

# Vernacular architecture & spatial typology: their share in urban health

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## Aim & methods

"Vernacular architecture can be defined as a type of local or regional construction, using traditional materials and resources from the area where the building is located. (Camilla Ghisleni, Archdaily 2020).

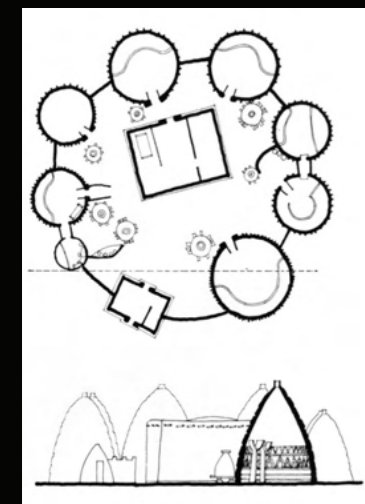
The aim of this study is to reveal that over modernization of architecture and spatial planning techniques could be a threat to urban health in Global South, and that resort to vernacular methods could be a solution. It is an empirical study resulting from a combination of personal, quasi-ethnographic experiences, 10 years of professional practice, observation, scientific reading and discussion, and experimentation.



The Tata Tamberma of Northern Togo, UNESCO Heritage (francetvinfo.fr)



Maisons rurales au Togo (maison-monde.com)



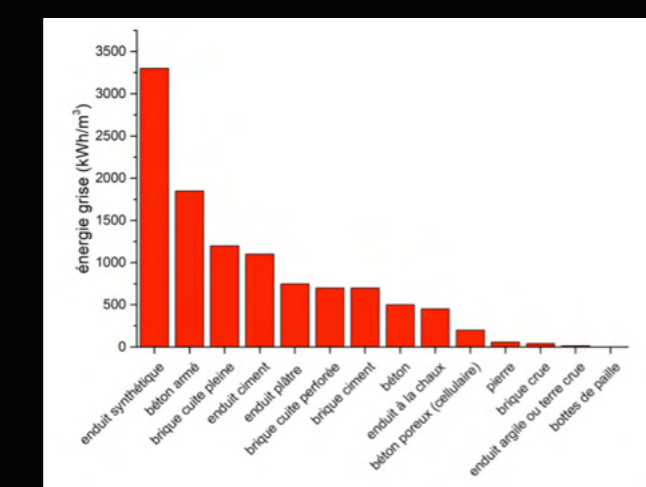
Musgum architecture (architectureindevelopment.org)



Black Panthers movie Wakanda architectural inspirations (machi.com/architecture-of-wakanda)



Distribution of raw earth constructions in orange color. Craterre (theconversation.com, 2020)



Orders of magnitude of grey energy of materials. Abdelhak Maachi

Beyond the minimalist aesthetic advantages, the earth material offers:

- healthy indoor climate
- natural hygrothermal comfort
- acoustic comfort

Despite these advantages, the material suffers from:

- Lack of knowledge
- Inappropriate regulations
- Hyper-industrialized construction
- Reign of cement concrete
- Lobbying
- Prejudices



Akon City project in Senegal (images.adsttc.com)

## Findings

With the advent of colonization in Africa at the beginning of the century, the importation of modern construction materials and methods gradually changed the architectural and urban landscape. Earth, wood and stone gave way to concrete, glass and metal. Moreover, the spatial organization in community has given way to more and more individualism and the urban sprawl has made the land scarce, which forces to contiguous and under-equipped development. The old habit of the proximity of the fields as an integral part of the living place is also more and more fought for reasons of modernism. All these practices lead to discomforts such as excessive heat in the habitat.



WellCity realstate construction in Togo (h3.googleusercontent.com)

"In addition to discomfort, there is scientific evidence that exposure to high indoor temperatures can affect the immune and cardiovascular systems, and even lead to serious illness and death". (https://hal.ehesp.fr/hal-02190365/document, page 44)

Individualism also leads to psychological access, and the uneducated population, without access to urban agriculture, lives in precarious and undernourished conditions.



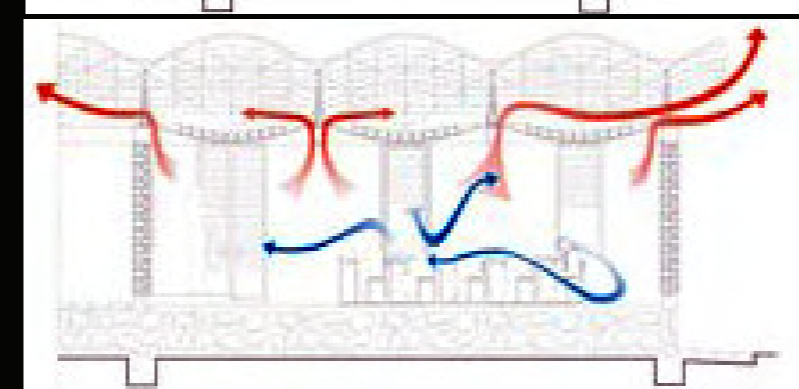
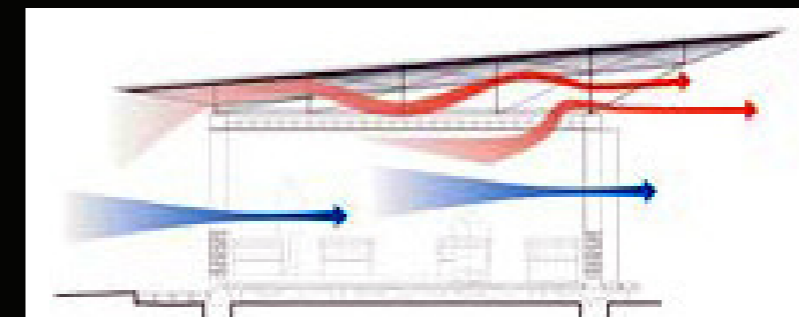
Palm Beach hotel in Lomé, Togo (l.piniimg.com)



African Heritage House, in Nairobi, Kenya (kotchink.org)



Gando school by architect Francis Kere in Burkina Faso (arquitecturaviva.com)



Ventilation principles of the Gando school (baunetzwissen.de)



A contemporary building inspired from Musgum architecture (https://pbs.twimg.com/media/E3dwYDYXwAA50a3.jpg)



Architect: Akuto Akpedze Konou



Architects: Akuto Akpedze Konou, Fifonsi Sonya Tomegah, Arnold A. Ayih-Akakpo

## Recommendations

- Regulations for implementation & maintenance,
- adapted tests on specificities & complexity
- evaluation of properties & durability
- Improvement of vernacular techniques



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Brondby Garden City with a circular urban design (https://img.bfmtv)

## Conclusion

- Scientific research
  - Education
  - Professional and institutional training
  - Promotion
- for more independent, resilient & HEALTHY CITIES.