forms of a *mahsar* (in response to the war situation) and the circular shape of the *Anawal* (signaling radical equality between members). This fusion of the two forms resulted in the grid-like layout of each *daïra*, while organizing them in a circle around the administrative buildings. This is despite the fact that the refugee camps are not called *firgan* in the Sahrawi lexicon, but rather the eminently Arabic word *al-mukhayam* (Wilson 2014: 15–16), which means “the tented place.” Nor can they be considered sedentary spaces, as they remain, despite the protracted conflict, spaces and states of exception that also constitute a fundamental right of refugees from which exception is constantly re-enacted as a political means of struggle (Lafontaine Carboni and Gimeno Martin 2020).

Isidoros also insists on a further persistent dimension of nomadic encampment in the refugee camps: the capacity of the tents to coalesce, a capacity of fusion and fission among a group of individuals, enacting a moving political constellation and forming a “tented-state” (Isidoros 2018: 235). Arguing on this dimension, she insists that the “public space” of the camp was created for the international humanitarian program that “echoes emptily” (Ibid. 214) when it leaves in the summer. This constellation is based on the fact that in the nomadic culture of the Sahrawis, one tent always moves toward another, and this motion is at the basis of the emergent quality of their political power. Furthermore, this nation-building as tent-dwellers began prior to the exodus to the region of Tindouf (and thus prior to the construction of the “public infrastructure”), when the Sahrawis began to claim their right to independence in the 1960s. As Isidoros argues, this moving political space—a space provided by women’s tents and hospitality, blurring the traditional opposition between states and different *qabā'il*, nomadism and sedentarism, citizens and refugees—characterizes the persistent presence of nomadism in the changing culture of the Sahrawi, suggesting an analogy between the refugee camps and the nomadic encampments.



### *Motions and spatial histories of the refugee camp (1975–1991)*

Looking closely at the motions of the Sahrawi in the refugee camps, there are myriad surviving forms of the pastoral way of life. A further scale that we can also acknowledge is the non-linearity of the spatial histories and motions of the refugee camps as a whole in the first two decades of the camps' existence. Building on the little information we have on this period, international observers have tended to describe this history in terms of a linear development. Nevertheless, the camps did move several times through the hamada of Tindouf to search for safety and resources (water and firewood). Thus, in the following we offer insights into these motions based on a series of discussions held with elderly women in February/March 2020 in the refugee camps of Smara and Dakhla.

#### *Territorial Motions*

There is now an extensive body of literature on the political and armed struggles of the Sahrawi against Moroccan occupation from a political science perspective (Mundy, 2007) and from a counter-historical perspective (see, among others, Bárbulo 2002; Gimeno Martín and Robles Picón 2015). Some anthropologists have intensely studied the identity and cultural transformation of Sahrawi society through exile and revolution (among others, see Caratini 2003; Isidoros 2018; Gimeno Martín 2007). The camps have even been analyzed from an urbanistic perspective (Herz 2013). Nevertheless, the memories and histories of the refugee camps in themselves have not been addressed. From the hamada of Tindouf, the Sahrawis, the great majority of which (around 90 percent) women, have outlined and performed the camps and the nation-state that is to govern it.

Thus, the history of the refugee camps encompasses much more than the settling of the population in a single place and the steady growth of infrastructure. Almost all of these eminently nomadic camps and their spatialities have disappeared; the harshness of the climate coupled with the flimsiness of the installations mean that barely any traces have been left behind. In addition, none of the motions, gestures, and spatialities enacted by women have been archived or recorded (Lafontaine Carboni 2021).

After the Spanish left without warning on October 30, 1975, Mauritania and Morocco's armies simultaneously invaded the Western Sahara. Thousands of Sahrawis, both in cities and in pastureland, suddenly had to leave the territory, as they did not want to live under another colonial regime. We don't know precisely how many people arrived in the precarious refugee camps installed in the region of Tindouf from 1975 to 1976; the number is thought to be around 60,000. At first, there were no tents to protect the families from the heat during the day and from the cold at night. Despite help from Algerian authorities, the population was lacking almost all necessities. As most of the men were at war in the disputed territories, women began to organize political cells and committees to improve living conditions with the Polisario. As water and firewood were lacking, and as remaining in the open air was unsafe (the Moroccan army could attack using planes), they decided to spread throughout the hamada of Tindouf. At this point, the population was already partly spread out but disorganized; some of them first settled in the camps of Bir Taoulat and Bir Jaoulat (on the Algerian border), which existed until the beginning of 1974. Others had already lived for years in Ouenet Bellagra—which would later become Dakhla, a well-known site for nomads as water there is less than one meter underground—because they felt insecure in the territory of the Western Sahara. Others settled in Bou Garfa, south of Rabuni, where a relative abundance of water permitted them to begin agricultural experimentations.

53 This information results from a series of interviews and discussions led by Lahsen Selki Sidi Buna and Julien Lafontaine Carboni in the refugee camps in February/May 2020 about the history of the refugee camps between 1975 and 1991. The results of this research will be presented in the forthcoming PhD thesis of Julien Lafontaine Carboni, in 2022.

Thus, following the founding of the SADR, the population was dispersed throughout the hamada, in places where firewood and water could be found and in the riverbeds, to reduce their visibility from afar (Map 3). In order to do so, they developed a scalable system of barrios, daïras, and wilayas to organize the camp's food supplies, distribution and autonomous administration without the help of external or foreign institutions and NGOs. The result was the establishment of the camps of Asebti North and Asebti South (which would later change location and join to become Smara), with two daïras each, the camp of Ed Jal (at the north of Smara, which would later be relocated to El Aaiún), also with two daïras, the camp of Enubke (renamed El Aaiún), with four daïras, the camp of Ouad Lhme, with three daïras, and the camp of Ouenet Bellagra.<sup>53</sup> They also created the camp of Grarrat Lentilaga, literally the camp "for the immigrants," for newcomers who would then be assigned a tent in another camp. Each daïra and barrio was relocated with the aim of finding resources and safety. In 1978, they were renamed to organize the return to the Western Sahara; each Wilaya now bears the name of an administrative region of the Western Sahara, and each daïra bears the name of a smaller administrative unit around a city. Further infrastructure was later built, such as the women's school and the national hospital.

For over a decade, the Sahrawi population in exile moved through the hamada to improve their living conditions. None of these movements ever stopped entirely; for example, one of Dakhla's daïras was relocated to the Wilaya of Smara in 2012 due to desert encroachment (Fig. 8).

### ***Spatialities of the camps: Analogies to former encampment models***

As Caratini and Wilson have underscored, the Sahrawi refugee camps were built on the basis of a productive ambiguity between the political ideals of the newborn SADR and nomadic pastoralist values. While the administrative model was inspired by the Algerian system of governance and enacts a return to the occupied territories, aligning it with national ambitions (in terms of education, health, social services, police, etc.), the spatiality and arrangement of the tents was defined and inspired by the mahsar and anawal models (Fig. 9). In 1976, with the foundation of the SADR, a series of laws were enacted on the spatial layout with a view to "detribalizing" society and promoting radical equality among the Sahrawis.

These regulations were precise and lasted until 1991, the year of the ceasefire with Morocco, when a general relaxation occurred. In this model, the reference to the anawal is only metaphoric; by promoting the "detribalization" of society, the SADR and the popular congress prohibited grouping tents according to qabīla membership. No hierarchies existed between the tents, and as such the equality enacted by the circular form was re-enacted in another spatial setting. Along these lines, familial groupings were also largely prohibited until the mid-1980s, after the strikes in Dakhla.

On the contrary, we can hypothesize that the spatialities of the camp were borrowed from the mahsar encampment structure. The tents had to be aligned on the north/south and west/east axes (Fig. 10). This alignment permitted fluid mobility throughout the camps and an unobstructed view of the desert (and thus of any oncoming enemy attacks). In addition, the proximity between the tents (around 4 meters), as in the Mahsar, fostered solidarity between the households thanks to the circulation of goods, information, and help. One of the significant shifts between the spatialities of the mahsar and the refugee camps is that, due to the protracted armed conflict and the absence of men, who were occupied on the battlefield, the camps and the family were up to that point matrilocal; husbands would move into the tents of their wives, who traditionally lived in close

proximity to their mothers' khyam. The absence of men profoundly changed the gendered division of labor during the wartime effort, as the women had to manage the wilayas and barrios in their husbands' absence. These new dynamics between the tents and politics in the encampments were characterized by what Konstantina Isidoros called a "political economy of affection" (Isidoros 2018: 76). The grid-like organization of the camp did not seem to follow common international models for refugee camp construction, instead resembling the traditional Mahsar, an exceptional form of encampment enacted in times of war, danger, or for the temporary unification of the qabīla. Prior to the development of public infrastructure, which was secondary, this model further entrenched their status as ideal refugees (Fiddian Qasmiyeh 2014; Fig. 11).

While it would be inaccurate to say that the refugee camps, the al-mukhayam, are nomadic encampments, we can nevertheless underscore the "genetic dynamism" associated both with the mahsar encampments and with the firgan throughout the twentieth century and the encampments of the hamada of Tindouf. The camps can be interpreted as exceptional spatialities enacted to unify the qabā'il, derived from nomadic qabā'il-centered traditions and built upon the ideal of radical egalitarianism as a temporary (and essentially reversible) strategy for survival and adaptation. In this sense, through the lens of the long history of Sahrawi culture, this relative immobilization does not lie in tension with nomadic culture and its perpetuation over generations. On the contrary, the maintenance of affective and material dimensions of nomadism, despite the lower mobility of the Sahrawi population—whose movements have been reduced only in terms of magnitude—outlines the existence of new forms of Sahrawi nomadism in exile. These magnitudes of nomadism are deeply inscribed in the history of the twentieth century, a period in which the pastoralist population reinvented forms of nomadism and economic/ecological modes of life as a strategic adaptation for survival. Moreover, this portrays a strategy for reclaiming and resisting attempts to undermine their status as refugees, a necessary political subjectivity used to legitimate and pursue their struggle for self-determination.

## **Conclusion: The short-circuiting of knowledge circulation**

Beyond the spatial analogy and the inscription of the refugee camps in a broader spatial history of Sahrawi culture, Sahrawi nomadism is an entire socio-cultural set of gestures and motions, from tea-making to the ways in which the tents have been positioned in relation to each other. The material culture of the Sahrawi evolved in exodus, shaped by the economic and material reality; among other factors, the absence of herds of camels and goats rendered the maintenance of the traditional khayma impossible. As such, with a view to sustaining their nomadic culture, numerous Sahrawis refused, for a time, to improve their quality of life as refugees; as they argued, replacing the lightness of the firgan with individual blocks built of sand bricks—for kitchens, bathrooms, and "living rooms"—jeopardized their right to claim to belong to a nomadic culture. For the same reason that the Sahrawi have refused (and continue to refuse) to call the refugee camps "cities," they have resisted building infrastructure and undertaking material improvements to their households. Just as their status as refugees and the acknowledgment of the camps as refugee camps is a right, the nomadic continuation of their culture is also a right, despite their protracted refugeehood and immobilization. This persistence reflects their unyielding will for self-determination as a people and sends a message to those who are working to improve the situation.



This perseverance is part of a political project that articulates modernity and nomadism. The Sahrawi project promoted by the Polisario Front and by the institutions of the SADR has sought to break with institutions of the past that are typical of Bedouin societies, where the segmentation of the social structure was accompanied by a classificatory system in which artisans and slaves occupied an inferior position. This entailed the rejection of their tribal condition and of slavery, which were abolished with the aim of building a society in which all people are equal. The struggle for the self-determination of the Sahrawi people has been accompanied by their will to mold themselves into a modern society. However, the nomadic condition of Sahrawi society, which we have highlighted here as its central cultural feature, has in a sense redeemed the term “Bedouin.” Its positive significance, associated with freedom of movement, denotes a radical freedom of thought (within the framework of a nomadic and Muslim culture). In this way, the term “Bedouin” has been reclaimed in ways that resist the tendency toward “abjection” that is often at play when it is situated within the global hierarchy of values of the contemporary world (Peutz 2011).

Although we can argue that the spatialities of the refugee camps are inscribed in nomadic culture as an exceptional constellation of tents, we must nevertheless emphasize that nomadic culture isn’t based solely on the presence of physical movements. In this contribution, we have not emphasized the movements of individual Sahrawis since their exodus, despite their significant mobility—notably to Mauritania and the occupied territories, to liberated territories, to European countries and allied countries such as Cuba (through Algeria), and even inside the camps themselves for work or weddings. Beyond these movements, we argue that, in addition to the spatial analogy between the refugee camps and the nomadic encampments, the coalescence of the tents (Isidoros 2018) and the unification of the qabā’il as an adaptive strategy for survival and independence is now the main argument for the existence of new forms of Sahrawi nomadism.

The biggest threat to Sahrawi nomadic culture isn’t immobilization but the short-circuiting of the dissemination of pastoralist knowledge, which lies at the heart of their culture. Sahrawi nomadism is at base a set of motions: cultural and ecological practices that ground a collective capacity to survive, exist and freely develop in the harsh conditions of the Western Sahara. To the extent that they become dependent on the international neoliberal economic system, however, these networks, based on oral and embodied knowledge circulation, risk losing their strength and resiliency. The very motions that constitute their knowledge, spatialities, and practices can be sustained despite their immobilization. Nevertheless, they would seem to be further endangered by the increasing imposition of a neoliberal economy on the refugee camps, justified on the grounds of improving living conditions and thus using the same mechanisms on which colonial Spain relied to acquire a cheap workforce.

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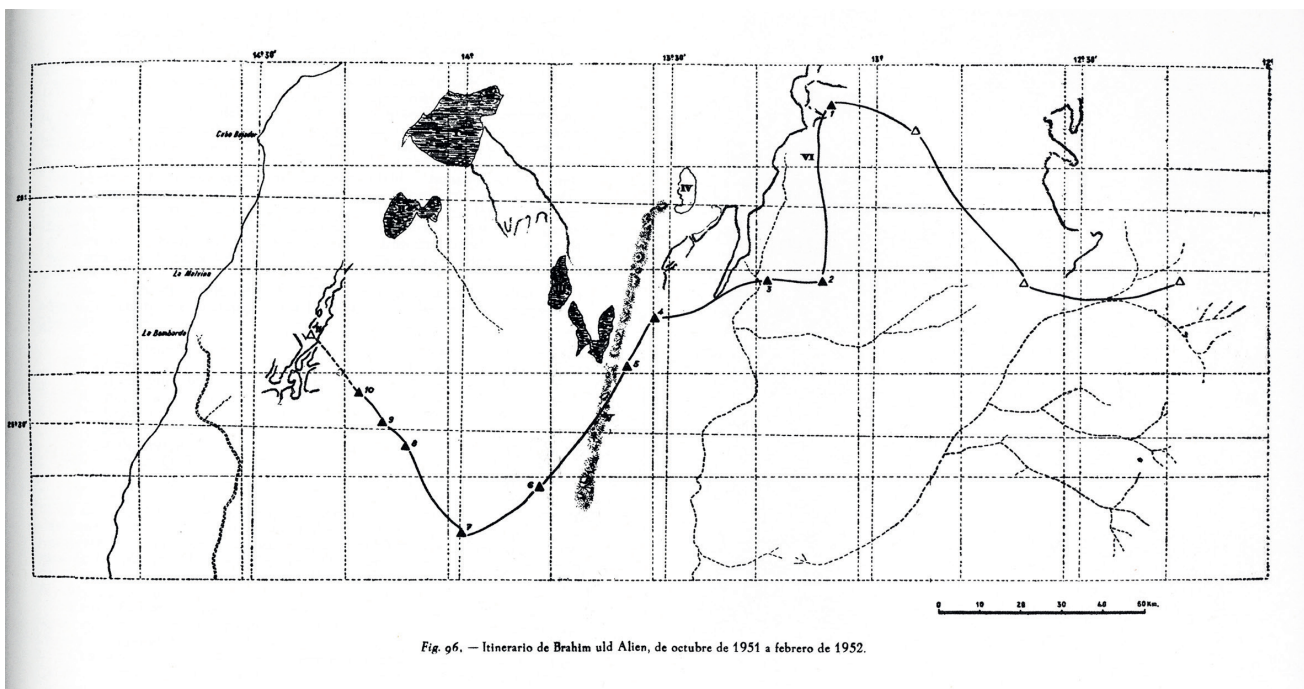
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## Figures



Fig.1: Partial view of a Frīq. Source: Baroja, J. C. (1955). Estudios saharianos. Instituto de Estudios Africanos.



Map 1: Itinerary of Brahim uld Alien from October 1951 to February 1952, map extracted from Baroja, J. C. (1955). Estudios saharianos. Instituto de Estudios Africanos.



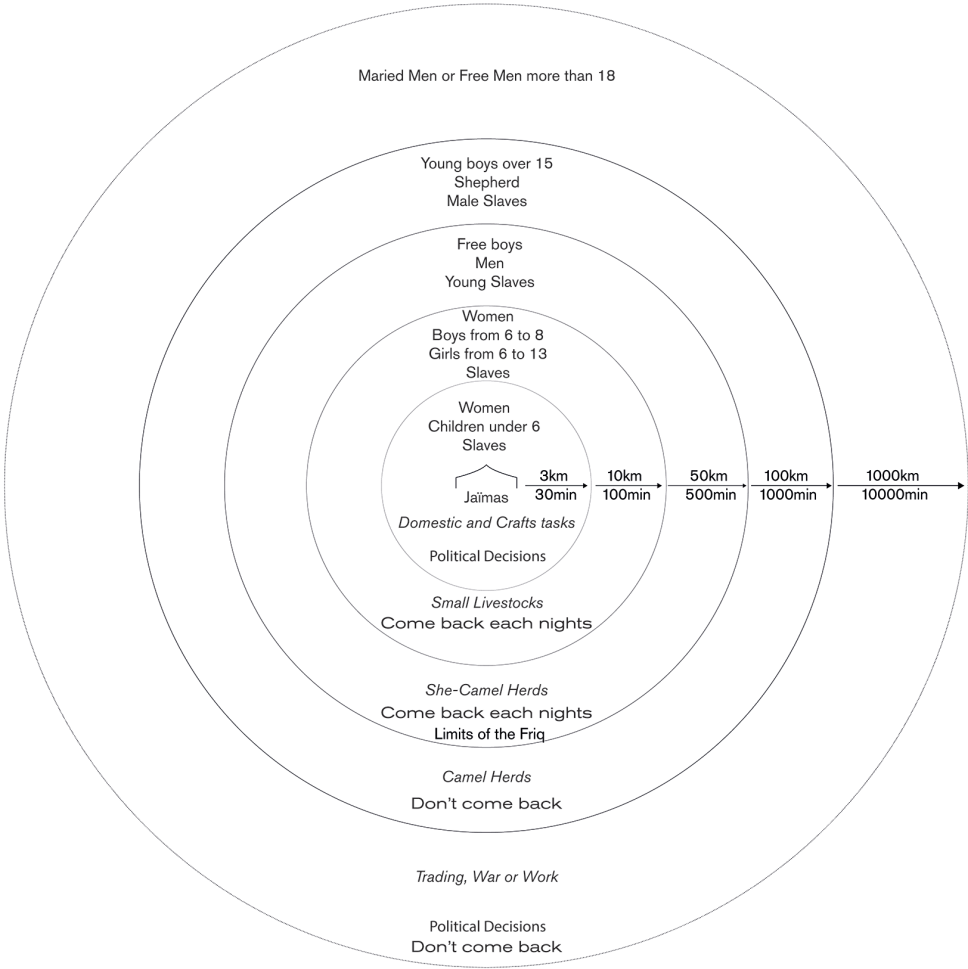


Fig.2: Motions around the tent according to the age and the gender, thus to the daily tasks. After the information of Caratini concerning the members of the Rgaybat Qabila. Source: Julien Lafontaine Carboni, ALICE, EPFL.

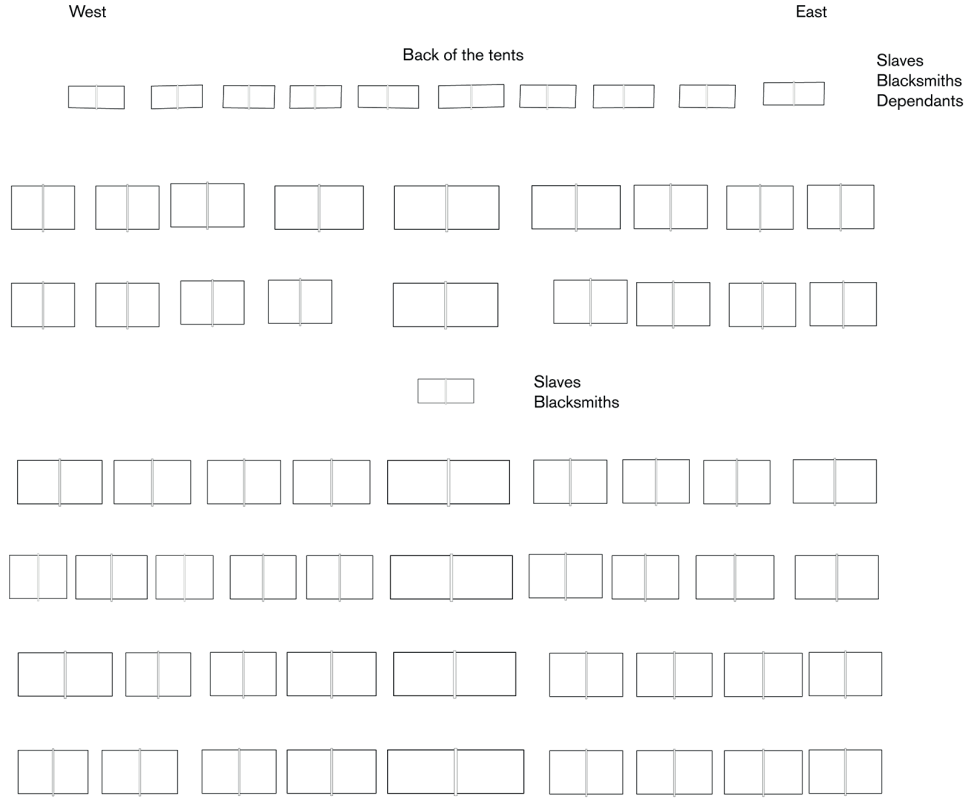


Fig.3: A Mahsar, after Sophie Caratini. At the exact center of the square would be installed the tent of the Sheik (elderly). At the north are installed the tents of the craftsmen and slaves. One line is organized on the same model as one Friq in a denser way. Source: Julien Lafontaine Carboni, ALICE, EPFL.

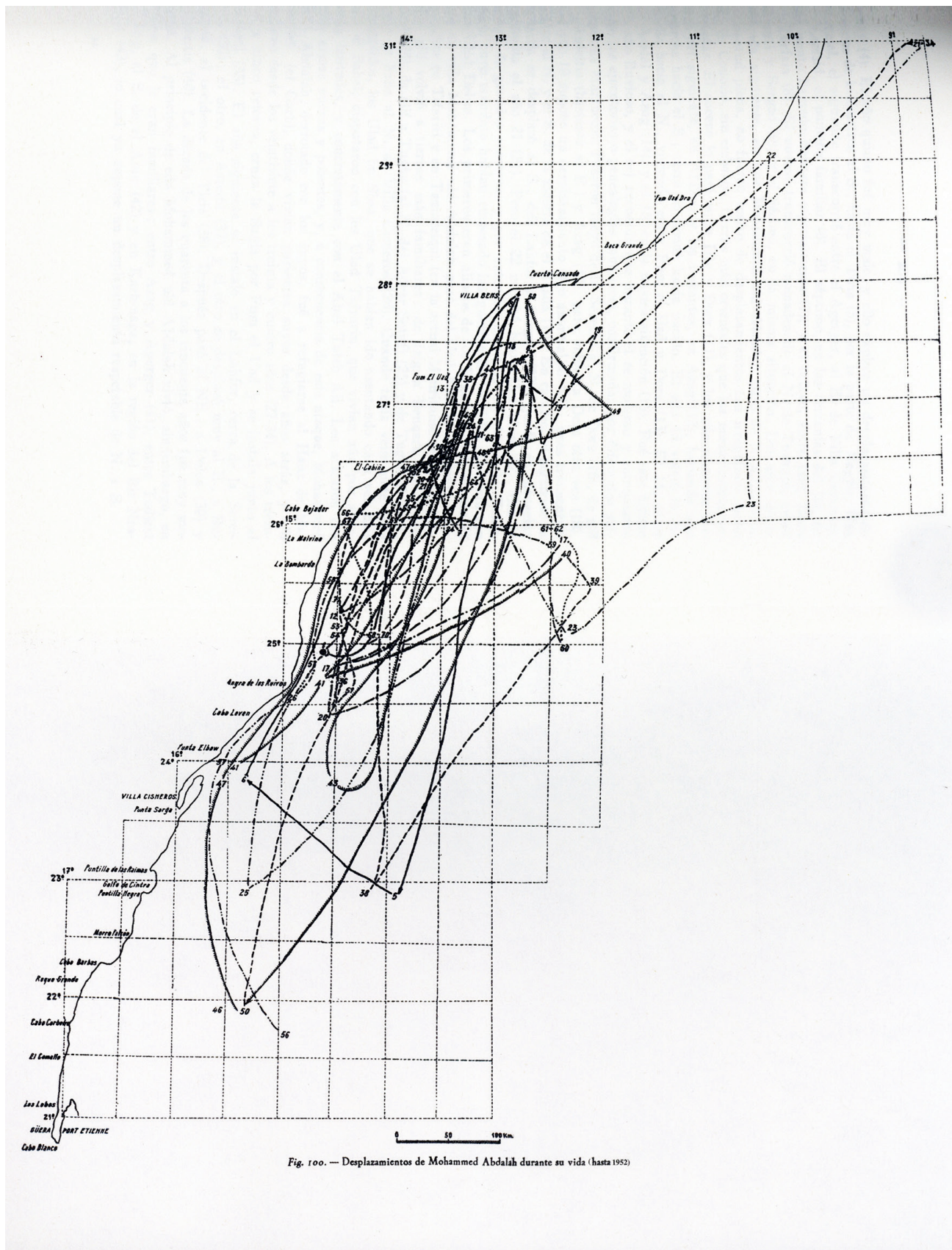


Fig.4: An Anawal, after Sophie Caratini. The stones on the tent's back permitted to be warned if anyone wanted to access in the camp. At night, the circle is closed, and the animals are kept at the center. In the Anawal, there is no formal difference between slaves and masters, and the different members of a family. Source: Julien Lafontaine Carboni, ALICE, EPFL



Fig.5: Morning Meeting in the refugee camps in 1976. Source: Manfred O Hinz, '3WM Interview mit Gunther Hiliger', Terre des Hommes (1977) : VIII. Found in the Archives of the Ministry of Information of the SADR.





Map 2: Motion of Mohammed Abdalah during his life (until 1952). Extracted from Baroja, J. C. (1955). Estudios saharianos. Instituto de Estudios Africanos.



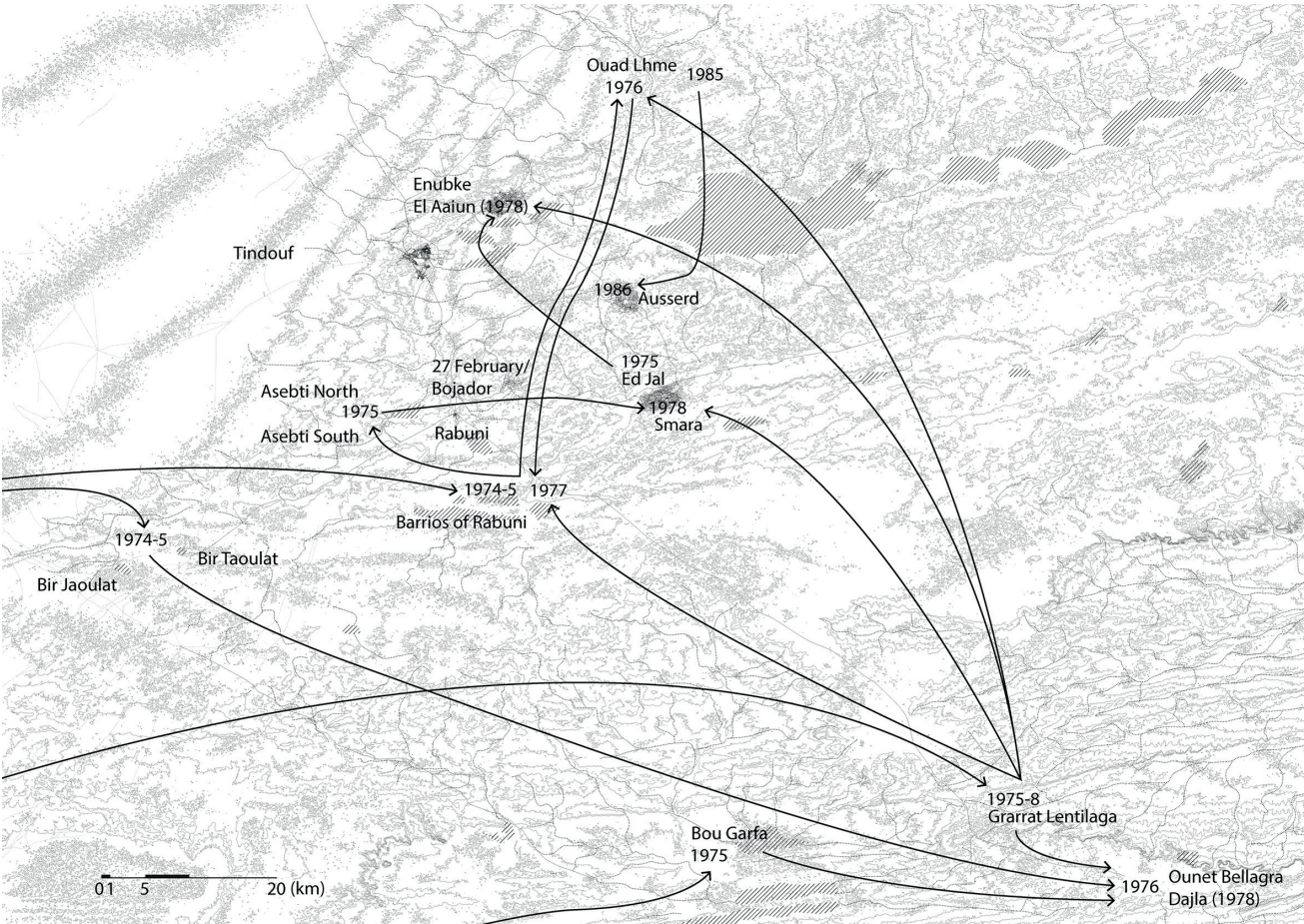


Fig.6: Aerial view of Dajla in 1960. Beside the military equipment, we can see the nomadic encampment at the South of the photograph. Extracted from Rodríguez Esteban, J. A., & Barrado Timón, D. A. (2015). *Le processus d'urbanisation dans le Sahara espagnol (1884-1975)*. Une composante essentielle du projet colonial. *Les Cahiers d'EMAM*, 2425. Source: Cartographic and Photographic Centre, Ministry of Defence (Spanish).





Fig.7: Panorama of Mahbes in 1974. Photography taken by a Spanish military for his service in Western Sahara at the end of the Spanish colonial period. We can see an encampment at the left of the photo, near from the military installations. Source: La Mili en el Sahara (<https://www.lamilienelsahara.net/>, accessed on the 1st of July 2020).



Map.3: The motions through the Hamada of Tinduf of the Barrios, Daïras and Wilayas until 1991. Some camps were ephemeral, others were transitioning camps for the population, notably Grarrat Lentilaga. An interesting element is that the whole barrio moved at the same time from site to site, and not individually. After the discussion led in the refugee camp in February/March 2020. Source: Julien Lafontaine Carboni, ALICE, EPFL





Fig. 8: Traces of the disappeared daïra of Dajla which motions begun in 2012. At first, the sand dunes were considered as safer zones, as it was easier to dig refuges. Nevertheless, the sand dunes moved rapidly and armed the structures of the sand-brick houses. The daïra was rebuilt some kilometers at the North. Source: Julien Lafontaine Carboni, ALICE, EPFL.



Fig. 9: A group of tents organized in circles. According to the people we discussed with around this photography, it is probably a camp established for the proclamation of the RASD in February 1976. The round figure expresses equality between the members of the constellation of tents. Archives of the Ministry of Information of the RASD.



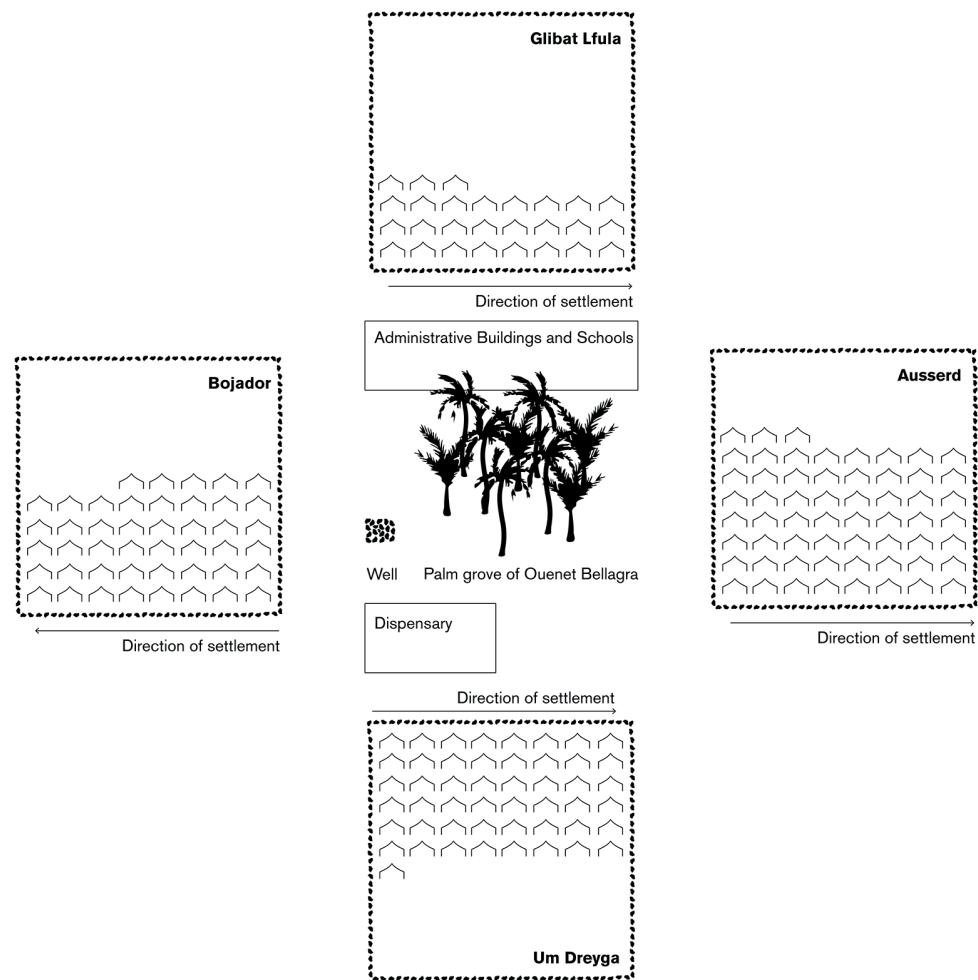


Fig. 10: Diagram of the organization of the camp of Ouenet Bellagra (Dajla since 1978). All the daïras were outlined by rows of stones from which we can find traces at some places. Source: Julien Lafontaine Carboni.



Fig. 11: One lasting stone line on the site of Ed Jal delimiting one barrio, the wilaya that moved toward El Aaiún in 1978 located at the North of the actual location of Smara. Source: Julien Lafontaine Carboni

## [Annex] Undrawn Spatialities. The architectural archives in the light of the history of the Sahrawi Refugee Camps.

Julien Lafontaine Carboni

ALICE, Institute of Architecture, Swiss Federal Institute of Technology, Lausanne.  
OrcID: <https://orcid.org/0000-0002-8366-5969>. Twitter: @jllfcb

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### Abstract

What happens if the architectural knowledge is not mediated through drawing or does not produce any type of record? How can an architectural archive exist and make sense in a context where the circulation of knowledge and the emergence of spatialities leave no physical traces? This essay offers insights into the traces left by undrawn spatialities and how they could be recorded and interpreted in architectural archives based on observations on the history of the Sahrawi refugee camps in archiving oral memories in collaboration with the Sahrawi Ministry of culture. This project has been launched to archive and maintain nomadic knowledge circulation that has been short-circuited by protracted immobilization. The proposed theoretical framework enclosed herein—grounded in gestures, words, and bodies as producers of architecture and material evidence—allows other regimes and traces of spatialities to emerge.

### Keywords

architectural archives: Sahrawi refugee camps; non-visual architecture; minor histories; gestures and bodies; architectural knowledge and image;

### Introduction

Entering the archive of the Ministry of Information of the Sahrawi Arab Democratic Republic in Rabuni, the capital of the Sahrawi population in exile, I was impressed by the number of documents. Around a corridor, one can find a room for the digitization of audio and video material, a small office for the director, and a storage room for the audio and video material. There is also a little room, called the library, with journals from the national periodic (May 20<sup>54</sup>), *Jeune Afrique*, and other publications. In this room, a set of books written on a wide range of topics concerning the Sahrawi history, the war, and Western Sahara geography is stored. “Everything you want to learn about the Sahrawis is here,” said Lahsen Selki Sidi Buna, my host and collaborator on the Oral

54 The 20th of May is a National Celebration day of the SADR and refers to the first attack of the Front Polisario against a Spanish post on the 20th of May 1973, led by El-Ouali Mustapha Sayed, the first general secretary. The front was founded ten days before on the 10th of May 1973.

Memory archiving project. On the right side of the corridor, there is a room used as an archive of the journals that include articles on the Sahrawis and the conflict with Morocco from 1976 to the present.

Lahsen and I worked on the memories and histories of the refugee camps (1975-1991), from an architectural perspective. During this period, women were alone organizing and building the camps and the state. This archival fund has proven difficult to interpret, and without contexts or captions, the documents were cryptic. No drawings or plans ever existed to organize the camps, and no map to coordinate them. Furthermore, most of the camp's spatialities disappeared. The climatic and political conditions obliged the Sahrawi to move several times and reconstruct the camps each time in a new location. For all these reasons, the reading and understanding of the archives' documents did not help provide a reliable image of the camps over time.

Minutes later, we went to Mohamed Ali Laman's office, the person responsible for Oral Memory in the Sahrawi Ministry of Culture. He launched this project at the beginning of 2010. He observed a short-circuiting of the circulation of oral knowledge and memory in the new generations due to the protracted immobilization and the impossibility of maintaining a nomadic life. This knowledge is essential, as it constitutes a decisive element for returning to their land and legitimate their centennial culture. In his office, which was kept dark to keep the temperature down, there was a desk, a computer, and a hard disk. When Mohamed Ali inserted the hard disk into his computer, I found a series of audio and video interviews documenting discussions with elderly people in the refugee camp. I then realized I was there to continue to develop this work in the following months. When navigating through the materials of this archive of Oral Memories, I understood that these were the most relevant architectural documents I would find during my stay.

In this article, I question how could archives incorporate records and traces of architectural knowledge and culture unmediated through architectural drawings, notebooks, models, or other working documents? How can an architectural archive exist and make sense in a cultural context in which the circulation of knowledge and the emergence of spatialities leave no traces to be recorded under the Western epistemic frame of reference?<sup>55</sup>

These questions have been addressed by cultural mapping, which UNESCO acknowledges as "a crucial tool and technique in preserving the world's intangible and tangible cultural assets."<sup>56</sup> Equally, numerous artists and scholars address the refugees' and migrants' conditions and the limits of conventional representation in grasping their memories and the traces of settlement and movements.<sup>57</sup> Nevertheless, their work remains disregarded in the Western architectural archives. This article offers insights into the traces left by undrawn spatialities and how they could be recorded and interpreted in architectural archives based on observations on the Sahrawi camps' history.

Firstly, the interpretation and analysis of architectural drawing, based on the writings of Robin Evans (1944-1993), will be introduced. Moving from an understanding of architectural space as the object of architectural history to a performative and embodied approach of architectural spatiality, I will engage with architectural images based on enacted gestures that remain undrawn or unbuilt. I then analyze the traces left by these undrawn spatialities, considering why and how their discussion fosters architectural knowledge diversification in archives. I will finally ground this epistemic frame through an analysis of the refugee camps' histories, focusing on the memories of three architectural events, which I observed during a stay in 2020, to understand the traces left by these spatialities, how they can be recorded, and constitute architectural images of the socio-spatial transformation of the Sahrawi society in exile.

55 For a critique of the Imperialist western gaze on the archive, see: Elizabeth A. Povinelli, "The Woman on the Other Side of the Wall: Archiving the Otherwise in Postcolonial Digital Archives," *Differences* 22, 1 (1 January 2011): 146-71.

56 <https://bangkok.unesco.org/content/cultural-mapping>, accessed June 1, 2020.

57 Ektoras Arkomanis, "Passage Variations: An Elliptical History of Migration in Eleonas," *Architecture and Culture* 7, 1 (July 2019): 95-111. On Palestinian camps see, Dorota Woroniecka-Krzyzanowska, "The Right to the Camp: Spatial Politics of Protracted Encampment in the West Bank," *Political Geography* 61 (November 2017): 160-69.



58 Robin Evans, "Translations from drawing to building," *AA files* 12 (1986): 156, 160.

59 *Ibid.*: 160.

60 Kent Kleinman, "Archiving/Architecture," *Archival Science* 1 (2001): 321–32. An example of a building preserved in a museum includes the Chinese merchant house of Yin Yu Tang at the Peabody Essex Museum in Salem, Massachusetts.

61 Robin Evans, "In Front of Lines that Leave Nothing Behind. Chamber Works," *AA files*, 6 (1984): 487.

62 *Ibid.*: 488–89.

63 *Ibid.*

64 Mark Wigley, "Unleashing the Archive," *Future Anterior: Journal of Historic Preservation, History, Theory, and Criticism* 2, 2 (2005): 10–15.

65 As quoted by Stuart Hall from Benjamin "To articulate the past historically does not mean to recognize it 'the way it really was.' It means to seize hold of a memory as it flashes up at a moment of danger." He argues that archives are not inert historical collections. They stand in an active, dialogic, relation to the changing questions which the present puts to the past from one generation to another. Stuart Hall, "Constituting an Archive," *Third Text* 15, 54 (March 2001): 89 and 92. Ariella Azoulay proposed that the archive is "a graveyard of political life that insists that time is a linear temporality: again, an imperial tautology." Ariella Azoulay, *Potential History. Unlearning Imperialism* (London: Verso Books, 2019), 186.

66 Jill Stoner, *Toward a Minor Architecture* (Cambridge, MA: MIT Press, 2012). Lucía García Jalón Oyarzun, "Excepción y cuerpo rebelde: lo político como generador de una arquitectónica menor/exception and the rebel body: the political as generator of a minor architecture," Thesis (Madrid: Universidad Politécnica de Madrid, 2017).

67 André Leroi-Gourhan, *Gesture and Speech* (Cambridge, MA: MIT Press, 1993).

## Architectural matter(s): Potent and latent gestures and words

In "Translations from Drawing to Building," Evans outlined opposite architectural practices. Firstly, there is one that ends "up working on the thing itself," "emphasizing the corporeal properties of things made;"<sup>58</sup> this entails a making based on direct action and engagement with physical matter. Secondly, design can be mediated through drawing by "disengagement, obliqueness, abstraction, mediation and action at a distance."<sup>59</sup> While mediated by drawings, the architectural image is transposed on a transcendental plane, exterior and agential—the drawing's role is to represent this image, to fix it on paper. Conversely, an unmediated architectural image belongs to the non-representational and the non-exclusively visual—haptic—it emerges through performed practices.

Architectural drawings can be collected, stored and retrieved, protected from weather and time, documenting the evolution of their uses and appropriations. Archives do not need to store buildings, even though it happens exceptionally.<sup>60</sup> Nevertheless, the architectural drawing is not simply a representation; it is part of the world and its materiality, physical and virtual, as it enacts a field of potentialities.

In the article "In Front of Lines That Leave Nothing Behind," Evans writes about Daniel Libeskind's Chamber works series (1983) and the existence of another kind of lines in architectural drawings. He wrote: "we must look in front for the things that the drawing might suggest, might lead to, might provoke; in short for what is potent in them rather than what is latent."<sup>61</sup> Evans saw a possibility for architecture to move back "from building to drawing [...] [to] split into prior and subsequent activities: design and construction."<sup>62</sup> This architectural practice maintains the dichotomy between drawing and building but liberates it from its dependence on construction. Drawings become autonomous architectural works, acting in the world directly for what they can do—not for what they represent—"allows[ing] for the construction of lines in the sky."<sup>63</sup>

In this definition, the spatialities are emergent and brought into being by a drawing understood not as a representation of a future state but as an active agent in the world and a producer of potentialities. Extending this consideration, I argue that gestures and speaking should be considered decisive records for architectural archives, not unlike drawing or other disciplinary media, as they can play the same agential role in the enactment of spatiality. In this perspective, the content of the architectural archive finds itself challenged in two ways. First, the gaze would reenact the agency of the records and the potentialities they afforded. Then, archives would become a place of imagination,<sup>64</sup> and critical understanding of the potentiality of transformative gestures,<sup>65</sup> shedding light on an underestimated dimension in the architectural archives: spatialities that remain unbuilt and undrawn. To consider these realities of architectural experience and archive them requires shifting from the historical linearity of the architectural space to the body-to-body migration of architectural spatiality.

## From Architectural Space to Architectural Spatiality

The concept of "minor architecture" articulates that architecture and architectural technicity exist before the so-called "architectural."<sup>66</sup> Organizing spaces and times is a potentiality of the body negotiating and inventing its environment,<sup>67</sup> individuating its milieu. This co-individuation of the milieu and the individual is the proposition of Gilbert Simondon (1924–1989) concerning the physical, biological, and

psychosocial individuation concerning the technical being.<sup>68</sup> In this view, the architectural space is a life form, not necessarily mediated through the kind of drawing described by Evans. It belongs to trace and gesture. I contend that the way two bodies are seated, one in front of the other, implies cultural situatedness, a fundamental part of spatial and architectural culture. Nevertheless, this definition of the architectural technicity engenders a historiographical paradox in the way we inherit or transmit architecture—not only through the linearity of heritage but also in the regimes of the “migration of gestures,”<sup>69</sup> and in the way we archive and construct architectural histories through a relentless and unforgiving standardization of the architectural documents and records.

Facing this epistemic dead end, geography scholars searched for another epistemology and shifted from the concept of space to that of spatiality. Taking the theory of performativity elsewhere, geographers Nicky Gregson and Gillian Rose suggested that:

“performances do not take place in already existing locations [...], waiting in some sense to be mapped out by performances; rather, specific performances bring these spaces into being.”<sup>70</sup>

Performance is a “situated convergence of human and nonhuman elements and force relations through which people, places, and things emerge or become.”<sup>71</sup> It is a reenactment of socio-spatial norms through citational practices.<sup>72</sup> Everyday spatialities are performed and maintained through iterative gestures that ground their meanings through an architectural assemblage of bodily, physical, and virtual materiality. The spatial knowledge on which these performative reenactments rely is a particular texture of architectural images that we call figurations. These figurations embody tacit knowledge hinging between the cognitive and the physical, deeply rooted in a cultural context as a technico-gestural knowledge.

Suppose architecture is brought into being by the rhythmic organization of space and time by embodied re-con-figuration. In that case,<sup>73</sup> this phenomenon is more straightforward than the architectural event we are used to and remains unmediated through representational drawings. In this sense, spatialities are formed through an encounter of physical reality and a set of virtual potentialities. Space does not exist as a separate entity on which the architect and the geographer work. Under this premise, the architectural event shifts from the invention of new spaces to new gestures and spatialities.

This architectural event is enacted by figurations, as a particular kind of architectural knowledge and image that are not only visual but also haptic.<sup>74</sup> The specific texture of the architectural knowledge and image is made of habits, gestures, bodies, and minor inventions by the emergence of new driving forces.<sup>75</sup> To understand the transformation of the architectural spatialities as situated performances, we have to follow their genesis from everyday gestures to transformative gestures through a body-to-body transmission. The historicity of these spatialities “differs from other types of traces in that it requires physical embodiment, the support of a human body.”<sup>76</sup> As a category of architectural spatialities, the undrawn requires investigations on other regimes of traces, both to address its temporalities, embodiment, and migration constituting its system of transmission, from one body to the other.

As gestures or words, the architectural drawing enacts or prepares new spatialities to come, as an embodied practice of imagination and reconfiguration. But if these undrawn spatialities are a matter of architectural history, what are the documents or records of these new threads? What is left of them that could become the content of an archive of spatiality?

68 Gilbert Simondon, *L'individuation à la lumière des notions de forme et d'information* (Grenoble: Millon, 2005).

69 One can find insight on the historicity of the migration of gestures in Carrie Noland and Sally Ann Ness, editors, *Migrations of Gesture* (Minneapolis: University of Minnesota Press, 2008).

70 Nicky Gregson and Gillian Rose, “Taking Butler Elsewhere: Performativities, Spatialities and Subjectivities,” *Environment and Planning D: Society and Space* 18, 4 (August 2000): 441.

71 Robert Kaiser and Elena Nikiforova, “The Performativity of Scale: The Social Construction of Scale Effects in Narva, Estonia,” *Environment and Planning D: Society and Space* 26, 3 (2008): 123.

72 Judith Butler, *Gender trouble: Feminism and the subversion of identity* (London: Routledge, 2011).

73 Keller Easterling, *Medium Design* (Moscow: Strelka Press, 2018).

74 David Turnbull, “Maps Narratives and Trails: Performativity, Hodology and Distributed Knowledges in Complex Adaptive Systems? An Approach to Emergent Mapping,” *Geographical Research* 45, 2 (June 2007): 140-49.

75 In his research on *Imagination and Invention*, Simondon proposes four textures of the image; the driving force, the hosting system of information, an affective resonance of experience, and a cognitive signal as symbol. The invention emerges out of a reorganization of the system of symbols (which is deeply embodied and individuates its milieu in the same motion), which results in a new image as driving force. Images are always a gesture and a movement. In Gilbert Simondon, *Imagination et invention: 1965-1966*, edited by Nathalie Simondon (Paris: Presses Universitaires de France, 2014).

76 Noland and Ness, *Migrations of Gesture*, XII.

## Traces of the Undrawn

The key question is why addressing architecture and the archives within this frame of performative spatialities and figurations? Why is the undrawn as a category relevant for historiography?

While the destructing of worlds based on colonial pursuits had been largely debated,<sup>77</sup> the decolonization of the archives, but mainly the colonial archives that misrepresented, looted the objects of, and produced epistemic violence on colonized populations, is still to be accomplished.<sup>78</sup> Within the almost-thirty-year-old archival turn, archives moved from archives-as-source to archives-as-subject—a field of ethnographic investigation.<sup>79</sup>

As Ann Laura Stoler suggested, “[D]istinguishing the archival power lodged in moments of creation from practices of assembly, retrieval, and disciplinary legitimation,”<sup>80</sup> researches unveil the “processes of production, relations of power in which archives are created, sequestered, and rearranged.”<sup>81</sup> Architectural archives are still in need of such inquiries to disentangle power relationships. In this sense, the high degree of standardization of the documents hides, devalues, and silences many forms of circulation and conservation of architectural knowledge, notably organic forms,<sup>82</sup> enacting what has been called an “epistemicide,”<sup>83</sup> and instituting a male Western gaze on architectural history. A myriad of ways of engaging with architectural and spatial knowledge exists, and it is our responsibility to acknowledge them and give ground to reparation.

Architectural scholar Janina Gosseye stated that “over the past half-century, architectural historiography has been punctuated by attempts to break the silence, to tell alternative narratives and to include other voices.”<sup>84</sup> The bourgeois classification and opposition between the building and the original architectural object presented in experts’ documents are criticized for its underlying idealism and incapacity to foresee the majority of the protagonists in a building’s conception and life.<sup>85</sup> As one of the categories that could mediate potential (hi)stories, the undrawn aims at addressing standardization and silencing in giving accounts of other regimes of traces and circulation of knowledge. In endorsing the performative dimensions of spatialities and the embodied nature of figurations—as an attempt to dismount imperialist views on architectural knowledge and image—the undrawn allows us to think of new ways of engaging with architectural archival practices; it permits us to ground a debate on the content of the architectural archives, beyond the analysis of its actual content, and its potential opening to other traces of spatialities and potent materialities. It is proposed here the recording of three series of traces that remained out of the architectural archives’ scope, and that could be brought to the fore by using new and old archival technologies.

I begin this non-exhaustive enumeration with the relation between spatialities, bodies, and reenactments. The body-as-archive has been extensively explored.<sup>86</sup> Performance and dance theory discussed reenactment as a will-to-archive. Curator André Lepecki stated that in some “reenactments, there will be no distinctions left between archive and body.”<sup>87</sup> In a performative perspective, physical space and gestures are actors of the reenactment of a spatiality. As such, the embodied knowledge that is figured through reenactment is an architectural record.

Cinematographic, journalistic, or vernacular videography remains the most accessible record from the viewpoint of the technicality of reenactments. Filmmaker Harun Farocki interrogated the cinematographic archive, questioning how it allows non-lexical indexing of the content based on gestures and bodies.<sup>88</sup> Other archiving migration approaches use film to address the complexity of the temporalities, spatialities, geographies, and

77 Saidiya Hartman, “Venus in Two Acts,” *Small Axe* 12, 2 (2008): 114.

78 Gayatri Chakravorty Spivak, Nelson Cary, and Grossberg Lawrence, “Can the Subaltern Speak?” *Marxism and the Interpretation of Culture* 271 (1988): 271–313.

79 Ann Laura Stoler, *Along the Archival Grain: Epistemic Anxieties and Colonial Common Sense* (Princeton, NJ: Princeton University Press, 2009).

80 *Ibid.*: 48.

81 *Ibid.*: 32.

82 Povinelli, “The Woman on the Other Side of the Wall,” 146–71.

83 Boaventura de Sousa Santos, *Epistemologies of the South: Justice against Epistemicide* (London New York: Routledge, 2016).

84 Janina Gosseye, Naomi Stead, and Deborah Van der Plaats, editors, *Speaking of buildings: Oral History in Architectural Research* (New York: Princeton Architectural Press, 2019: 10).

85 Kleinman, “Archiving/Architecture,” 321–32.

86 André Lepecki, “The Body as Archive: Will to Reenact and the Afterlives of Dances,” *Dance Research Journal* 42, 2 (2010): 28–48.

87 *Ibid.*: 31.

88 Farocki developed it in *Workers leaving the Factory or The expression of hands*. Thomas Elsaesser, Harun Farocki: *Working on the sightlines* (Amsterdam: Amsterdam University Press, 2004).



memories.<sup>89</sup> Vernacular photography has also been studied in relation to the visual and as a source of civil knowledge.<sup>90</sup> Considered as an event engaging agents with a camera, photography sometimes results in images, allowing the performative dimensions to be analyzed as part of a scene where every individual act sheds light. By meticulously studying the events and their spatialities, vernacular photographs become a rich source of information for architectural histories.

Finally, as one of the primary means of transmitting knowledge, oral memory has been addressed as a source of epistemic diversity in the construction of archives.<sup>91</sup> The electronic and digital records are marked by the “return to conceptual orality,”<sup>92</sup> which is at the core of our concerns through the lens of the interview and the archive’s community-based construction.<sup>93</sup> In a context where spatialities remain undrawn, unbuilt, or ephemeral, oral memories constitute one of the most reliable architectural traces for understanding one’s relation to space and its evolution in time.

These materialities constitute a corpus of traces that could record spatiality and bring light to undrawn spatialities. They place the architectural researcher (and archivist) in the role of an ethnographer. However, these questions did not emerge out of nowhere. In this frame, through research granted by the Swiss National Fund, in collaboration with the University of Tifariti in the refugee camp of Smara, with the Ministry of Culture of the Sahrawi State, and with the Autonomous University of Madrid, I had the chance to be part of an archiving project of Oral Memories. Collectively, we aimed at addressing the history and memories of one of the oldest refugee camps in the world, focusing on the sociocultural transformation of the Sahrawi society through exile.

## Spatialities and Historicity of the Sahrawi Refugee Camps

Nowadays, extensive literature exists on the Sahrawi’s political and armed struggle against the Moroccan occupation from a political science perspective,<sup>94</sup> offering a counter-historical account.<sup>95</sup> Some anthropologists studied the Sahrawi society and the identity transformations through the revolution;<sup>96</sup> the actual camps had even been analyzed from an urbanistic perspective.<sup>97</sup> Nevertheless, the memories and history of the refugee camps had not been addressed. From the Hamada’s desert (high plateau), the Sahrawis, in the majority women, outlined and performed the camps and a nation-state to govern it.<sup>98</sup>

The refugee camps’ history is much more complex than just settling the population in one place and organizing the infrastructure’s cumulative and linear growth. The refugees moved several times to find water and branches or because of floods and safety issues. Consequently, almost all of these camps and their spatialities disappeared. The harshness of the climate coupled with the installations’ lightness left nearly no physical traces behind. Thus, emerged the questions of the traces of the undrawn; the prolonged immobilization of the Sahrawis short-circuited the traditional systems of knowledge circulation, stressing the urging necessity to archive the memories and knowledge of these women. The memories of the refugee camp spatialities are expressed in various ways, from the hands’ movement to the way they are seated. The sociocultural revolution, which they went through, was expressed and actualized through the new spatialities and gestures they invented, grounded on traditional and embodied knowledge, new ideals of radical equality, and the lost territories’ reenactments.

These gestures and spatialities were not enacted through or translated into archivable documents; in the Ministry of Information archives, one can find only some

89 Arkomanis, “Passage Variations,” 95–111.

90 Ariella Azoulay and Louise Bethlehem, *Civil Imagination: A Political Ontology of Photography* (London: New York: Verso, 2012).

91 Lynette Russell, “Indigenous Knowledge and Archives: Accessing Hidden History and Understandings,” *Australian Academic & Research Libraries* 36, 2 (January 2005): 161–71.

92 Terry Cook, “Evidence, Memory, Identity, and Community: Four Shifting Archival Paradigms,” *Archival Science* 13, 2–3 (June 2013): 34.

93 Nancy MacKay, *Curating Oral Histories: From Interview to Archive*, Walnut Creek (Calif: Left Coast Press, 2007).

94 Jacob A. Mundy, “Performing the Nation, Pre-Figuring the State: The Western Saharan Refugees, Thirty Years Later,” *The Journal of Modern African Studies* 45, 02 (June 2007): 275.

95 Tomás Bárbulo, *La historia prohibida del Sáhara español*, *Imago mundi* 21 (Barcelona: Ediciones Destino, 2002). Juan Carlos Gimeno Martín, and Juan Ignacio Robles Picón, « Vers une contre-histoire du Sahara occidental, » *Les Cahiers d'EMAM. Études sur le Monde Arabe et la Méditerranée*, 24–25 (January 1, 2015).

96 Sophie Caratini, *La république des sables: anthropologie d'une révolution* (Paris: L'Harmattan, 2003). Konstantina Isidoros, *Nomads and nation-building in the Western Sahara: gender, politics and the Sahrawi* (London: I.B. Tauris, 2018).

97 Manuel Herz, *From Camp to City: Refugee Camps of the Western Sahara* (Zürich: Lars Müller, 2013).

98 Women constitute around 90 percent of the adult and capable population.

photographs, anonymous and without captions. There are no drawings or plans. Only administrative documents and official discourses can provide testimony for this period. If these spatialities embody a common affect and knowledge, a (non-visual) architectural image and its performative reenactment, how can we imagine archiving them without losing their embodied qualities while translating them into a latent drawing? How can one include in the archival project the body-to-body history of the Sahrawi spatialities' transformations? Some insights emerge from the discussions with elderly women, sketching ideas toward constructing an archive of architectural spatialities.

### ***The Lezl Refuge***

Surrounded by her family members, Aguaila was seated on a carpet in front of the sand-brick wall of her Jaïma, enjoying the sunset. Like many older people who spent most of their lives in the refugee camps, her eyes are surrounded by a white halo, progressively losing sight because of the sun's light intensity. Aguaila is a public figure in the barrio 3 (neighborhood) of Hausa's daïra in Smara; as a traditional medicine specialist, she is consulted to treat every health trouble. She was holding two large needles in her hand, passing them again and again through the stitch of the carpet, in synchronicity with the rhythms of her sentences. All her childhood and youth, she lived as a pastoralist in the northeast of Western Sahara; she did not go to the Spanish schools and did not learn how to read or write. Instead, she cultivated the bottomless memory of the Sahrawis and the knowledge of medicinal plants and natural medicines. Thus, the way she described the Saharan desert was dense in information and details enhanced by her gestures and body's position while she was talking.

We mainly discussed her exodus in the camps with her children. When the Moroccan army entered the Sahrawi territories on October 31, 1975, Aguaila was in Jdeiriya, a village at the northern border. When the Spanish army left silently, the Sahrawi population was alerted by the dust lifted by their cars. The people, including Aguaila and her children, fled to join the Polisario Front and protect themselves from the Moroccan army. Over four months, two-hundred people moved from one water well to another without any equipment to survive before reaching the first refugee camp at the Algerian border. While narrating the exodus, Aguaila named each Ouad (river), dates of arrivals and departures, describing the vegetation and the climatic conditions.

After staying hidden for a few days near Jdeiriya, where she was born, they went on the road to Smara to the water well called M'Jbeiriya, on the Ouad R'ni, a tributary of the Saguiat el Hamra. The sand accumulates at the feet of Lezl trees growing in the river's bed;<sup>99</sup> the more significant the heap, the higher the tree grows, while branches are absorbed in the sand. Aguaila imitated the plant's growth and the sand accumulation using her hands and arms to explain this process. In times of trouble, the Sahrawis dig at the feet of trees to create shelter from the heat of the day and protect themselves from the coldness of the night. She reenacted the wood structure with her gestures, which permitted her to create invisible, temperate, and safe spaces to sleep and spend the days protected. Aguaila and the women dug holes into the sand for several days and nights to protect their children. She bent her back, tilting her whole body onward; she explained that to warm up their babies, the women hollowed the ground out to use its heat, transforming their bent bodies into blankets. She reenacted figurations anchored in her body, carrying with her a timeless co-shaping of desert spatialities and the Sahrawis' gestures. The movements of her hands and her body's posture, forming gestural drawings that leave no lasting traces, are the means of circulation and conservation of an architectural knowledge that cannot be standardized into a document but is remembered by the archive of her body.

### *The Bricks of the National Hospital*

Another kind of trace is left by the national hospital built from 1976 to 1978 between the Smara and Awserd camps. Most of the information shared here emerges from a discussion with Souilma Beiruk, the representative of the Sahrawi Arab Democratic Republic (SADR) at the African Union. The hospital was the first building made by the Sahrawi women in the refugee camps. The situation when they arrived at the camp was critical. People were sleeping outside, without blankets. Several diseases spread throughout the population while the open war against the Moroccan army was raging. The few tents they received from the international support were not enough to host all the armed people.

Women were highly organized; cells of nine to twelve people were the basic political unit through which information spread and the political decisions were made. Along with the political cells, women were organized in committees in charge of health, education, social assistance, justice, and craftwomanship. At night, when the children were sleeping, around 11 p.m., they would meet and sit in circles, as was their custom, to discuss for hours how to ameliorate the camp's living conditions (Figure 1).

Souilma Beiruk remembered one night when a woman had the idea to fabricate bricks out of the sand. Sahrawi women did not have construction knowledge. Nevertheless, for years, when all the daily tasks were accomplished and the children were sleeping, they met to mold bricks. They accumulated enough bricks to erect walls and started to outline in the sand the plan of the hospital at full scale (Figure 2). Souilma told us that there were no preliminary plan or paper drawings. The organization of the hospital spaces according to the need of the health committee and external medical aid was discussed by observing the traces inscribed in the ground; rooms were added, and the layout shifted based on the evolution of the needs until the end of the construction process. It is not yet clear how the construction site was managed. From the discussion emerged that the only division of labor was between the molders and the builders; the plan resulted from collective discussions without hierarchical distinctions. The hospital was built over several months and lasted for years, improving the health conditions. Nowadays, only some sand piles subsist; the bricks disintegrated under the rain, and women built new health dispensaries in each camp. As the first public infrastructure, this hospital is the evidence of a sociocultural revolution in terms of the apparition of a public sphere embodying new spatialities that emerged from collective discussions and imagination.

### *The Void Left by Men*

The exile imposed to leave behind the traditional wool tent replaced by light tents distributed by NGOs. Movement and the objects' position in the Jaïma (tents) interior were reinvented through new socio-material assemblages. In the traditional pastoralist encampment called Friq, in which a significant part of the Sahrawi lived before the exodus, the tent's position was defined by the orientation (main entry at the south, and other entries at each cardinal point) and the social status. While the refugee camp layout erased the social stratification in view of society's detribalization, the cardinal points' relation remained central. The tents in the camps were organized on a grid determining the proximity between them. The four entries fostered connections, hosting a network of solidarity between the Jaïmas, reconfiguring the social links and the political economy of affection.<sup>100</sup>

In the traditional Jaïma, everyday objects had a precise position according to the cardinal orientation (Figure 3). Women's objects stood at the west of the tent, where women's activities took place. Men's object (weapons and saddle) stood at the east.<sup>101</sup>

100 Isidoros, *Nomads and nation-building in the Western Sahara*, 2018.

101 Baroja, Julio Caro, *Estudios saharianos* (Madrid: Instituto de estudios africanos, 1955).



Upon arriving in the camps, the women used the tents according to their habits, ordering objects on the west side of the NGO tent; but the absence of men left a physical void of absent objects. After a while, the Sahrawi women installed the cooking utensils and created a proper kitchen on the east side. The kitchen was a small extension enclosed within a fabric that protected the main tent from fire. Then, around 1985, when women learned to manufacture sand bricks and had time at night, they started to build small rooms on the east for the kitchen, durably changing the tents' spatialities and the camps (Figure 4).

These minor spatialities are telling signs of the sociocultural transformations, particularly about the changing role of women, yet remain invisible, as the protracted sedentarization led to the construction of individual rooms, where the functions are separated and the spatialities fixed. Nowadays, the kitchen position is no longer chosen only according to the orientation, but also in relation to the internal organization of the spaces of the *Jaïma*.

## Conclusions

These three situations unveiled minor architectural events that left no traces such as drawings but threaded a potent architectural image. In this context, the notion of an image refers to non-visual affects,<sup>102</sup> in the form of figurations. When fleeing to the Algerian desert in 1975, the Sahrawis could not bring physical artifacts with them. Nevertheless, beyond the toponymic references to Western Sahara in the camps, the Sahrawis reenacted their land through the maintenance and reinvention of their traditional spatialities. When discussing the interior of the *Jaïma*, those inventions call for new forms of architectural histories, records, and archives—following minor gestures and spatialities, transmitted body-to-body.

In the Sahrawi society, orality is the essential means of knowledge transmission; writing, as much as drawing, had never been until recently a common practice, leading to weak viability of the Western concept of archives. Nevertheless, the protracted conflict and refugeehood profoundly affected the social structure. Thus, the system of knowledge circulation was short-circuited by the forced sedentarization. Furthermore, in the soft-power conflict, facing the appropriation of their customs and rewriting their history for colonial means, the absence of an archive proved to be an obstacle to legitimate their culture. To counter this without disregarding their knowledge's epistemology, the ministry of culture launched an Oral Memory archive. In this context, audio-visual technologies bring into being possible archiving practices permitting to collect and protect not only tangible and built elements but also virtual and ephemeral cultural events and spatialities. Equally, reenactment, as a particular performance that permits to bring into surface traces of embodiment and organic forms of knowledge and memory, also constitutes a decisive means of archiving the Sahrawi spatialities which the Sahrawis are employing widely to transmit their nomadic knowledge to future generations.

Still, it is crucial to consider this atypical archival condition, where political unrest may limit access. For instance, the refugee camps' current situation did not allow the author to contact the Archivist to get the authorization to publish the photographs, which had to be redrawn in Figures 1 and 2 to be published in this article, due to the new attacks of the Moroccan army against the Polisario position in the liberated territories.

The insight into the Sahrawi archives made me question the architectural archives I knew. Spatialities are not necessarily mediated through archivable documents; other media, like sketches in the sand, gestures, or words, can act in the world, fulfilling a function of

102 On non-visual image and affects, read the introduction of Stoner, *Toward a minor architecture*, 2012. Lucía García de Jalón Oyarzun, "Nightfaring & Invisible Maps: of Maps Perceived, but Not Drawn," *The Funambulist*, 18 (2018): 40–43.

memory recall, as architectural drawing would. As in the case of the Sahrawi women's circle meeting, whose spatialities manifest a history of discussion, debates, and knowledge transmission. The movement of the bodies and the evolution of these gestures give ground to another history of architecture. Similar questions emerged in performance studies and the process of archiving dances and performances, leading to the proposition of the body as an archive. A field of research is to be open on the architectural heritage beyond the built and the drawn. The digital and digitization could play a significant role in the widening of the archivable performative-materialities—mostly the gestural—but also in their retrieval and sharing. This perspective would frame another historicity of spatialities, threading minor architectural histories and allowing traces of the undrawn to be archived, far from the dominant Western history and archives we know, outlining a path toward reparations and an active engagement with the potential histories shaping spatialities.

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Figure 2 : Redrawing by the author of a photograph of the National Hospital at the end of the construction. The original photo (ca. 1978) from the Archives of the Ministry of Information of the SADR was part of a portfolio edited by the Polisario Front for foreign visitors in 1980 to promote the accomplishment of the newborn state.

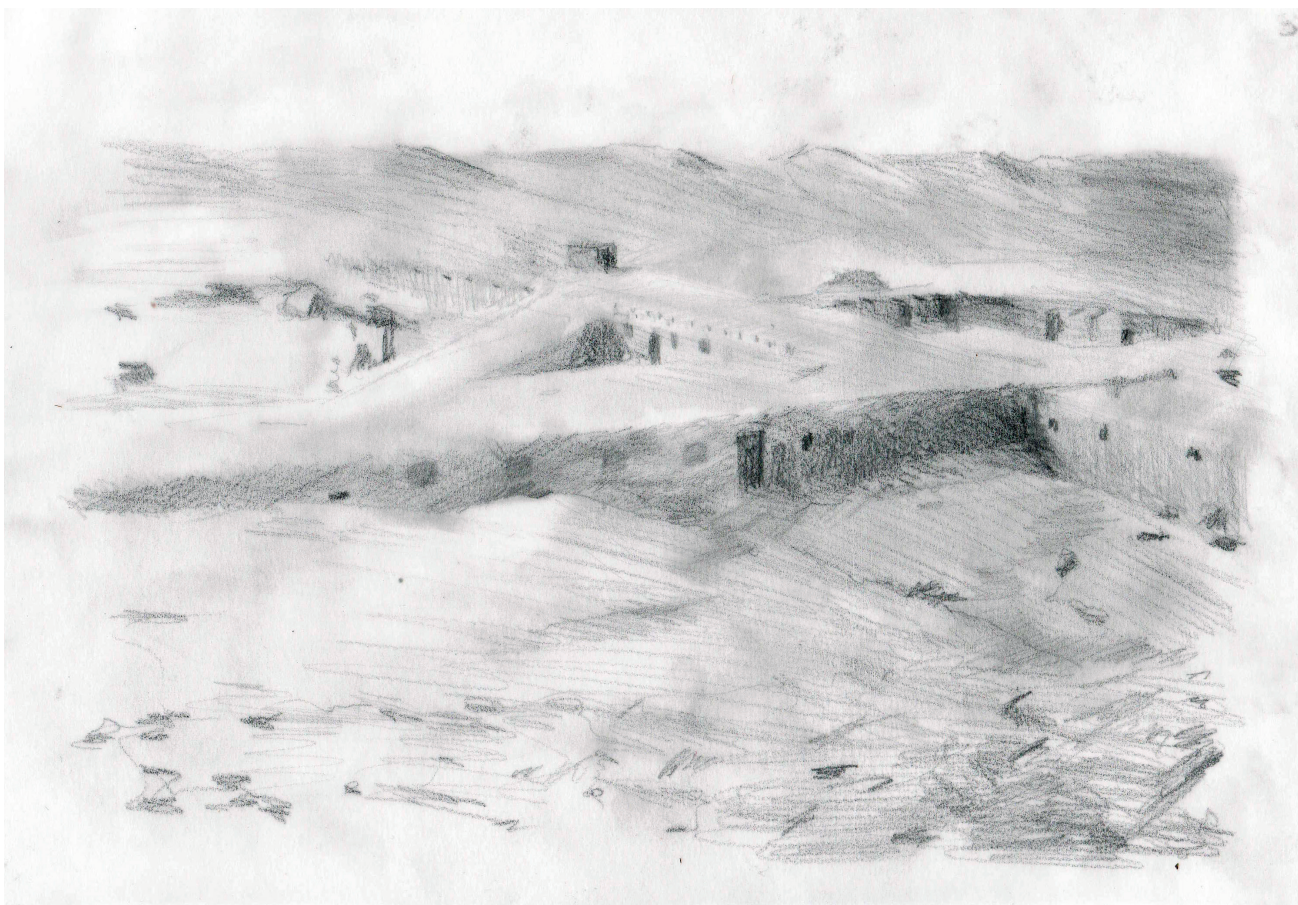


Figure 3 : The Jaïma (Tent): disposition of the interior space, feminine and masculine objects, location of people. Diagram drawn by Julien Lafontaine Carboni according to the anthropological investigation of Sophie Caratini on the Rgaybat, the main tribe that constituted the Sahrawi population. In Sophie Caratini. *Les Rgaybat: 1610 - 1934. 2: Territoire et société* (Paris: Éd. L'Harmattan, 1989). © Drawing by the author.



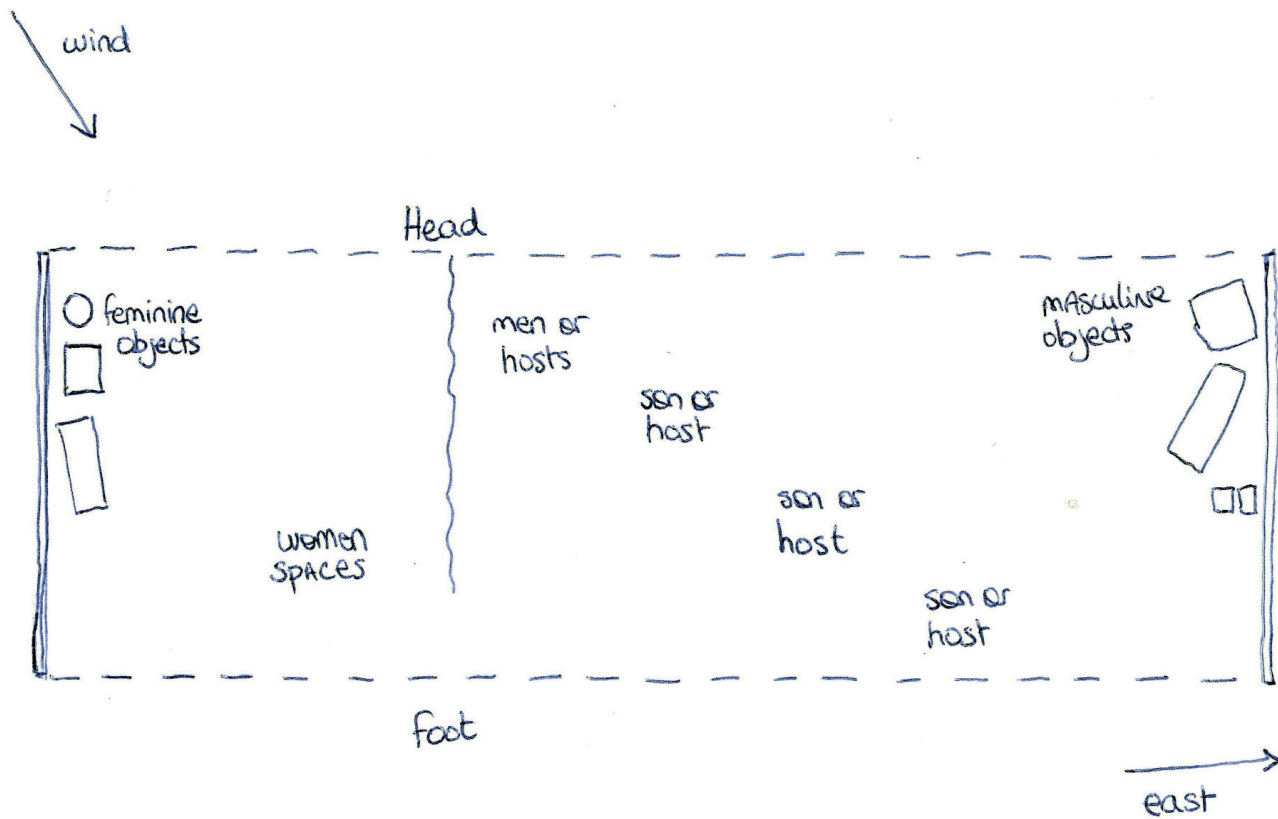


Figure 1 : Redrawing by the author of a photograph from the Archives of the Ministry of Information of the SADR. Morning meeting in the refugee camps (probably Rabuni) in 1976. Source: Manfred O Hinz, '3WM Interview mit Gunther Hiliger', *Terre des Hommes* (1977): VIII. © Drawing by the author.

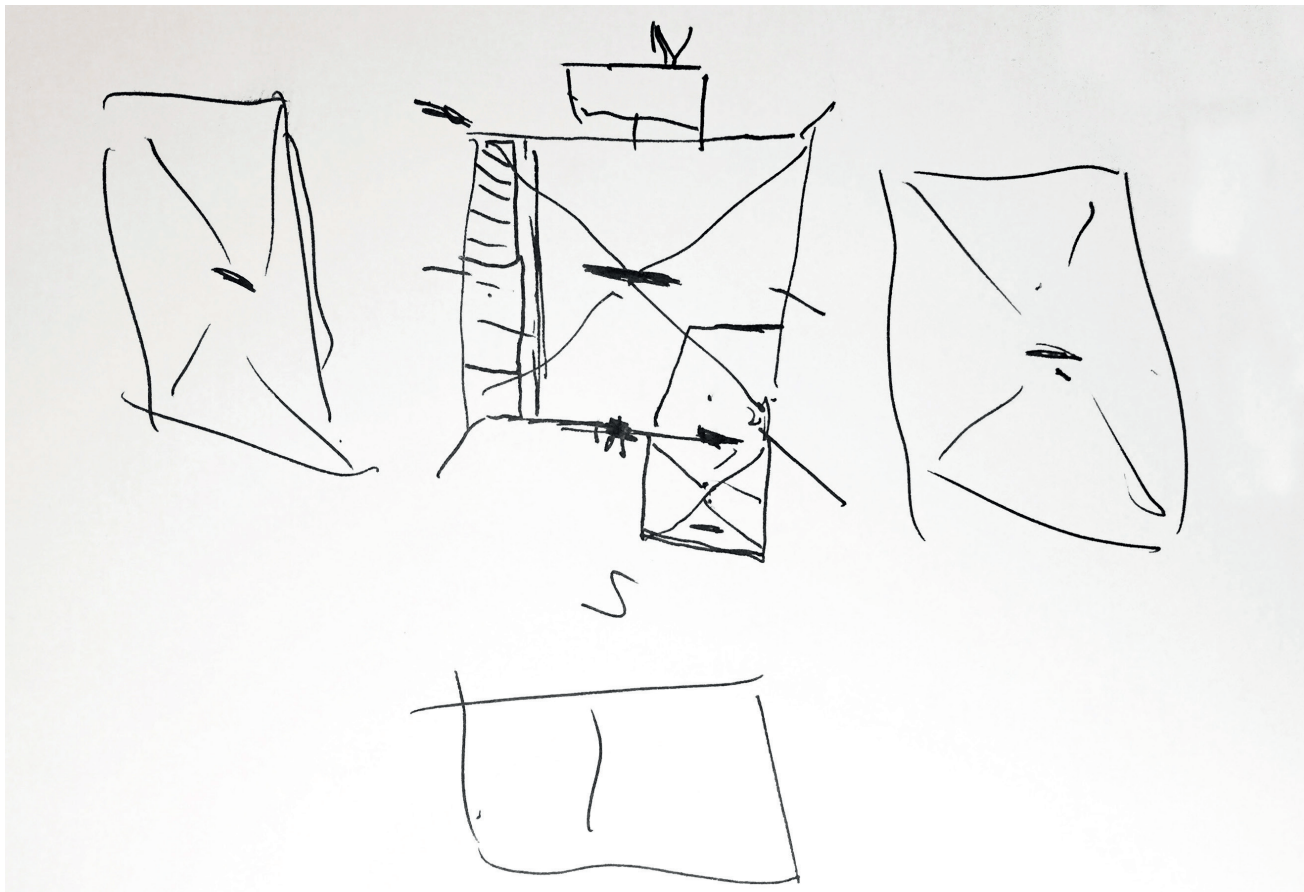


Figure 4 : he Jaïma. Disposition of the interior space and relations to other tents in the camp (1980-1991). Diagram made by Lahsen Selki Sidi Buna during an interview with Gorba M. L. (March 8, 2020). The women's objects are on the west side of the tent, while the kitchen is on the east. © Drawing by the author.

## **[Annex] Reinvidicar un derecho al campamento ¿Se han convertido Smara, El Aaiun, Ausserd, Dajla, Bojador en ciudades de refugiados?**

Lafontaine Carboni, Julien, and Juan Carlos Gimeno. "Reinvindicar Un Derecho al Campamento." *Sociedad Geográfica Española La Ciudad. Las Ciudades.*, no. 66 (Mayo-Agosto): 94–105.

Juan Carlos Gimeno Martin (UAM), Julien Lafontaine Carboni (EPFL)

### **Introducción**

Los campamentos de refugiados se conciben y diseñan en situaciones de emergencia y por un período corto de tiempo; permiten gestionar circunstancias excepcionales y proporcionar a una población desplazada por razones climáticas, hambre o guerra el apoyo estatal y/o internacional para cubrir las necesidades básicas de los desplazados, siempre y cuando esto sea posible. Sin embargo, desde hace varias décadas, estos campamentos se han multiplicado por todo el mundo, en Asia, Oriente Medio, en toda África, en Europa y en América, y se están convirtiendo en estructuras permanentes. Aunque la complejidad de las cuestiones geopolíticas hace imposible dar una o más razones unitarias para esta tendencia mundial de consolidación, no hay duda de que es una realidad cada vez más extendida. Los informes de ACNUR son claros: los campamentos de refugiados de largo plazo (más de cinco años) tienen ahora una vida media de 25 años. Esta tendencia va acompañada por el número creciente de refugiados a escala mundial, cifra que se verá agravada por las crisis climáticas, provocando conflictos por el acceso a los recursos básicos<sup>103</sup>.

Esta situación de globalización de la excepción pone en tela de juicio la definición de la condición de refugiado que figura en la Convención de Ginebra de 1951, que otorga derechos humanos básicos y elementales a las poblaciones momentáneamente frágiles y necesitadas de asistencia urgente. Nunca desde entonces se ha vuelto a discutir el alcance de los derechos de los refugiados, aunque algunos de ellos han vivido desplazados durante décadas. Por extensión, los campamentos de refugiados como infraestructura de emergencia controlada por los Estados o las ONG, que efectivamente colocan al refugiado en un estado de excepción y exclusión del territorio que le rodea, se convierten en permanentes y plantean la cuestión de su urbanización o, en otras palabras, de su futura condición de ciudad.

Esta propuesta nos lleva a creer que la restitución de ciertos derechos a los refugiados, en particular sus derechos democráticos y económicos, permitiría transformar los campamentos de refugiados en ciudades. Sin embargo, nos parece que aborda de manera problemática la realidad de las prácticas sociales, políticas y económicas de los refugiados de larga duración. Estos lugares no están fuera del tiempo, donde la historia

103 Virilio, Paul, et Bertrand Richard. *L'administration de la peur. Conversations pour demain.* Paris: Textuel, 2010.



104 Pasquetti, Silvia. « Negotiating Control: Camps, Cities and Political Life ». *City* 19, no 5 (3 septembre 2015): 70213. <https://doi.org/10.1080/13604813.2015.1071121>.

105 Dicha invasión fue resistida por el pueblo saharauí, bajo la dirección del Frente Polisario en una guerra que se prolongó hasta el alto el fuego de 1991. Mauritania abandonó la guerra en 1979. La población saharauí de los campamentos es una población exiliada, organizadas para la guerra hasta 1991, y obligada a vivir en el refugio a la espera de que se realice el referéndum que decida su autodeterminación o su integración en Marruecos, pactado ante la comunidad internacional con el reino de Marruecos en el alto el fuego. Por lo tanto el refugio tiene una dimensión política, aunque como población refugiada es asistida con los mecanismos de la ayuda humanitaria.

106 En las wilayas citadas reside las familias saharauí, dotadas por un sistema administrativo a nivel de wilaya (gobernación de provincia), *daira* (ciudad) y barrio. Rabuni es el centro administrativo donde radican las instituciones de gobierno de la RASD.

107 El concepto de *jaima* significa hogar. Las jaimas tradicionales se construían con pelo de camello y cabra; las tiendas de campaña que proliferaron en los campamentos, guetones, son de corte militar y asistencial. Se denominan entre los saharauí, jaimas, porque eran su hogar. Por lo mismo, las edificaciones hechas de adobe se denominan jaimas.

está fijada, y donde la gente sólo practicaría la espera. Las historias de los campamentos de refugiados no son lineales, y la realidad de la vida en muchos campamentos de refugiados apunta a otras formas de poder y programas, lo que demuestra que en muchos casos el campamento es un lugar privilegiado para la acción colectiva y política, especialmente en comparación con los barrios pobres y marginados<sup>104</sup>. Por lo tanto, la oposición de los ciudadanos/refugiados y de la ciudad/campamento no es tan clara como algunas propuestas recientes podrían sugerir.

En los campamentos de refugiados saharauí, que tienen más de cuarenta años hoy en día, tras el abandono de España, la metrópoli colonial y la ocupación marroquí-mauritana<sup>105</sup>, esta situación es clara. Las distinciones clásicas no se aplican, gracias, en particular, a la existencia de un estado establecido por la población y el Frente Polisario desde el nacimiento de los campamentos (la República Árabe Saharaui Democrática, RASD). Si el tamaño y la infraestructura de las wilayas de Smara, El Aaiún, Auserd, Dajla y Bojador y el centro administrativo de Rabuni<sup>106</sup> nos lleva a llamarlas ciudades, la mayoría de los saharauí se niegan a hacerlo, y también se niegan a escucharlo. Por lo tanto, nos parece esencial entender hasta qué punto los campamentos de refugiados saharauí pueden realmente ser entendidos como ciudades y llamados como tal, y cuáles son los límites y umbrales hoy en día entre ciudad y campamento, refugiado/exiliado y ciudadano.

Con el fin de abordar la complejidad de esta cuestión, introduciremos primero algunos debates que animan a la sociedad saharauí, aportando información sobre su negativa a considerar estos campamentos como ciudades. En un segundo momento, trataremos de deconstruir la oposición refugiados/ciudadanos basándonos en las prácticas políticas y materiales de los saharauí. Por último, reivindicaremos un derecho al campamento, paralelo al derecho a la ciudad propuesto por Henri Lefebvre, como un derecho a la excepción como espacio de lucha política.

## **Smara no es una ciudad. Debates y controversias en los campamentos de refugiados saharauí.**

En 2013 se publicó un libro titulado *From Camp to City* (Del campamento a la ciudad), en el que se analizan los campamentos de refugiados saharauí con herramientas características del estudio urbano moderno/occidental. Como resultado de las investigaciones realizadas por arquitectos y planificadores urbanos, la argumentación que apoya esta transición del campamento a la ciudad se basa en dos dimensiones principales; en primer lugar, una dimensión material, desde la instalación de la luz hasta la construcción, desde las paredes de tela hasta las paredes de adobe, de bloques de arena; en segundo lugar, desde la infraestructura de emergencia y primera necesidad hasta la multiplicación de usos y servicios. Estas dos dimensiones son, en efecto, realidades en los campamentos de refugiados saharauí. A partir de la precariedad de las instalaciones improvisadas características de los primeros años, los saharauí desarrollaron hospitales, escuelas, servicios públicos y de las administraciones... Pero estas transiciones no condujeron a la creación de una nueva sociedad.

A partir de 1985, las mujeres, que habían permanecido solas en los campamentos, se encontraron con la liberación de sus noches. Las populares campañas a la luz de la luna habían terminado, y esto les permitió comenzar a construir pequeñas salas de estar, en su mayoría en torno a cocinas, junto a sus jaimas, tiendas de campaña<sup>107</sup>, para reducir el riesgo de incendio que asolaba los campamentos.

Después del alto el fuego (1991) y el regreso de los hombres, las condiciones de vida cambiaron. Mientras esperaban un regreso que hasta 1996 parecía estar próximo, pero que se retrasaba y retrasaba, los saharauis trataron de mejorar significativamente sus condiciones de vida. En esta línea, el gobierno saharauí autorizó la introducción de dinero<sup>108</sup>, inexistente hasta entonces, en los campamentos. La economía de la construcción experimentó un gran crecimiento. Todas las familias construyeron entonces salas de estar, cocinas, cuartos para dormir, baños y aseos... Sin embargo, todo esto ocurrió junto a una gran controversia interna.

Cuando la materialidad de los campamentos cambió, cuando las instalaciones de tela se convirtieron en construcciones de bloques de arena, fueron muchas las voces que se alzaron. ¿Qué mensaje enviaba esa transformación a la comunidad internacional, a los visitantes solidarios, a las instituciones internacionales de la ayuda? ¿No era una lucha equivocada, la de mejorar las condiciones de vida en los campamentos, una lucha al precio de la lucha por la independencia? A finales de la década de los 2000, aparecieron los bloques de cemento. Primero fueron vistos como un lujo, el lujo de esquivar la amenaza de la lluvia, y por lo tanto, evitar la repentina y violenta destrucción de su hábitat. Poco después reiniciaron el debate anterior, con mucha más fuerza esta vez, llegando a fracturar la sociedad exiliada de manera duradera.

Esta controversia revela una cuestión fundamental: el peligro de la urbanización de los campamentos y, por lo tanto, de la normalización de esta situación que debe seguir siendo excepcional, quedando esta excepción como argumento para el regreso. Así, más allá de la mera dimensión material, llamar a las wilayas de Smara, El Aaiún, Bojador, Dajla o Auserd usando la palabra Medina es un tabú total en los campamentos<sup>109</sup>. Aunque Medina sería materialmente la palabra más apropiada para designar urbanísticamente a los campamentos, este rechazo categórico es un rechazo al fracaso, un rechazo a aceptar la situación, un medio de mantener viva la lucha por la independencia.

### **La ciudad y el campamento, el nómada y el sedentario, el ciudadano y el refugiado. Parejas complejas y no antagónicas.**

Es cierto que la historia de los campamentos de refugiados saharauis es particular. La presencia de un Estado soberano<sup>110</sup>, con un derecho democrático garantizado al voto, instituciones sólidas, un gobierno, al mismo tiempo que es apoyado por una población altamente politizada y organizada, a menudo lleva a describir a los saharauis como refugiados ideales<sup>111</sup>. Como señaló Konstantina Isidoros<sup>112</sup>, las categorías clásicas del pensamiento político no se aplican al pueblo saharauí, a los que se encuentran en los campamentos, en los territorios ocupados, en Mauritania o en otros lugares. Esta paradoja, que le lleva a proponer que el pueblo saharauí en los campamentos de refugiados no ha hecho desaparecer la forma política de la tribu, sino que ha procedido a una reunificación de las tribus en una sola nación, una fusión, nos compromete como observadores a renovar nuestra lectura de la palabra tribu, de la qabila saharauí; los qabila y el nomadismo se presentan entonces como una alta especialización de la sociedad saharauí, como un conjunto de conocimientos y prácticas que ha permitido durante varios cientos, incluso miles de años, a este pueblo sobrevivir materialmente y desarrollarse social y culturalmente en el desierto. Y es precisamente este cuerpo de conocimiento el que les permitió sobrevivir y organizarse en los campamentos de refugiados.

108 Una de las primeras fuentes del dinero que circuló en los campamentos, fue producido por el reconocimiento del gobierno de Felipe Gonzalez de pensiones a saharauis que habían pertenecido a las tropas nómadas y policía territorial, así como como trabajado en algunas empresas estatales.

109 Hay otro argumento del rechazo a la consideración de ciudad de los campamentos, porque estos están concebidos administrativamente como wilayas (departamentos o provincias), como parte de una estrategia de reproducir simbólicamente el territorio saharauí ocupado por marroquinos en los campamentos. Cada wilaya, está compuesta por 6 ó 7 dairas (ciudades) y cada una de ellas, de varios barrios. De esta manera la RASD, que administra ahora los campamentos y los territorios al oeste del muro construido por Marruecos, mantiene una estructura administrativa (estado/ wilayas/dairas y barrios) capaz de reivindicar la administración total del territorio del Sahara Occidental, una vez consiga su autodeterminación como pueblo.

110 Reconocido desde 1976 por más de 80 países.

111 Caratini, Sophie. *La république des sables: anthropologie d'une révolution*. Paris: L'Harmattan, 2003.

Fiddian-Qasbiyeh, Elena. *The ideal refugees: gender, Islam, and the Sahrawi politics of survival*. First Edition. Gender, culture, and politics in the Middle East. Syracuse, New York: Syracuse University Press, 2014.

Herz, Manuel. « Refugee Camps or Ideal Cities in Dust and Dirt ». *Urban*, 2008, 14.

112 Isidoros, Konstantina. *Nomads and Nation-Building in the Western Sahara: Gender, Politics and the Sahrawi*, 2018.

Esta realidad nos lleva entonces a no comparar los campamentos con las ciudades, sino con las formas tradicionales de los campamentos saharauis, los Firkan<sup>113</sup>, o a leer esta sedentarización como una táctica, una estrategia temporal, dando lugar a la Qasbah o el Qsar<sup>114</sup>; la historia saharai está marcada por la sedentarización temporal en tiempos de crisis política o económica vinculada a las sequías. Así pues, el nomadismo no implica el movimiento constante de toda la sociedad; al igual que en las agrupaciones de jaimas tradicionales, las tiendas se instalaban durante un tiempo, pero los rebaños se movían constantemente. El nomadismo no sería una cuestión de movimiento perpetuo, sino del potencial de movimiento. En este sentido, cómo diferenciar entre nación y tribu, nómada y sedentario, campamento de refugiados y campamento nómada, campamento y ciudad, ciudadano y refugiado.

Si la condición de refugiado se considera despolitizadora y privativa, en contraposición a la condición de ciudadano libre y participante en la vida democrática, las prácticas de los refugiados saharauis, politizadas en su condición de pueblo exiliado y en lucha, desmantelan y desafían esta visión, muy presente en las acciones de las instituciones internacionales y aún en los análisis realizados sobre él desde las ciencias políticas. Así pues, el principal problema ya no es tanto si los campamentos se convierten en ciudades a través de su perpetuación, porque eso no nos permitiría comprender la complejidad de la evolución durante estos años de la vida política y social de los saharauis. Debemos entonces preguntarnos qué formas de arreglos sociopolíticos han puesto en marcha los saharauis que les permiten, a través de su estatuto de refugiados, militar, crear y vivir, reclamando la fuerza de Esmara, El Aaiún, Dajla, Bojador y Auserd como campamentos de refugiados/exiliados, y no como ciudades.

## El derecho al campamiento. Política y espacio, política de espacios en los campamentos saharauis.

En su famoso libro *El derecho a la ciudad*, el filósofo francés Henri Lefebvre defiende la idea de que hay que dar a los habitantes la posibilidad de participar en la creación del entorno urbano para luchar contra la homogeneización de los estilos de vida, permitiendo a todos «participar en la ciudad tal como existe, pero también en su producción y transformación [y da] el derecho a participar en su planificación, el derecho político a definir la ciudad, el derecho a un medio ambiente sano y también [...] el derecho a una vivienda adecuada o a un transporte público accesible»<sup>115</sup>. Este derecho a la ciudad ha sido ampliamente reivindicado por los movimientos sociales y políticos, las ONG, los científicos... y en particular en el contexto de las poblaciones marginadas y vulnerables, a veces refugiadas. Por lo tanto, es una forma de derecho a la ciudadanía, un derecho a imaginar individual y colectivamente el futuro de los espacios en los que vivimos.

Aquí, como ya se ha hecho en otros campamentos de refugiados palestinos<sup>116</sup>, proponemos extender y transformar el derecho a la ciudad en un derecho al campamento. Este derecho al campamento reconoce el espacio del campamento de refugiados no como un lugar donde el tiempo se ha detenido, un espacio congelado, sino como un espacio de lucha política, donde las identidades se mezclan y se fabrican. Así pues, reconoce al refugiado no como sujeto de una biopolítica de control<sup>117</sup>, sino como actor de una asamblea sociopolítica en estado de excepción. Y es precisamente habitar conscientemente este estado de excepción el que fabrica el espacio-tiempo de la lucha por una causa, por el retorno, por el fin de la guerra, por el reconocimiento, por la descolonización...

113 Wilson, Alice. « Ambiguities of Space and Control: When Refugee Camp and Nomadic Encampment Meet ». *Nomadic Peoples* 18, no 1 (1 janvier 2014): 3860. <https://doi.org/10.3197/np.2014.180104>.

114 Isidoros, Ibid, Basado en Salzman, Philip Carl y Edward Sadala, editores. *When Nomads Settle: Processes of Sedentarization as Adaptation and Response*. Nueva York: Praeger, 1980. Las descripciones de estos diversos momentos de sedentarización de parte de la población saharai también se pueden encontrar en Bárbulo, Tomás. *La historia prohibida del Sáhara español: las claves del conflicto que condiciona las relaciones entre España y el Magreb*. Atalaya. Barcelona: Ediciones Península, 2017.

Caratini, Sophie. *Les Rgyabât: 1610 - 1934. 2: Territoire et société*. Paris: Éd. L'Harmattan, 1989.

———. *Les Rgyabât (1610-1934)*. Paris: L'Harmattan, 1989.

115 Gauthier, E. y al. (2007). *A babord*, 22. « Le droit à la ville »

116 Woroniecka-Krzyzanowska, Dorota. « The Right to the Camp: Spatial Politics of Protracted Encampment in the West Bank ». *Political Geography* 61 (novembre 2017): 16069. <https://doi.org/10.1016/j.polgeo.2017.08.007>.

117 Agamben, Giorgio, Pierre Alféri, Joël Gayraud, Marilène Raiola, et Martin Rueff. *Homo sacer: l'intégrale : 1997-2015*. Paris: Seuil, 2016.

Foucault, Michel. *Surveiller et punir. Naissance de la prison*. Editions Gallimard, 1975.



El derecho al campamento no implica el rechazo del desarrollo del mismo o la existencia de comodidades; la excepción del campamento no debe ser la precarización de la vida y el control de los cuerpos. En cambio, este derecho al campamento, en la continuidad de las declaraciones y debates dentro de la sociedad saharaui, justifica el derecho a rechazar la urbanización, a rechazar el nombre de “ciudad”, porque usarlo implicaría una normalización inaceptable de una situación de exilio. Por último, el derecho al campamento como un derecho a la autodeterminación. Los campamentos no son organismos muertos o inactivos; desde su llegada al desierto y a las tierras altas rocosas de la hamada de Tinduf, los saharauis se han desarrollado y adaptado increíblemente, desempeñando el papel del Estado y de la nación<sup>118</sup>, así como de sociedad en movimiento de liberación, al tiempo que reclaman su condición de exiliados injustamente y refugiados provisionalmente.

## Conclusión

Proponer un derecho al campamento es no aceptar que la sedentarización forzada de los saharauis en el exilio y el desarrollo de los campamentos conduzcan linealmente a una ciudad. Otros imaginarios más culturales e históricos, como los del Frig, la Qasbah o el Qsar, tal vez podrían ser analogías más adecuadas, y al mismo tiempo formar parte de la larga lucha de los saharauis por la independencia. Negarse a pensar en la perpetuación de los campamentos como una transformación en una ciudad es también imaginar esta sedentarización como una táctica de resistencia<sup>119</sup>, una unificación del pueblo saharaui para liberar el Sahara Occidental, es pensar el exilio y la existencia en los campamentos desde la forma de vida del nomadismo, donde el asentamiento se vive como una etapa transitoria entre dos etapas de movimiento.

La situación en los campamentos de refugiados saharauis es ciertamente singular, pero no es incomparable con la de otros campamentos de refugiados en el mundo. Este punto de vista ya ha sido ampliamente defendido con respecto a los campamentos de refugiados palestinos. Más allá de la sorpresa que pueda causar el desarrollo de los campamentos saharauis, a través del refinamiento de la cultura y la artesanía, o la relativa comodidad de ciertos hogares, hay que recordar que la mayoría de los saharauis han vivido la gran mayoría, si no toda, su vida en el exilio, y que privarlos de su condición de refugiados producida por la ocupación de su territorio por un tercer país, hasta el momento no suficientemente contestada por la comunidad internacional, es también privarlos de su lucha.

118 Mundy, Jacob A. « Performing the Nation, Pre-Figuring the State: The Western Saharan Refugees, Thirty Years Later ». *The Journal of Modern African Studies* 45, no 02 (juin 2007): 275. <https://doi.org/10.1017/S0022278X07002546>.

119 Salzman, Philip Carl, y Edward Sadala, éd. *When Nomads Settle: Processes of Sedentarization as Adaptation and Response*. New York: Praeger, 1980.

## [Annex] Protofiguration, opérations d'installation

Lafontaine Carboni, Julien. "Protofiguration, Opérations d'installation." In *L'archaïque et Ses Possibles Aujourd'hui*, Metis Presse. Vol. 1. Paris: GERPHAU, 2020.

Julien Lafontaine Carboni

### PROTOFIGURATION, OPÉRATIONS D'INSTALLATION

#### STRATÉGIES PRÉFIGURATIVES ET OPÉRATIONS

Le terme «préfiguration» entre, et ce, depuis quelques années, dans la terminologie des disciplines architecturales et urbaines. Aucune définition précise de ce qui peut prendre la forme d'une méthode de conception (collaborative ou non), d'un temps spécifique du projet, ou même, d'une pratique politique n'a été donnée. Il est tout de même possible d'identifier à travers l'analyse des stratégies préfiguratives, deux séries d'opérations; d'un côté, une inscription psychosociale grâce à la mise en place d'événements, d'expérimentations, d'arpentages ou de campagnes de communication avec l'objectif d'intégrer un nouveau système urbain ou architectural dans les usages et les pensées, et d'un autre, la projection physique, spatiale et territoriale, «d'éléments d'une "autre réalité" dans le monde» (YATES 2015: 4)<sup>1</sup>, actualisation d'un virtuel dans le réel.

Ces pratiques d'inscription dans un site, un milieu — à la fois mental, collectif et physique — mettent à nouveau en débat le rôle du corps, des gestes et de l'engagement individuel dans le processus d'urbanisation. Elles sont, et c'est l'une de mes hypothèses, des éléments témoignant d'un retour de l'archaïque dans le discours architectural, faisant face aux désorientations de notre métropole contemporaine<sup>2</sup>. Au-delà de cette émergence, nous pouvons identifier l'existence de pratiques d'inscription dans plusieurs cultures; celles-ci sont principalement associées aux mythes fondateurs. Chacune d'entre elles est composée d'une série d'opérations — du geste au tracé — qui transforme une structure territoriale a priori hostile en un espace hospitalier et/ou habitable. Ces histoires d'urbanismes, se concentrant sur

le geste et la perception collective, orientées par la mise en scène et la performance induisent un «versant opératoire»<sup>3</sup> de la théorie urbaine, prenant pour objet les rituels, pratiques et processus de préfiguration d'une réalité à venir.

Ici, je souhaite discuter la notion de préfiguration et les pratiques qui y sont associées grâce au couple aliénation et invention, proposé au sein du système d'analyse technique (élément/individu/ensemble) introduit par Gilbert Simondon dans *Du mode d'existence des objets techniques*. Pour cela, je proposerai une lecture des pratiques d'inscription et d'arpentage romains en questionnant leur rôle cognitif. Cette analyse me mènera à une reformulation des figures de l'inscription en proposant le concept de *protofiguration*<sup>4</sup>, dessinant les contours d'une définition plus rigoureuse des stratégies préfiguratives, intégrant l'analyse du geste, du mot, et des diagrammes qui permettent l'inscription, témoignant d'une antériorité au sein de l'histoire de l'architecture, et de leur opérationnalité cognitive.

#### ALIÉNATION ET INVENTION DANS LES PRATIQUES D'INSCRIPTION

Dans la troisième partie de son ouvrage sur l'ontologie technique et la genèse de la technicité, Gilbert Simondon propose un système d'analyse dans la continuité de sa théorie de l'individuation appliquée au devenir des cultures. Selon lui, une culture existe dans le même temps en plusieurs phases, qui ne sont pas des moments historiques mais des modes de relation avec le monde<sup>5</sup>. Ces différents modes de relation se déphasent à partir d'une «unité magique primitive», organisée autour de «point clés» qui forment une réticulation

d'espaces et de temps magiques constituant la réalité humaine. L'artéfact et l'objet technique sont donc issus d'un déphasage de cette unité magique, et la technicité devient alors l'un des modes de relation au monde, comme milieu transindividuel de compréhension et d'interaction avec son domaine de réalité.

L'acte de fondation, versant *mythique* des pratiques d'inscription, est, dans le cas de la fondation de colonie romaine sous la République, composé d'une succession d'opérations qui reproduisent les gestes de Romulus sur le Mont Palatine lors de la fondation de Rome. Parmi les différents *experts* intervenants, l'augure, prêtre-législateur de la Rome Antique, dessine dans le ciel, sur le sol et dans la Terre une série de croix diagrammatiques qui se superposent. Ces croix, qui divisent différents domaines de la réalité deviendront *cardos* et *decumanus* de la ville en devenir. Ce double processus, organisation autogénérative et adaptative d'un système humain avec son environnement, préfigure l'inscription dans un paysage qui devient dans le même mouvement, territoire. Ces points-clés, dans l'espace et dans le temps, qui sont articulés et articulent différentes phases d'une culture, du religieux au technique, ouvrent à une succession dynamique d'événements, qui permettent l'intégration de ressources extérieures aux processus cognitifs et psychosociaux, plaçant l'espace dans un état d'opérationnalité — sur lequel on peut agir. En ce sens, nous pouvons étudier ces actes de fondation et les pratiques d'inscription qui y sont associées comme des technologies ou articulations de techniques culturellement spécifiques de médiation entre un environnement donné et un groupe d'individus. L'étude des mythes fondateurs nous permet d'analyser les domaines de réalité que ces opérations articulent, de comprendre quels instruments sont utilisés, quelles cosmologies sont associées aux gestes portés, et leurs variations et survivances à travers des épaisseurs historiques multiples. Cette attention portée à la genèse du récit et à son statut de technologie

nous permet donc de l'analyser avec le cadre d'un objet technique.

Dans *Du mode d'existence des objets techniques*, Simondon (2001) propose un système à trois niveaux d'analyse de l'objet technique; élément, individu et ensemble. «Les niveaux d'analyse sont classiques», explique Jean-Hugues Barthélémy (2015); «l'élément compose l'individu et l'individu compose l'ensemble». Ce système permet à Simondon de théoriser la genèse, l'évolution et la transformation des objets techniques. Les éléments existent en deux types, l'outil et l'instrument; les deux participent à la résolution des problèmes de l'individu technique, et le composent. Au niveau des individus techniques donc, l'être perçoit à travers les instruments et agit avec les outils, permettant la «modulation» des éléments entre eux. Pour Simondon, l'individu conçoit et incarne de nouvelles structures, suivant des inventions «mineures» et «majeures» au sein d'un processus de concrétisation. Cependant, à l'ère industrielle, un changement majeur survient; la machine assume dès lors le rôle de l'individu technique. L'utilisation industrielle de ces nouvelles techniques automatisées court-circuite le système de «couplage entre la capacité inventive et la capacité organisatrice de sujets pluriels» (SIMONDON 2001 : 253). Le travailleur devient alors l'instrument et l'outil de la machine, et fait alors partie des éléments. Selon cette analyse, la définition donnée par Simondon de l'aliénation<sup>6</sup> dépasse la définition marxiste du terme; au-delà d'une aliénation socio-économique, il insiste sur le fait que ce remplacement de l'humain par la machine au niveau de l'individu technique est la cause d'une aliénation psychophysiologique; l'humain ne peut plus inventer, privé de ses circuits de transindividuation technique.

Les pratiques et figures d'inscription forment des médiations de l'individu et du collectif avec un environnement; elles sont des technologies ou des articulations de techniques de communication. L'inscription constituée dans certains cas



par une reproduction performative d'un mythe fondateur matérialise un système de référence psychique et collective; une série d'opérations dessine une nouvelle origine et inaugure des espaces et des temps collectifs par déphasage. Ces gestes et pratiques corporelles individuent le collectif et son milieu associé et augmentent la perception de l'environnement à travers plusieurs instruments. Ce couplage, intégration de ressources extérieures dans les processus cognitifs permet d'abord l'imagination, puis l'invention par la mise en performance d'un ensemble technique. L'individu peut agir et percevoir, localisé dans un système de références collectives; à l'inverse, la disparition de ces pratiques peut produire une situation d'aliénation due à la non-maîtrise d'un ensemble technique, de ces outils et de ces instruments, comme nous le constaterons à l'étude de l'évolution des pratiques d'installation romaine sous l'Empire. Ce temps de la ville, que l'on peut retrouver à l'échelle architecturale, place l'humain au niveau de l'individu technique, possédant outils et instruments cognitifs permettant attention, imagination et donc invention.

#### VERSANT OPÉRATOIRE DE LA GRILLE ROMAINE

Concentrons-nous donc, pour prolonger cette analyse de la pratique d'inscription comme technologie préfigurative de médiation par projection d'un ensemble technique, sur la série d'opérations constituant les fondations de villes et/ou de colonies romaines et préromaines. Nous prendrons pour exemple trois sites; un site étrusque — à l'origine, comme le propose Dumézil, d'un versant important des religions romaines — et deux de la culture romaine, qui marquent l'évolution des techniques, des séries d'opérations et donc, des formes de relations à l'environnement. Marzabotto [A], cité fondée par les Étrusques entre le VII<sup>e</sup> et le VI<sup>e</sup> siècle av. J.-C., Alba Fucens [B], colonie romaine du IV<sup>e</sup> siècle av. J.-C., et la colonie d'Orange [D] fondée en 35 av J.-C. et étendue par centuriation en 77 sous les ordres

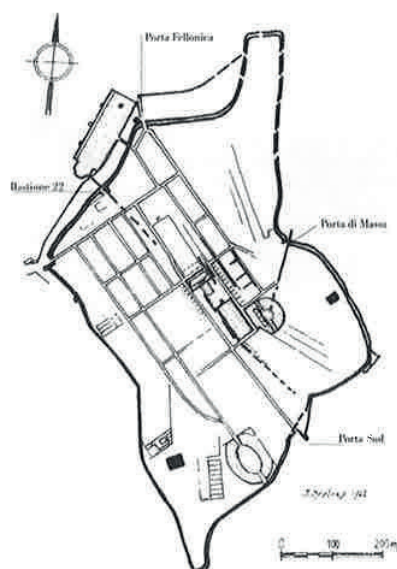


A

de l'Empereur Vespasien, montrent toutes trois des tracés orthogonaux, aux alignements divers, mais aux dimensions comparables correspondant chacune à un corpus technique de mesure et de construction leur étant contemporain et situé. La continuité formelle entre ces différents systèmes urbains est manifeste, cependant, les rapports aux éléments préexistants — topographie, hydrographie, population autochtone et autres — montrent de grandes variations. Si les formes ne permettent pas de mettre en lumière ces disparités, nous supposons donc que l'analyse de leur versant opératoire, les pratiques d'inscription le rendent possible. Pour s'établir dans un nouvel espace et pour fonder une ville, les Romains et Étrusques effectuaient une série de rites visant à définir une succession de limites physiques et/ou psychosociales en la présence d'experts; dans le premier cas, les hypothèses proposent la présence d'un haruspice — prêtre divinateur; dans le second, d'un haruspice et d'un augure; et pour le dernier d'un augure ou administrateur au rôle similaire et d'arpenteur-géomètre.

Selon Gottarelli (2003), la ville de Marzabotto a été projetée depuis un espace au nord-est, où se situent les temples. Depuis ce lieu sacré, l'haruspice divise le ciel, le sol, puis la terre en seize parties (AVENI & ROMANO 1994:545-563), alignant les espaces de la future cité au cosmos. Ici, les cérémonies de

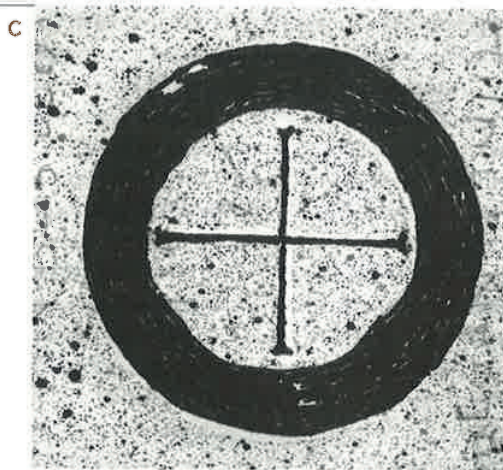
A Marzabotto, Foie de Plaisance et haruspice en divination, II<sup>e</sup> siècle av. J.-C.



division du sol sont incarnées par le creusement du *mundus*, analogie matérielle du cosmos, dans lequel, selon Plutarque, les fondateurs jettent de la terre de leur pays d'origine, ainsi que des fruits pour fertiliser le sol. Depuis ce premier espace de référence, une divination issue de la religion étrusque, lecture dans le foie d'un mouton vivant sur le site de l'installation [A], permet de pré-

dire le destin de la cité, par l'interprétation de sa composition en rapport aux constellations (dans l'espace et le temps). Le plan de la ville est ainsi appliqué dans l'alignement des lectures stellaires et hépatiques, et en extension des gestes fondateurs. À l'analyse du plan, nous observons une axialité parfaite entre le lieu cérémoniel, le cœur de la cité, croisement de ce qui sera chez les Romains, *cardo* et *decumanus*, et la porte sud-est de la cité, qui pourrait induire la primauté du corps et de la vision dans la projection de l'espace collectif par la prolongation de gestes et champs de vision.

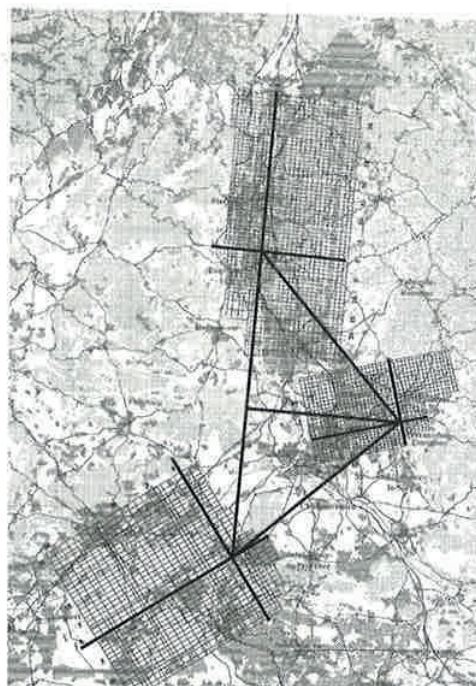
Dans le cas d'Alba Fucens [B], colonie romaine latine, l'haruspice ne possède plus le rôle central de la série d'opérations. S'il semble que les rites de divination du foie soient encore présents à cette époque, l'augure<sup>7</sup>, est l'agent qui divise successivement ciel, terre et monde souterrain, à l'aide d'un diagramme simplifié, qui semble dérivé de la division cosmologique étrusque; une simple croix. L'établissement du *templum*<sup>8</sup> «in caelo, [...] in terra, [...] subterra» (VARRO 1999: 272, VII-6) est proféré pendant le rituel de l'*inauguratio*; une division basée sur le tracé d'une ligne imaginaire, de la limite sud à la limite nord du *pomodorum* — enceinte sacrée de la ville —, définit le champ de vision de l'augure, divisé à nouveau en deux parties. À partir de cet espace fictif, les augures sont pris: le vol des oiseaux est observé et permet de connaître ou d'interpréter des messages divins, particulièrement ceux de Jupiter. Cette simple division, ce geste de la main envers un environnement non consacré, définit le *cardo* et *decumanus*, centre symbolique — et physique dans la plupart des cas — du territoire inauguré. Une des seules images qui subsistent de cette figure dynamique est le *Templum in caelo* [C], extrait de la *Constitutio Limitum* de Hyginus Gromaticus (le plus ancien manuscrit survivant du *Corpus Agrimensorum*<sup>9</sup>, le *Codex Arcerianus*, sur les processus d'arpentage). Le diagramme représente les gestes de l'augure réalisés dans l'air afin de diviser le cosmos. Comme le démontre Stek, de nombreux éléments existants,



tels que des temples et voies, sont dans les rites inauguraux, intégrés au système urbain projeté, la grille étant elle-même adaptée et modifiée selon les conditions topographiques. De plus, les rites d'inauguration sont répétés au début de nombreuses fêtes et actions religieuses, tout comme à la construction de bâtiments publics, un temps collectif où les limites sont constamment négociées et redessinées, physiquement ou psychosocialement.

Plus tard, sous l'Empire, la division des terres devient l'affaire de spécialistes: les arpenteurs-géomètres, qui deviendront des membres éminents de la société romaine, prennent la place des haruspices, qui disparaissent, et des augures, qui ne sont présents que sous des formes dérivées ou purement symboliques. Les pratiques corporelles et collectives, liant cosmologies, espace de la cité et organismes psychosociaux, expérience d'une territorialisation du droit, disparaissent au profit d'une rationalité scientifique d'une très grande efficacité technique. La reconstitution de la centuriation d'Orange [D] nous permet d'observer la puissance de la science de l'arpentage, et la précision avec laquelle elle a projeté une grille et son cadastre. Extrêmement pointues, comme décrites dans le *Corpus Agrimensorum*, les techniques d'arpentage sous l'Empire appliquent un système universel qui facilite la cartographie précise des territoires, et dans le même mouvement, le contrôle. Au cours des siècles, la géométrie simple de la croix passe d'une figure mythique et symbolique d'organisation cosmologique, à un objet situationnel de faible signification (psychophysiologique), n'étant plus organisée autour de la pratique collective et corporelle d'inscription.

D'une discipline à l'autre, d'un domaine à l'autre et à travers les échelles, mais surtout, d'une époque à l'autre, il est possible de retracer au croisement des pratiques religieuses aux arpentages, de la cosmologie aux infrastructures, de la politique aux techniques, les variations et survivances de ce diagramme mental, profondément enraciné dans la culture, et définissant des ordres hiérarchisés



et des localités au sein de ces systèmes. Dans le manuel d'arpentage, dans le traité d'architecture de Vitruve, dans les traités sur les rituels (*Sur la langue latine* de Varron), des manuels d'organisation militaire (Hygin), des cartographies (en particulier dans la géographie de Ptolémée) et dans la cartographie impériale (Cadastre d'Orange), cet ordonnancement autour de la figure de la croix et de la grille est présent, et dérive des rituels étrusques témoignant de mutations des pratiques d'installation.

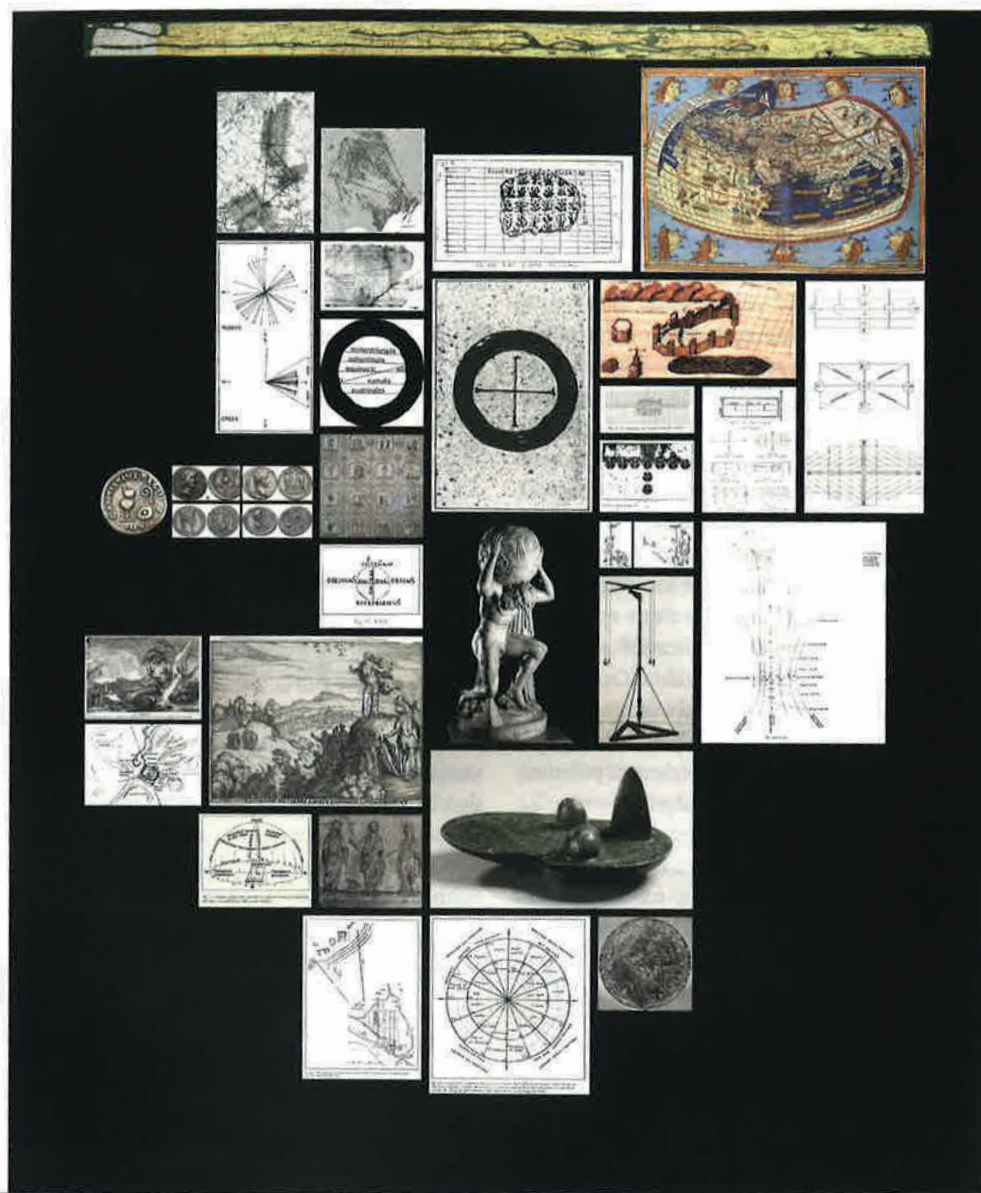
L'étude comparative de plans archéologiques, leurs relations au préexistant, combinée à l'analyse des rites et pratiques d'inscription révèle des mutations sémantiques et psychosociales de la

**B** Plan d'Alba Fucens et de la région, Roma Quadrata et Divisions étrusques.

**C** *Templum in caelo et in terra.*

**D** Reconstruction hypothétique de la centuriation d'Orange.





grille romaine. De l'haruspice au géomètre, le versant opératoire de la grille nous permet de mettre à jour un ensemble technique possédant sa calendarité et sa cardinalité<sup>10</sup>, intégrant de

manière variable les acteurs et les ressources extérieures. Cette chaîne dynamique d'opérations basée sur un calendrier précis et une projection d'éléments d'un autre espace dans le monde

physique nous suggère cependant une faiblesse sémantique du terme préfiguration; le préfixe *pré-* définit un système préétabli, peu dynamique, ouvert et adaptable. Pour cette raison, nous proposons d'introduire le terme de *protofiguration*.

**PROTOFIGURATION, VERS UNE THÉORIE OPÉRATOIRE**  
Le préfixe *proto-* vient du grec et signifie le plus ancien, la forme primitive de, à partir duquel d'autres choses similaires se développent — prototype par exemple. Les protofigurations désignent des séries d'opérations permettant l'inscription dans l'espace physique et mental. Situées culturellement, temporellement et spatialement, elles sont des technologies de médiation entre l'humain et son environnement. En continuité, le concept de *protofigure* désigne des gestes, figures, diagrammes réalisés dans l'espace et définissant des possibles ultérieurs. Les protofigurations sont en ce sens des pratiques définies dans le temps et l'espace et un agent mental et collectif permettant la coordination. Catalyseurs ou traducteurs, les protofigures permettent la transduction — le déphasage d'un domaine de réalité vers un autre. Les protofigurations sont ainsi un instrument d'analyse de l'histoire de l'urbain, son versant opératoire, autant qu'une stratégie de design collaboratif potentielle<sup>11</sup>.

Au sein du système d'analyse technique qui mène à la polarisation «aliénation»/«invention» de Simondon, nous désirons ainsi montrer que la protofiguration consiste à une mise en scène individuelle et collective, donnant les outils, les instruments et les connaissances nécessaires pour agir sur un environnement (au niveau de l'individu et/ou du groupe de Simondon). Ce concept intègre donc la notion de savoir incarné (*embodied knowledge* et *embodied cognition*), et propose de le mettre au cœur de la fabrication de notre espace **urbain et de son intelligence. Une intelligence urbaine qui s'oppose aux approches par l'automatisation grandissante de fonctions et prises de décision de et dans l'espace urbain, en se concentrant**

sur un couplage fin entre ressources extérieures, pratiques collectives et individuelles, systèmes techniques et processus cognitifs. Cette définition d'intelligence couplée engage également le développement, en continuité et en rupture avec le travail de Kevin Lynch dans *L'image de la Cité*, d'une théorie de la perception urbaine, qui dépasse les principes visuels ordonnateurs (alignements, continuités, formes fortes et archétypes...). Elle nécessite la constitution de modèles ouverts, de figurations localisées spatialement, temporellement, culturellement, et techniquement dans les réalités et virtualités d'une situation, rendant possibles et valables les narrations non linéaires, discontinuités, analogies, fragmentations...

Avec cet article, nous proposons donc à travers ces concepts d'introduire des éléments pour l'étude d'un versant opératoire de l'histoire de l'urbanisme, tout en inscrivant dans un retour contemporain des pratiques d'inscription. Certaines formes de protofigurations émergent à nouveau aujourd'hui à travers l'épaississement du temps de projet par la mise en avant d'une démarche processuelle et inclusive, ouverte à la variation (autoconstruction, contribution citoyenne...); elles s'incarnent aussi dans les occupations de l'espace valorisant le corps et les pratiques collectives comme agent et vecteur de l'intégration d'un environnement dans les organismes psychosociaux — mouvements sociaux (ZAD de Notre-Dame-des-Landes par exemple), au sein des urbanismes de révélation et autres pratiques spatiales et politiques basées sur l'expérience sensible et collective de l'environnement (marches urbaines, arts de la rue) — ou bien dans une certaine mesure, dans l'ouverture du temps de chantier comme espace de négociation.

<sup>11</sup> Naissance de l'hylémorphisme dans l'architecture territoriale occidentale, pratiques d'inscriptions étrusques et romaines, du geste à l'outil de contrôle. Atlas de protofigurations, versant opératoire de la grille. Extrait de la recherche doctorale en cours de Julien Lafontaine Carboni, 2018, EPFL.



Intrinsèquement porteuse de nouvelles valeurs associées à la fabrication de la ville basée sur le corps, l'attention, l'imagination et l'invention, cette définition engage à une certaine exigence avec ce qui est couramment appelé préfiguration, tout en validant une antériorité et une permanence au sein des cultures occidentales de ces pratiques d'intégration des ressources extérieures dans les processus cognitifs, à travers les échelles et les do-

maines de réalité. Ainsi, elle ouvre à de nouveaux récits incarnés de nos territoires, en reconsidérant la centralité des techniques et technologies dans leurs fabriques. Territorialisation des épaisseurs techniques, légales, psychosociales, symboliques, incarnation de leurs limites et frontières, les protofigurations amènent à questionner le rôle du corps et ces pratiques spatiales comme temps et lieu d'un autre imaginaire urbain.

#### notes

- <sup>1</sup> Les termes préfiguration et politique préfigurale sont également utilisés en science politique (entre autres par Breines, Epstein, Franks, Leach, Maeckelbergh et Polletta).
- <sup>2</sup> En utilisant cette formulation qui propose l'archaïque comme un mouvement en éternel retour et émergeant face à la métropole contemporaine, je fais référence aux textes du laboratoire GERPHAU, et qui proposait ainsi ce phénomène comme axe d'étude pour ce colloque.
- <sup>3</sup> Au sujet du versant opératoire des sciences dont l'étude est constituée par l'*allagmatique*, voir *L'allagmatique* dans SIMONDON 2005: 529-536.
- <sup>4</sup> Les termes *protofiguration* et *protofigures* ont été forgés par le laboratoire ALICE, EPFL, dans le cadre d'une recherche plus vaste sur le cadre épistémologique *proto*. Nous pouvons remarquer notamment les thèses sur les *protostructures* d'Agathe Mignon (2014-2019) et l'autre abordant l'hypothèse opératoire de *protoémotions* de Dario Negueruela del Castillo (2017).
- <sup>5</sup> Le concept de phase et de déphasage est directement emprunté à la physique. Simondon (2001: 222) explique: «Par phase, nous entendons non pas moment temporel remplacé par un autre, mais aspect résultant d'un dédoublement d'être et s'opposant à un autre aspect». Nous pouvons notamment trouver un développement remarquable sur la notion de phase et de déphasage chez Simondon dans Jean-Hugues Barthélémy, «Genèse, Histoire et Normativité Technique» in BONTEMS 2016.
- <sup>6</sup> La constitution d'une culture technique, qui irait bien au-delà d'une muséologie de la technicité, a pour objectif de fonder une *mécanologie* ou un *nouvel encyclopédisme*, qui supporterait l'humain et ses capacités d'agir et de concevoir au niveau des ensembles techniques; cette culture serait un moyen de dépasser les aliénations psychophysiologiques liées aux machines, sans technophilie ni technophobie.
- <sup>7</sup> En ce qui concerne le déroulement précis des différents rituels où intervient l'augure, et aux différentes interprétations données des textes majeurs de la littérature première, voir LINDERSKI 1986.
- <sup>8</sup> Le mot *templum* vient du grec *temenos*, que Simondon a également mentionné à plusieurs reprises dans l'ouvrage concernant la religion, l'unité magique primitive et l'insertion dans le monde de l'humain; on pourrait le traduire par diviser, couper en parties.
- <sup>9</sup> Le *Corpus agrimensorum* est un manuel d'arpentage romain composé de plusieurs volumes de différents auteurs, et qui constituent une collection des textes que nous connaissons sur cette pratique, datant du I<sup>er</sup> siècle ap. J.-C., jusqu'au V-VI<sup>e</sup> siècle, selon les interprétations.
- <sup>10</sup> Le terme *calendarité* est un néologisme utilisé par Bernard Stiegler (1994). La *calendarité* permet de se situer à travers des échelles de temps. La *cardinalité* nous aide à définir notre position dans le monde avec le monde. La *calendarité* est également l'articulation entre les individus et un ordre symbolique et technique d'une communauté. Elle permet ainsi la transcalarité d'un moment temporel. Il s'agit donc d'un agent entre l'immédiat, le temps historique et mythologique, à travers le temps spatial et psychique. Nous utilisons le terme *cardinalité* dans la continuité de cette définition d'agents psychosociaux.
- <sup>11</sup> Le laboratoire ALICE teste actuellement le modèle de la protofiguration dans le studio de design de la première année en architecture de l'EPFL. L'exercice vise alors à une compréhension des méthodes et processus d'inscription des ressources externes dans le processus de design autant que des dimensions collectives et relationnelles (où je suis, à côté de quoi et de qui, comment je perçois et conçois l'environnement, et ainsi comment construire ensemble). Dans ce but, nous avons proposé de constituer un dessin de site à quatre cents mains, à travers la mise en application de dix méthodes d'arpentage différentes élaborées par les *studio directors*. À travers les semaines, le dessin se fabriquant, il devient un milieu intermédiaire entre espace collectif et individuel, mental et physique, sensible et matériel, et dont le résultat final n'est pas la finalité, n'étant qu'une des traces et des agents du processus d'intégration du collectif et de l'extérieur dans le design [<https://infoscience.epfl.ch/record/264444?ln=fr>].



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## JULIEN LAFONTAINE CARBONI

est architecte diplômé à l'ENSA Paris-Malaquais et doctorant au Laboratoire ALICE à l'EPFL. Ses recherches proposent une épistémologie non-visuelle pour investiguer l'histoire de l'espace: corps, gestes et mots génèrent des architectoniques dont l'historicité est performative et ontogénétique, permettant alors l'émergence d'histoires architecturales mineures.

## Curriculum Vitae

I am trained as an architect, graduated at ENSA Paris-Malaquais and since 2017, I pursue a PhD research at the ALICE Laboratory, EPFL, under the (provisional) title '(from) the repertoire. Unfolding architectures of operations' oral and embodied knowledge'. I have published articles in several architectural, philosophical and anthropological journals such as *Architecture and Culture*, and *Tabula Rasa*. In my research, I investigate more-than-visual epistemologies and methodologies to thread spatial histories: bodies, gestures and words enact and perform spatialities, implying other forms of historicity concealed by the architectural disciplinarization. Thus, my aim is to frame an architectural political agency that resides in gestures themselves, while proposing a critical architectural historiography and operational theory. My research is also linked to and enriched by an institutional activism within EPFL, in the DRAGLab, an attempt to create grounds of discussion for inclusive, post-domination, diverse and anti-racist pedagogies and politics within schools of architecture.

### 1. Personal Information

Julien Lafontaine Carboni (they/them)  
 09.06.1994, Cognac (16), France  
[julien.lafontainecarboni@epfl.ch](mailto:julien.lafontainecarboni@epfl.ch)  
 Avenue Vinet 23, 1004 Lausanne, Suisse  
 Tel: +336 11 22 71 01  
 OrcID: <https://orcid.org/0000-0002-8366-5969>  
 Research Gate: [https://www.researchgate.net/profile/Julien\\_Lafontaine\\_Carboni](https://www.researchgate.net/profile/Julien_Lafontaine_Carboni)

### 2. Education

**17.11-Today**\_PhD candidate and assistant at ALICE (Atelier de la Conception de l'Espace), EPFL, under the supervision of prof. Dieter Dietz and dr. Lucia Jalon Oyarzun.

**19.10-20.08**\_Doctoral Mobility, Universidad Autonoma de Madrid, Departement of Social Anthropology, Section of Postcolonial Studies and Western Sahara studies, under the supervision of Juan Carlos Gimeno Martin and Bahia Awah.

**17.06**\_Master degree in Architecture at Paris-Malaquais School of Architecture. Mention Research with honours. Under the Direction of Dominique Rouillard and Marc Armengaud.

**12.08-15.06**\_Bachelor in Architecture at Ecole Nationale Supérieur d'Architecture de Clermont-Ferrand (63), France.

**12.06-09.09**\_European (English) Scientific Baccalauréat with honours. Clermont-Ferrand (63), France.

### 3. Employment history

17.11-today\_PhD candidate, Teaching Assistant, ALICE (Atelier de la Conception de l'Espace), EPFL.

16.10-17.03\_Intership as Research Assistant in the Laboratoire Infrastructure Architecture et Territoire (LIAT), ENSAPM, under the direction of Dominique Rouillard.

16.06-16.10\_Internship at AWP, agence de reconfiguration territoriale. Paris.

### 4. Teaching Activities

22.02/06\_Organizer and Teaching Fellow of the Unité d'enseignement ENAC, 'DRAG(U.E.), Performativities of the built environment.'

22.02\_Organization of the Workshop between HEAD and EPFL Architecture entitled 'Des corps dans la nuit. Dynamique de genres, transgression des normes, solidarités et autodéfense.'

In this workshop we will propose to student from all the discipline of HEAD and architecture students to design dispositives and/or architecture allowing self-defense, while introducing the major concept to understand gender performativity and the reproduction of systematic violence, notably through spatial and material agents.

2020/22\_Maître EPFL, Projet de Master and Enoncé Théorique, EPFL.

21.05\_Organizer of the SwissUniversity doctoral course 'Unearthing Traces, Dismantling imperialist entanglement between the archives and the built environment', in collaboration with UNIL, HEAD Genève and the Centre d'Arts de Neuchâtel.

21.04\_Organizer and Teaching Fellow in Semaine ENAC 'A Land of Thousand Dances', EDAR, EPFL.

Organization and pedagogical frame. In this course, we aimed at fostering interdisciplinary capacity of attention and care toward the built environment by giving methods to observe and act with human and non-human dynamics in the context of a lasting temporary structure in Evian -a timber-frame wooden structure constructed three years ago by the First-Year Design Studio.

18.02-18.05/19.02-19.05\_Teaching Fellow for the U.E. 'Atlas Poliphilo', EDAR, EPFL.

18.08\_today (once per month)\_Theoretical course of architectural history (Unlearning Imperialist Drawing Operations), Spatial Issues, Year One Design Studio, EPFL.

18.08-19.01\_Tekhne writing, introductive lessons, writing for architects, Year One Design Studio, EPFL.

17.10-today\_Member of Jurys for the Design Studio of the First Year of Architecture at EPFL.

### 5. Active Membership

20.11-today\_Active member of the DRAGlab, a queer and feminist group of architects and activists, militating for a fair and safe environment in architectural institutions and firms through the organisation of cultural events and active proposition of policy changes.

21.01-today\_Member of the Diversity Office at ENAC, EPFL, in the task force recruitment, proposing new policies for inclusive and diverse recruitment in the faculty.

16.04-today\_Active member of Ars Industrialis, association internationale pour une politique industrielle des technologies de l'esprit.



## 6. Organisation of conferences

**21.03.24/26**\_Organisation of the Deep City Symposium granted by the LATSIS Foundation. Organisation of the content, peer-reviewing and selection of participant, Moderation of paper sessions and Keynote lecture (Shannon Mattern). (<https://deepcity.ch>)

**21.03.10**\_Organisation of the Parity Talk between the ETHZ, Women in Dsign (GSD Harvard), Claiming Space (TU Wien), Parity Board (TU Munich) and the DRAGlab (EPFL). Definition of the program, moderation of Keynote lecture for the Athena Lecture series.

**20.11/12**\_Member of the scientific committee of EDUMEEET, International Conference on Transfers for Innovation and Pedagogical Change, Universidad Politecnica de Madrid.

**20/21.12/05**\_Organisation of the seminar series 'Surrounded by a fog of virtual images.' Chair of the session 'Haunted Bodies and Ghostly Spatialities' with Gabriele Schwab and Avery Gordon. (<https://surroundedbyafogofvirtualimages.ch>)

**18.11.22/23**\_Organisation of the International Symposium Scaffolds. Chair of the panel: Cognitive and Sensory Strategy for Understanding and Shaping our Environment, at Scaffolds, Open encounters with Society, Art & Architecture. International Symposium, Brussels. <https://scaffolds2018.epfl.ch>.

## 7. Prizes, Award, Fellowships

**19.10-20.07**\_Mobility.Doc Fellowship to complete the research 'Outlining the City from Dust' 38.000 CHF, supported by the FNS (Fond National Suisse). Extension accorded (7.000CHF).

**18.06-20.06**\_Visions prospectives pour le Grand Genève. Habiter la ville-paysage du 21e siècle. Fundamental and Design Research in collaboration with ALICE Lab and AWP Atelier (80.000CHF).

**17.10**\_Prix des Meilleurs Diplômes en Ile-de-France (1–5people per year), Maison de l'Architecture en Ile-de-France. Exhibition of the diploma.

## 8. Personal Skills

Languages : French (Mother tongue), English (C1), German (B1-2), Spanish (B2), Arabic (A1-2)

## 9. Publications in journals

- Lafontaine Carboni, Julien. "Undrawn Spatialities. The Architectural Archives in the Light of the History of the Sahrawi Refugee Camps." *Architecture and Culture* 9, no. 3 (April 29, 2021): 502–22.

- Perron, Paule and Julien Lafontaine Carboni. "Les inconnues éblouies." *Plan Libre, France Inconnue* #3, Été 2021.

- Lafontaine Carboni, Julien, and Juan Carlos Gimeno Martín. "Inmóviles, Pero No Quietos. La Sedentarización de Los Saharauis Como Estrategia de Adaptación y Respuesta a La Supervivencia. Sobre La Posibilidad de Un Nomadismo Inmóvil." *Tabula Rasa*, 2021.

- Lafontaine Carboni, Julien, and Juan Carlos Gimeno. "Reinvindicar Un Derecho al Campamento." *Sociedad Geográfica Española La Ciudad. Las Ciudades.*, no. 66 (Mayo-Agosto): 94–105.

## 10. Contributions to Books

- Bertschi, Denise, and Julien Lafontaine Carboni (editors). *Unearthing Traces, Dismantling the entanglements of archives and the built environment*. Presses Polytechniques et Universitaires Romandes, forthcoming.
- Dietz, Dieter. Jalon, Oyarzun, Lucia. Lafontaine, Carboni, Julien. 'Urgency' In Gerber, Andri, éd. *Training spatial abilities: a workbook for students of architecture*. Boston: Birkhauser, 2020.
- Lafontaine, Carboni, Julien. 'Protofiguration, opérations d'installation.' In *L'archaïque et ses possibles aujourd'hui*. Editions Hermann. 2019.

## 11. Contributions to international conferences

**21.12.08**\_ Participation at the colloquium and Rencontres thématique of the network Philau 'Prendre-soin ', organized by Philau, Ecole Nationale Supérieure d'Architecture de Clermont-Ferrand.

**20.11.12**\_ Participation at the 'Journée d'étude sur le Sahara Occidental', organized by OUIISO (Observatoire Universitaire International sur la Sahara Occidental).

**20.11.10**\_ Participation to the international biennial of research in architecture and its conference in Valencia, in the category Smart City around the alienation of political imagination produced by Smart City programs, and proposal for new frames of thinking urban intelligence based on non-representational and cognitive theories.

**15.06.2018**\_ Participation in the colloquium Potential for an Archaic Today, organised by the laboratory GERPHAU, the school of architecture of Paris La Villette, and the Cité de l'Architecture et du Patrimoine.

## 12. Outreach activities

**22.04**\_ Organisation and participation to the group of Research for the exhibition 'Des corps dans la nuit', Maison de l'Architecture en Ile-de-France. The exhibition focuses on how the spatialities and materialities of the night perpetuates diverse forms of domination, notably racial or gender systemic oppression, and finding ways for architecture to implement (self-)defense strategies to short-circuit this reproduction.

**10.2019**\_ Charter Member of the Association Radio PLOT, a radio that investigates in rural french territories the relationship between art creation and popular culture, between artists, architects and civil population, focusing on the possibilities of dialogues and encounters around fair ecological transition concerns.

**18/19/20/21**\_ Design and Drawing of the Protofiguration for the first year Design Studio at EPFL. Territorial drawing and pedagogical support, coordinated by Julien Lafontaine Carboni and Aurélie Dupuis.



