

Archery Rites: Remaking Confucian Rites



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Abstract Ritual archery has a long and vital history in Chinese civilization. This chapter examines the current reenactment and digital reconstruction of the specific tradition of the Archery Rites embedded in the Confucian tradition, ritual practice and cosmology of *li*, which suffered major decline in the twentieth century with modern China's political upheaval and social shifts. In recent decades, scholars and practitioners in China have sought to revive the lost art of the Archery Rites. The most significant endeavor to date is the "Re-Making of Confucian Rites (RCR)," a major reenactment project based on the renewed philological study of the *Book of Etiquette and Rites (Yili)*, which describes rituals recorded by disciples of Confucius in fifth century BCE. The RCR project is forging the fundamental means to reconstruct and build new archives for the embodied knowledge systems of Confucian rites, through the coupling of reenactment with advanced digital documentation forms, in conjunction with novel interactive and immersive media art experiences for their affective transmission. The approaches arising from this work are building a foundation for the renewed scholarship and societal practice of the Archery Rites, as well as a cohesive framework to address the challenges facing the wider revival of intangible cultural heritage in China today.

Keywords Archery rites · *Li*-rites · Confucian rites · Intangible cultural heritage · Embodied archives · Visualization · New museology

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Confucius said

A refined person has no use for competitiveness. yet if he cannot avoid it, then let him compete through archery! for on entering the archery range he will salute and show consideration for other competitors, and on leaving the range he will share ceremonial wine with them, and thus even in competition he will be acting according to the principles of refined conduct.

—*Book of Etiquette and Rites*, Paragraph 5B9, Cited in Selby (2000, 70–71)

1 Introduction

Archery as a ritual practice has played a long and vital history in Chinese civilization, as we have learned throughout this volume.¹ According to Selby (2000, 6), arrowheads from “the middle of China’s stone age period, at around 20,000–10,000 years BP [18,000–8,000 BCE]” have been found in various regions of China that suggest archery was already being practiced, but by the Neolithic period the evidence is “unequivocal” with numerous sites revealing the developed use of arrows, which Peng and Bingxue (2016, 2) assert is the most “convincing research method”. Peng and Bingxue (2016, 5) estimate however that the oldest arrowhead found in China dates the origins of archery to 28,900 years ago, which as Ma Ming-da confirms (2009, 17), makes it “one of the oldest archery traditions in the world”. Peng and Bingxue (2016, 7–11) further elaborate how archery gathered its sacred status in Chinese cosmology over thousands of years, which formed in an assembly of various myths. Selby underscores that it is also in this timeframe that the earliest stories of bow and arrow use are documented in folklore. One of the best-known stories is of Huangdi, the “Yellow Emperor” (2697–2597 or 2698–2598 BCE). Considered the ancestor of Chinese peoples, as the tale goes, Huangdi invented the bow and arrow in order to slay a tiger, though there are notably dozens of other inventors competing for this claim (see Peng and Bingxue 2016, 2–3; Selby 2000, 12). Ultimately, as Ma (2009, 17) writes: “Archery served multiple functions in ancient China, and beside its utility for war and hunting, archery was very early on incorporated as part of the official education and given a pedagogic function”.²

In the (Peng and Bingxue 2016) monograph titled *Early Stages of Ritual Archery (Lishe chujie)*, Peng Lin and Han Bingxue argue that archery culture is embedded in ancient Chinese societies as both a weapon of war and a ritual weapon, pluralities that evolved into a practice that enabled self-cultivation. It is the pivotal yet shifting role that archery has played in Chinese culture and imagination that lies at the core of its ritual status. This chapter is focused on the crucial question of how to revive, archive, reconstruct, and transmit the embodied knowledge systems of ritual archery

¹ See, for instance, Stephen Selby’s chapter in this book and his discussion of both the performative aspects and the regulation of rites that merge ritual with law. In brief, rites or rituals are formalized or performed ceremonial acts, arising either from long secular tradition or sacred orders. See Bell 1997; Myerhoff 1997; Schechner 1993.

² Traditional Chinese archery is generally considered to have two distinct lineages of military archery and ritual archery, although they were often intertwined. See Ma 2009, 17.

and the Archery Rites³ in the aftermath of their elimination from Chinese society in the twentieth century (the last official Rite of Archery performance on record was done by the Qing dynasty imperial court in the 1850s). Demonstrating new horizons for the revitalization of the Archery Rites is the current reenactment and digital reconstruction being realized as part of “Re-Making of Confucian Rites,” a major reenactment project based on the close reading of the *Book of Etiquette and Rites*. To comprehend the depth and complexity of this undertaking requires an initial brief account of the long history of ritual archery in China, specifically as it pertains to Confucian Rites.

2 Ritual Archery and Confucian Rites

State-led ritual archery reached its peak in the Western Zhou dynasty (1046–771 BCE), and the flourishing of private learning made it possible for more people to participate in ritual archery activities. During the Zhou dynasty, Chinese aristocratic classes used archery ceremonies to promote social rites, and evaluate nobility and prowess, and thus reiterate the elite hierarchy. Held at the local state school every two to three years, students were selected for competition based on their outstanding skills and virtues, alongside a handful invited scholars and gentlemen, revealing that the main intention of the ceremony was to educate through the practice of ritual archery.

Chinese philosopher and politician Confucius (551–479 BCE) was not the first person in China to recognize the significance of archery as a means of moral, physical, and spiritual training. It was however Confucius’s conception of archery as a manifestation of virtue that formalized the ancient tradition of ritual shooting with a bow and arrow. What was a fundamentally combative and competitive exercise, originating in hunting and warfare, was given a new meaning within a distinct set of performance and aesthetic protocols. Furthermore, as Ma Mingda explains in his contribution to this book, the pedagogy that Confucius envisaged would integrate archery as an educational tool available to ordinary people, in contrast to the exclusively aristocratic pursuit it had been up to then. The Confucian Rites would come to form part of a larger social and political order based on humanistic ethics defined by virtues and the attainment of equivalent benevolent characteristics in a person (Do-Dinh 1969).⁴

³ A distinction should be made between ritual archery, which entails a broader set of practices, spanning a much greater timeframe than the formalized conventions set out in the Confucian Archery Rites. Ma (2009, 17), for example, writes that there were many “various methods of archery contest and diverse competitive archery activities” across the Western Zhou period, and Song, Liao, Jin, Yuan, and Ming dynasties”. That said, the Archery Rites dramatically evolved over many centuries, as we will discuss.

⁴ Confucius lived in an era of large-scale moral decline arising from a centuries-long civil war, called the “Warring States” period, which had split the country into fourteen states and corrupted the feudal ritual system; a situation that provided the impetus for a radical, new code of ethics.

The Confucian theory of ethics is centered on the notion of *li* (ritual).⁵ *Li* is a cosmological attitude: it trains the person to be constantly aware of the holistic connectedness of all things, of both living and inanimate things. In Confucian ideology, the aim of *li* ritual performance is the cultivation of ethical character, developed in three ways: through ceremonies to reify filial elders, ancestors, authorities and deities, in social and political institutions, and through daily behavioral etiquette.⁶ While many scholars translate *li* as “ritual”, the meaning of the term is far more expansive and cannot be summed up in a word. *Li* is a cosmology that refers to order and holistic relations. For this reason we use the novel compound of *li*-rites to convey the fact that *li* is performed as a rite, or series of rites. Though it appears to take the form of ritual and the performance of reciprocity, the *li*-rites had a much greater intent: the attainment of the core value of *ren*, encompassing the dual guise of virtue and humanity, or humaneness, goodness, benevolence, and love (see the *Analects (Lunyu)*, 6:30; Do-Dinh 1969, 107).

The rites that Confucius consecrated were not recorded in his time, though his teachings were. It was the followers and disciples of Confucius who generated and arranged the documentation of his sayings and dialogues with his disciples, first of all in the form of the *Analects*, the earliest version dated to the fourth century BCE. Two manuscripts produced by Confucian followers over several centuries specifically established ritual archery as part of the core canon of Confucian rites. The first of these, *the Record of Rites (Liji)* (fifth century–221 BCE), provides a social perspective on the rites emphasizing the communal spirit of *li*, specifically in a chapter titled *The Meaning of the Ceremony of Archery (Sheyi)*. On the other hand, *the Book of Etiquette and Rites* (originating in fifth century BCE) contains instructions for rituals and behavior in a handbook format.⁷ As Liu Yucai and Luke Habberstad detail (2014), the seventeen ceremonies in the *Book of Etiquette and Rites* provide conventions for capping, marriage, mourning, sacrificial offerings, archery competitions, banquets, official visits, and court audiences. Being a performance manual written for civil servants, the *Book of Etiquette and Rites* elucidates ritual in terms of procedure, avoiding proclamations about its consequence. Details are primarily technical: how to arrange the seating for a banquet, forms of gesture that should be made when greeting visitors, when and how to bow, and so on (minutiae that have proven to be vital in the reconstruction of these rites in recent years).

Two archery rituals are intricately described in two separate chapters of the *Book of Etiquette and Rites*. The *Rites of the Provincial Archery Competition (Xiang she li)* is the fifth of the seventeen ceremonies elaborated in the *Book of Etiquette and*

⁵ The phonetic translation “li” is also non-specific and homophonic with other more common words in Chinese.

⁶ Imperial ancestral rites are not the focus of this chapter but were a significant concern for both elites and scholars of Confucian Rites, who emphasized funeral rites and other elaborate sacrificial activities to take care of ancestral spirits.

⁷ This text originates in the writings of Confucian disciples from the fifth century BCE, much of which was lost. The version called the *Book of Etiquette and Rites (Yili)* was compiled by second century scholar Zheng Xuan (127–200 CE) and provided the material for subsequent editions and scholarship (Boltz 1993, 240).

Rites, while the seventh rite, *Dashe*, details *The Great Archery Meet* (at state level). The traditional order set down in the Zhou dynasty era for the Archery Ceremony are chronicled in the *Rites of the Provincial Archery Competition*, which began with drinking courtesies followed by a three-round student archery contest and a social drinking protocol to conclude. The archery competition was the core event of the ceremony, during which the three rounds that examined the archers' skill while refining self-cultivation.

The text of the *Book of Etiquette and Rites* does not elaborate Confucian philosophy in and of itself. Concerns of self-cultivation in aesthetics and etiquette are nonetheless illuminated in a number of its passages, as well as the ordering of social hierarchy that underpins the Archery Ritual. For instance, "Confucius said, 'How does the archer combine his shooting with listening to the ceremonial hymns? Take your cue from the music, and if you miss the center, how can you have been a loyal officer?'" (*Book of Etiquette and Rites* paragraph 5B9, cited in Selby 2000, 76). And, "the aim of the shooting is to become ennobled" (*Book of Etiquette and Rites* paragraph 5B7, cited in Selby 2000, 74). Physical self-improvement required mental training avoiding unnecessary movements, whose aim was acted as an allegorical mirror of selfhood: to align the arrow with the self: "Archery has been described as 'expression,' or as 'emotional release'. Expression is expression of one's own inner self; thus, the mind must be at peace and the posture erect, and upon taking up the bow and arrow, one must concentrate" (*Book of Etiquette and Rites* paragraph 5B7, cited in Selby 2000, 74–75).

Using the bow and arrow, an archer presents his awareness and virtues through the conducts of shooting and claims himself as an upright social-body to the outside world. In the Confucian regime, ritual archery was developed into a device for self-cultivation, a vehicle of self-expression, a manifestation of social orders, and a medium of communion between the self, body, and society. For Confucius, archery speaks for virtue and mind. In the chapter titled "The Meaning of the Ceremony of Archery" in the *Record of Rites*, the Archery Ceremony is defined as a form of "self-cultivation decorated with rituals and music". While ritual regulates the appearance of the archers, music is the harmonization of their virtue. The shooting ceremony is a means to deduce each archer's temperament, character, and integrity. For example, their body should be focused and upright. The shot can only be made when the mind is calm, the posture is upright, the bow and arrow are steady, and the target is precise. Through the rituals of shooting, the archer is expected to cultivate perseverance in order to overcome the failures inherent in shooting. To do this, an archer should be introspective. As the opponents in the archery ceremony are paired fairly and the scores counted collectively, the purpose of the archer should not be to defeat another person, but to seek to be positive within themselves. Hence, although the same target is used, the moral target varies for different archers, while the process of shooting centers on repeated self-examination, contemplation, and cultivating values.

For almost two millennia the teachings, texts and rites of Confucius were at the core of China's ideological, social and civil curriculum. Selby (2000, 69) underscores that the "Confucian interpretation to the archer's ideals ... was an explicit part of the

ideology of China that every archer after Confucius' time was required to know".⁸ It was only with the termination of the civil service examination of Confucian classics in 1904 that this ideological system started to change. This was the beginning of sweeping political change in the aftermath of the sacking of Beijing in 1900 by the multi-national military coalition of the Eight Nation Alliance, commonly known as "*baguo lianjun*" in Chinese. With the revolution of the National Republic in 1911, China's cultural anchorage upon Confucian learning, together with the dynastic political system, were radically transformed.

During this first era of the modern state, the modernization movement in China featured two opposing forces: those who promoted westernization, and an intellectual counter-movement whose members felt that westernization threatened the core of Chinese civilization. This debate was particularly significant for martial arts and for indigenous Chinese physical cultures in general. Ma (2009, 24) describes, for example, that "In the 1920s and 1930s when Western sports had come to successfully dominate mainstream physical culture in China, a number of pioneers, led by martial artists, attempted to counteract this trend by constructing their own system of physical education. This led to the so-called 'battle between indigenous and Western sports (*tuyang tiyu zhizheng*)'". The establishment of "national skills (*guoshu*)," a modern national schema for Chinese sports, was a major consequence of this struggle, which in turn spawned the modern development of Chinese archery.⁹ Chinese archery in this form continued to be practiced in the early Communist period up to 1957–8. However, during this time the development of Chinese archery was adapted as a modern sport in which ritual archery was no longer an explicit practice.

By 1949, the People's Republic of China had committed to Marxism-Leninism as its official ideology, and an era that would devastate Confucianism as well as everything else associated with traditional culture. Traditional archery continued to be practiced until 1958, when the social and economic campaign of the "Great Leap Forward" brought about the repression of Confucian Rites, alongside many other longstanding cultural practices, such as traditional archery. It was especially during the Cultural Revolution from 1966 to 1971, with the antagonistic objective to modernize China, that the term "feudal ethics (*fengjian lijiao*)" was deployed to denounce traditional rituals and Confucianism, including ritual archery in all its forms (see Louie 1980, 1986; Zhang and Schwartz 1997). The significant customs of Confucian social relations and Confucian rituals (ritual archery among them), which historically formed the backbone of Chinese culture, were considered not only backward but were also eventually criminalized. These efforts combined led to a breakdown in cultural and social transmission (Billioud and Thoraval 2015), so that the artform, ritual and aesthetic lineage of ritual shooting were all but lost.

⁸ It is worth noting that the two archery rituals were distinct from the other fifteen rites in the *Book of Etiquette and Rites*, which were familial ceremonies practiced in domestic settings that did not require access to expert training. The Archery Rites instead tended to be reserved for the elite classes.

⁹ Chinese archery thus developed according to Western principles yet without the wholesale adoption of Western sporting culture.

In recent decades, Chinese intellectuals, local folk movements, and archers have sought to revive ritual archery, in tandem with the Confucian Rites, struggling against the current of politically entrenched westernization of Marxist Communism. Copious, crucial research on the Archery Rites has been undertaken by longstanding academics including Peng Lin, Ma Mingda, Ma Lianzhen, and Stephen Selby. Today, specialist books and journal articles seeking to reinterpret and support the restoration of the Archery Rites and the *Book of Etiquette and Rites* are increasingly prominent in China (see Chen 2002; Guo 2007; Jiang 2004; Lian 2019; Lin 2020; Ren 2012; Yu 2013).

Certain contemporary scholars, such as Billioud and Thoraval (2015), Peng (2017), and Tu (1985), contend that Confucianism was never eradicated but has remained intact in the Chinese body and mind. Its continuity is exemplified in the ritual code of conduct and awareness of the *li*-rites. A deep-seated, embodied knowledge at the ideological root of China's civilization, the *li*-rites provide the basis for the reconstruction of both the Confucian Rites and the cultural paradigms that they flourish from, which is at the core of the "Re-Making of Confucian Rites" project and its mission to restore them as a living ceremony.

3 The Reenactment of Ritual Archery in the Re-making of Confucian Rites Project

At present, the most elaborate and extraordinary determination to revive the Confucian Rites is the initiative of Peng Lin, professor in the Department of History at School of Humanities, Tsinghua University, Beijing, and his more than thirty-five years of primary historical research and prolific publication on Confucian rituals, ethics and etiquette, including on ritual archery (see Peng in reference list).¹⁰ Professor Peng is Director of the Centre of Ritual Studies at Tsinghua University, where he leads the "Remaking of Confucian Rites (RCR)," a major reenactment project based on the philological "close reading" of the *Book of Etiquette and Rites*. Working with a team of scholars, Peng has undertaken extended and meticulous philological analysis of the *Book of Etiquette and Rites* in a collective reading and close study system, entailing specialist word-by-word examination.

The main significance of this project is the cultural strategy adopted by the scholars involved. Given the thorough devastation of traditional cultural forms, from destruction of material culture to transformations of social-political structures, a return to the context of pre-revolution China is unrealistic and ridiculous. Instead, the project grounds itself on the tradition of the unbroken lineage of Confucian scholarship that, for two millennia, has preserved China's sense of cultural continuity through

¹⁰ Professor Peng's scholarship has provided significant opportunities for *li* (ritual) studies to evolve. See Chard 2014; Peng 2002, 2013, 2015, and 2018a, b. In 2012, for example, the first International Symposium on Ritual Studies and the scholarship of *li* was inaugurated at the Tsinghua University Centre for Chinese Ritual Studies, in conjunction with Jia Li Hall.

the constant rejuvenation of its philological and philosophical reinterpretation of the original Confucian classics.

Instead of attempting to remember and revive the ritual forms as they were practiced in 1911 (an almost impossible task), the RCR project has embarked on the groundbreaking mission to bring alive the original ritual forms preserved in the *Book of Etiquette and Rites*—a performance script made by the disciples of Confucius in the fifth century BCE. It should also be explained that, of the *Five Confucian Classics (Wujing)* (later on, Six and Thirteen Classics),¹¹ which grounded China's civilization, the *Book of Etiquette and Rites* is the one text that has been least understood. This gap in knowledge is due to the text's rich reference to material culture and performative descriptions whose meaning have been lost, and there are many lacunae in historical documentation (Morgan 2017, see also Selby's chapter on ritual archery in this volume).

The outcome of the renewed scrutiny of the *Book of Etiquette and Rites* is a movement-by-movement score for reenactment for each Rite, furnished with all the necessary and precise details for performing the ceremonies anew. The script provides the scenography for the Rites' professional cinematic documentation, annotated with lists of props, musical scoring, and dialogue. Such a reconstruction process requires extensive cross-referencing of key primary sources, and the analysis of archeological, archival, and textual materials for recreating the reenactment set, environment and for the inclusion of live animals such as geese and horses during recordings. Peng's study also informs the design and fabrication of replica objects, such as the archery target, drinking vessels, the archers' bow and arrows, and their elaborate costumes.¹² By drawing on such diverse philological, musical and archeological sources, Peng and his team thus are painstakingly reconstructing the seventeen ritual ceremonies of the *Book of Etiquette and Rites*.

What makes the RCR project both contemporary and significant is its contribution to the advancement of classical philology that represents a return to the origins of the text. This has been made possible, firstly, by the creative advances in philological research since the seventeenth century CE, and, secondly, with the aid of twentieth century archaeological techniques. The remaking of the seventeen rites preserved in the *Book of Etiquette and Rites* is, above all, a re-grounding of China's seminal civilizational "myth" made possible by drawing upon scholarship stretching over two millennia, presented in a medium that can speak to any person today.

In 2012, Peng Lin embarked on the first digital recording and reconstruction of the reenactments of the Rites. This initiative is a collaboration with Tsong-Zung Chang and the Jia Li Hall in Hong Kong, Professor Jeffrey Shaw at the Academy of Visual Art, Baptist University, Hong Kong (formerly of the Centre for Applied Computing

¹¹ Nylan (2001: 2) states that "the adoption of the Five Classics as state-sponsored learning [took place in] 136 BCE under the Western Han dynasty," adding that they were later refined "during Eastern Han". The *Book of Etiquette and Rites* is part of the corpus of the *Thirteen Classics (Shisanjing)* from the Southern Song period.

¹² Written material on archery rituals fortunately survives today from the Han dynasty in technical manuals, fiction and poetry.

and Interactive Media, City University of Hong Kong), and Professor Sarah Kenderdine at the Laboratory of Experimental Museology (eM+), École Polytechnique Fédérale de Lausanne (EPFL), Switzerland. The RCR team have so far filmed three complete Rites since 2013, in Hong Kong, Taiwan and China (the “capping,” “marriage” and “archery” ceremonies, see Fig. 1). These three ceremonies were shot at professional cinema quality, over several months of filming. A troupe of thirty elite actors from the Beijing Opera performed the Rites, alongside amateur players. The footage from this initial work comprises the highest level of cinematic aesthetic excellence. The results have also been curated into major exhibitions worldwide (see Figs. 2 and 3), at the Royal Opening of the China Exchange London in 2015, *Body of Confucius* curated by Tsong-Zung Chang and Shiming Gao in 2016 for *Beyond the Globe*, the 8th Triennial U3 Ljubljana, Slovenia, and at the Art Institute Chicago

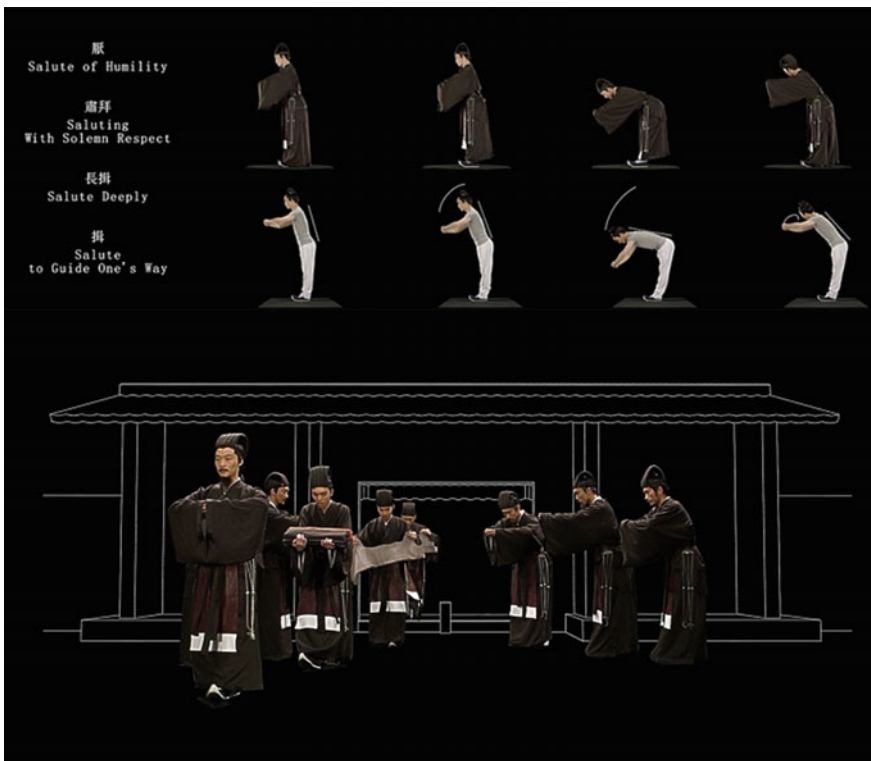


Fig. 1 (Bottom) actors perform the rite of passage “Confucian Rite (Capping ceremony)”; (top) motion annotation for the many forms of salute, 2013 (Remaking the Confucian Rites research project © Tsinghua University, Lia Jin Hall Foundation, École Polytechnique Fédérale de Lausanne, and City University Hong Kong)



Fig. 2 Installation view of “The Confucian Body: Rite of Archery” in *Deep Fakes: Art and Its Double*, curated by Sarah Kenderdine for EPFL Pavilions, Lausanne, Switzerland, 17.09.2021–01.05.2022, photograph by Sarah Kenderdine (Remaking the Confucian Rites research project © Tsinghua University, Lia Jin Hall Foundation, École Polytechnique Fédérale de Lausanne, and City University Hong Kong)

exhibition *Mirroring China’s Past: Emperors and Their Bronzes* (2018).¹³ In 2021 and 2022, an installation titled “The Confucian Body: Rite of Archery” was produced for and presented in the exhibition *Deep Fakes: Art and Its Double*, curated by Sarah Kenderdine for EPFL Pavilions, Lausanne, Switzerland, which featured a display of RCR’s replica ceremonial objects and a triptych of videos from the reenactment of the Archery Rite.¹⁴ It is this fifth ceremony from the *Book of Etiquette and Rites*, titled the *Rites of the Provincial Archery Competition*, that minutely describes for the first time the performance of the Archery Rite, which is the focus of the latter part of this chapter.¹⁵

¹³ *Mirroring China’s Past: Emperors and Their Bronzes*, Art Institute Chicago, United States of America, Feb 25–May 13, 2018. Retrieved from:

<https://www.artic.edu/exhibitions/2681/mirroring-chinas-past-emperors-and-their-bronzes>.

¹⁴ “The Confucian Body: Rite of Archery”, *Deep Fakes: Art and Its Double*, 17.09.2021–01.05.2022. Accessible from: <https://epfl-pavilions.ch/archive/deep-fakes-confucian-rites>.

¹⁵ The trainer for “Rites of the Provincial Archery Competition” is a Chinese Olympic archery champion.



Fig. 3 “Mirroring China’s Past: Emperors and Their Bronzes,” Art Institute Chicago 2018, installation view and triptych of films (Remaking the Confucian Rites research project © Tsinghua University, Lia Jin Hall Foundation, École Polytechnique Fédérale de Lausanne, and City University Hong Kong)

Significantly for this research, Peng also leads the “Ritual Archery Propagation Movement” initiated in 2014, through which a burgeoning number of colleges and universities in China are offering ritual archery courses and contests. As part of this endeavor, on September 24, 2015, the Tsinghua University Chinese Ritual Research Centre presented ancient Chinese archery rituals in the “Xiangyang Shooting Ritual Restoration Exhibition” held at the Confucius Temple in Beijing. Peng has also established an annual archery championship for academic students at Tsinghua University in coordination with other venues, in which 1200 people participated in 2019. Peng and Bingxue (2016, i) describe this revived interest as a “true portrayal of the return of Ritual Archery to education”. Both these activities and Peng’s reenactment of the “Rites of the Provincial Archery Competition” are considered of national scholarly import and interest for contemporary China and have received substantial support from the Chinese government and its National Planning Office of Philosophy and Social Science.

4 The Archery Rites and Intangible Cultural Heritage in China

The revival and remaking of the Confucian Rites are an important part of a relatively recent return to tradition in China. This shift first became evident during the 1970s, with China’s early embrace of global legitimization through UNESCO’s

cultural heritage listings (as of April 2022, China has 56 World Heritage Listed sites, second in the world only to Italy with 58 sites).¹⁶ The Chinese government's adoption of UNESCO's universal heritage values occurred in conjunction with conservation measures implemented at historical sites within China since 1950, and gradual turn to the revitalization of studies of "national studies (*guoxue*)".

On the global stage, at the end of the twentieth century, the lack of means to archive and transmit living or performed cultural heritage (such as dance, music, craft, storytelling or Confucian Rites) was one of the primary reasons for the 2003 UNESCO Convention for the Safeguarding of the Intangible Heritage (ICH). In the People's Republic of China, ICH is a significant discourse with its own lineage. China has arguably led the global rush to authorize ICH. Since the ratification of the UNESCO Convention on Intangible Cultural Heritage in 2004 Chinese authorities have listed 40 ICH elements (UNESCO, n.d.), and are advancing *feiyi* (an abbreviation of the words "intangible cultural heritage" in Chinese) to promote an ever-increasing number of cultural heritage projects and initiatives.

The transformation of the Chinese heritage paradigm has transformed Confucianism and Classical studies into venerated topics across cultural, political, and academic contexts.¹⁷ Yu (2015) highlights how "vernacular" living practices have been crucial for the communal transmission of ritual in China. Yet, some ICH scholarship undertaken by Chinese academics from a local standpoint has been criticised for being too focused on obtaining recognition for practices perceived as traditional (You 2015). While other scholars of Chinese ICH, such as Gao (2014) and Su (2018), maintain that subjective realms of intangible cultural heritage are excluded from the ICH paradigm, which Zhu (2012) further claims underpins doubts surrounding the authenticity of performed heritage. Concerns, nonetheless, about the authenticity of the sudden revival and promotion of intangible heritage cultures in China should be examined in tandem with the proliferation of reenactment practices and the rise of reconstructed rituals around the world.

5 Reenactment and the Archery Rites

Perpetuated through repertoires such as performance, dance, song, or ritual, intangible cultural expressions are enacted, socially transmitted, and intimately linked to people (Taylor 2003). However, the transmission of the past into the present requires not only the restaging of repetitions and reconstructions, but also their mediation between performers and audiences. Popularly known as reenactment, this mediation takes on diverse expressive forms, for example in battle scenes and martial arts or the reperformance of live art or ancient rites of passage. Such reconstructed

¹⁶ The "Convention Concerning the Protection of the World Cultural and Natural Heritage" was adopted by the General Conference of UNESCO on 16 November 1972.

¹⁷ See, for example, Yu Dan, a popular author on the Analects of Confucius, and Jiang Qing's work on political reform in China today from Confucian perspectives.

cultural performances share attributes of tacit and embodied expert knowledge, and are vibrant demonstrations of ICH in contemporary society specifically because they offer non-specialist audiences live and visceral encounters with history (Gapps 2009). More crucially, in enlivening embodied knowledge systems, reenactments serve vitally important aesthetic, social, economic, political, and epistemological functions for the societies that perform them (Daugbjerg et al. 2014).

For participants and scholars alike, reenactment is an opportunity for “embodied historiography,” an approach that considers performers as documents for critical thinking through which otherwise inaccessible knowledge might be unlocked (Branch and Hughes 2014, 108). Furthermore, as it places its actors in the same world as the objects or context being studied, reenactment produces more ontologically intense knowledge (Lash 2010; Schneider 2011). Finally, as a medium of heritage production that facilitates not only live reception but also learning, recording, and transmission, reenactment permits a deeper excavation of the past, as performers and audiences are given the means to review, revisit, re-do and rebuild the knowledge archive (Mulhe 2020; Ten Brink and Oppenheimer 2012; Waterton and Watson 2013).

The reenactment of ritual archery being undertaken in “Re-making Confucian Rites” is fundamental to the archery revival movement, which is an ideal exposition of the *li*-rites. First and foremost, the *li*-rites are a mediation technique for embodied knowledge, analogous to the sensual, corporeal and kinesthetic approaches as well as modes of representation found in many reenactment practices today. Archery is one of the more established methods of practicing and transmitting the *li*-rite, and is as such a crucial method for reconstructing the contemporary Chinese body, in addition to shaping how ritual archery might be incorporated, understood, and accepted into contemporary Chinese society. As Confucius himself taught in the *Analects* (7:1, 7:20), the way back to the embodied knowledge of the *li*-rites requires returning to the insights of the ancients. The task is not however to simply restore the past as it was, but to revive and reunite the Chinese social body with its core cosmology of the *li*-rites.

In terms of ritual archery, the most complete work undertaken to revive the *li*-rites to date is the reenactment and digital reconstruction of ritual archery in the “Re-Making of Confucian Rites,” from the performance manual of the *Book of Etiquette and Rites* from which the fifth ceremony, the *Rites of the Provincial Archery Competition*, has been reenacted. The following is a brief chronicle of the ceremony.

6 Rites of the Provincial Archery Competition *Xiang She Li*

The archery competition was divided into three rounds, in which six selected archers should compete in accordance with the Confucian *li*-rites, and with an emphasis on the harmonization between the self, the body, and the rhythm of music. According to Selby (2000, 54), the Provincial Archery Competition took place in a grand hall,

with an expansive courtyard surrounded by a wall... Towards the northern end is a roofed pavilion with a raised floor, giving the impression of a theatrical stage. In this pavilion sit the host and chief guests in special reserved places between the two main columns supporting the roof ... Towards the southern end of the courtyard a single target butt is set up. The target face is covered with a cloth. To one side of the target is a small screen sheltering the scorer.

The usual agenda of the Archery Ceremony consisted of preliminary bowing and drinking courtesies, followed by a contest, and a social drinking protocol to conclude. The three-round archery competition was the core event of the ceremony, which proceeded as follows.

Part one entailed preparations, including pairing of archers and teaching by the archery master, and final arrangements of the field, vessels, utilities, equipment and music for the competition. The first round of shooting comprised practicing non-competitive archery rituals, to rehearse the proper forms and conduct of the archery master's teaching.

The main formal competition was held in the second round, starting with the contest between the three pairs of archers, and a round between the town's mayor and the ceremony's host, followed by a match between the paired guests. The third round focused on competing based on etiquette techniques and music-shooting harmonization. A group of ceremonial musicians performed the poem of *Zouyu* (I:2:25) from the *Book of Songs* (*Shijing*) to accompany the archers' shootings. In order to score, the archer had to release the arrow and strike the target on the exact beat of the music, revealing Confucianism's ingenious integration of ritual and music to emblemize the form of the archer, whose harmony of mind and body was set as the ultimate quest of the Archery Rites. The third round thus aimed to guide the archers to focus on virtue and forbearance in practicing archery.

Importantly, etiquette protocols were threaded through the entire event. From the first shot, for instance, the two archers had to bow and then walk side-by-side from the west side to the east of the courtyard, and upon reaching the top of the west stairs they would bow (or salute) and then walk north, bowing to each other once again upon reaching the bottom of the west step. At the conclusion of each round of shooting the archers would "grasp their bows without any arrows in hand, salute to the south and then salute just as they did when they went up to shoot" (Selby 2000, 59). These ceremonial conventions underpin the self-cultivation role of ritual archery, as an exemplary medium of communion between the self, body and society in the Confucian ideological system, which simultaneously reinforced Confucian social hierarchy through etiquette protocols between junior and senior archers.

The Archery Ceremony has not been celebrated in China for close to 150 years. Its last official performance was under the auspices of Emperor Xianfeng in the 1850s, and at the time the Rite was performed according to an interpretation of the *Book of Etiquette and Rites* based on eleventh century CE scholarship, which was also not as accurate as the present RCR version. Regardless, reconstructing such a performed ritual paradigm from surviving manuscripts is a major challenge for historians and reenactors alike. An even greater problem for this revival is the documentation and transmission of the *li*-rites and its inherently embodied wisdom and knowledge. As it generates novel media art approaches and applies advanced methodologies in

interactive and immersive digital technologies, the primary endeavor of the RCR project is to reconnect the *li*-rites of past Confucian bodies with those of today.

7 Recording the Rites of the Provincial Archery Competition

As already outlined, the RCR project has reenacted and filmed three complete rituals from the *Book of Etiquette and Rites* since 2013—the “capping”, “marriage” and “archery” ceremonies—staged in Hong Kong, Taiwan and China. The “Rites of the Provincial Archery Competition” has entailed an even more elaborate realization, led by Professor Peng, his team and core members of Peng’s Ritual Archery Workshop. Above and beyond the relatively linear task of capturing the performance of the rites on video, the reenactment of the Provincial Archery event has resulted in major new innovations in the domain of digital reconstruction.

Arising from the rich lineage of media arts in the realm of intangible cultural heritage, of which Jeffrey Shaw and Sarah Kenderdine have created pioneering works,¹⁸ crucial forms of mediation are being developed through the immersive visualizations that are more apt to convey the bodily practices inherent to ritual archery. Over the past two decades, digital technologies have become a vital conduit for the transmission of embodied cultural knowledge in the creation of reperformable archives. The coming pages provide an overview of the methodologies developed in the process of documenting the “Rites of the Provincial Archery Competition,” as well as preparing a database for the eventual creation of an accessible archive of reperformable documents for study, teaching, and transmission.

First and foremost, strict historical accuracy underpins all aspects of this endeavor, specifically to combine academically justified interpretations of all the ritual ceremonial elements, from architecture, lighting, clothing, and equipment, to actor behavior, movement, and musical performance. For instance, an almost full-scale set of the original ritual temple described in the *Book of Etiquette and Rites* was constructed in a sound studio in Beijing (see Fig. 4), including all the temple architecture and the landscaping with real grass and dirt.¹⁹ A convincing daylight look was created using with more than 1000 studio lights (see Fig. 5), and the time of year (autumn) and location (central China) informing the lighting setup (35 degrees above the horizon at noon).

Secondly, the latest Hollywood green screen techniques were deployed to permit the eventual digital reproduction of the entire environment and scenery of the temple complex (see Fig. 6). Post-production processes have added the roof, sky, and the autumn-leafed apricot trees beyond the temple’s perimeter walls. A wide range of

¹⁸ See, <https://sarahkenderdine.info>. and <https://www.jeffreyshawcompendium.com/>.

¹⁹ Historical records with respect to the architecture of the Confucian Rites performance space are scant. The *Book of Etiquette and Rites* shows ground plans but no elevations or exterior renderings of the temple complex, however deductions have been made from other sources.



Fig. 4 Beijing-based studio set, capturing the “Rite of Archery,” 2018 (Remaking the Confucian Rites research project © Tsinghua University, Lia Jin Hall Foundation, École Polytechnique Fédérale de Lausanne, and City University Hong Kong)



Fig. 5 Set and green screen solutions for the “Rite of Archery,” 2018 (Remaking the Confucian Rites research project © Tsinghua University, Lia Jin Hall Foundation, École Polytechnique Fédérale de Lausanne, and City University Hong Kong)



Fig. 6 Final output of scene for the “Archery Rite,” 2018 (Remaking the Confucian Rites research project © Tsinghua University, Lia Jin Hall Foundation, École Polytechnique Fédérale de Lausanne, and City University Hong Kong)

digitization and video recording technologies have also been used to create a comprehensive and complete record of the Provincial Archery Competition, including 4K–8K videography with multiple points of view, static, mobile and dolly shots, close up, medium and long shots, aerial views, and high-speed videography. State-of-the art 3D imaging was also employed, from panoramic 3D and 360-degree photography, as well as spherical 360-degree videography. Lastly, a custom 360-cylinder rig was built to capture a 270-degree cylindrical panorama on the north side of the set.

While the photoreal representation of the location was prioritized, the main focus of the shoot was on the ritual behavior of the actors. To this end, the camera followed the relevant performer to train in on their actions as the ceremony unfolded. Motion tracking was therefore a critical component of the visual effects integration to ensure that the live action and computer-generated imagery (CGI) elements locked together as the camera travelled across the set. Creating a complete high-fidelity digital archive of the archery ceremony is, however, only the first level of documentation being pursued in the RCR project.

8 Transmitting Ritual Embodied Acts

A further core objective of “Re-making Confucian Rites” is the formation of an operative embodied expression of Confucian intangible cultural heritage in a present context. Computer science has fortunately already evolved the necessary techniques to this end, including interactivity, immersive visualization, virtual reality,

augmented reality, artificial intelligence and deep learning, being variously applicable to embodied expressions. The repetitious and precise nature of the Archery Ceremony's ritual order, moreover, lends itself to computational modelling, while new technologies of immersive interactive system design offer novel opportunities for research in embodied transmission through interoperable and reusable archives. Today, the digital encoding of performed and embodied heritage is enriched by a range of technological capture processes, such as green screen video capture, key frame pose extraction, motion capture, animation, photogrammetry and conventional 3D modelling, as well as photography and video in any format.

For the advanced documentation of expressive tacit movement, “mocap”, or the motion capture record of motion over time—as spatial/temporal modelling—produces datasets with unprecedented levels of detail that are particularly suited to documenting reenacted heritage. Motion capture provides a continuous topological model that allows for easier retainment of the affective quality of physical movement. Motion capture has notably already been adopted for the transmission of performed cultural heritage, such as martial arts (see Channon and Jennings 2014; Chao et al. 2018; Whalen-Bridge and Farrer 2011). Motion capture data is also used as a basic teaching aid in this context as it can serve as a prosthesis for social knowledge transfer in the absence of master teachers (Kenderdine and Shaw 2017, 2018).

These technologies are proving vital not only for the community and public transmission of the *Book of Etiquette and Rites* but also for the groundwork of the applied restoration research being done by its scholars, which cannot be undertaken in pure textual research because it has lost the original intention of Confucius (see Peng 2020). The real-world reconstruction of buildings for the Archery Ceremony film set, for example, has provided the practical means to re-perform ritual acts with physical bodies and vessels in a whole environment, which has in turn resolved academic disputes that philological study alone was unable to achieve. For Professor Peng, the digital animation of ritual movement within a virtual three-dimensional or panoramic space has enabled his team to incorporate annotations of past rituals and create an active database (see Peng 2020). This database is fundamental for in-depth investigation to compare reenacted performances with the literature paragraph by paragraph, and to coordinate the macro data with layered details, as is further described below, mining what Tsong-Zung Chang calls the “molecular structure” of the *li*-rites.

9 Aesthetic Transcription Through the Annotation of Ritual Movement

One key challenge for the embodied archives of the RCR project is how to ascribe meaning to ritual motion and acts in a way that is observable and decipherable for novice viewers. The annotation and semantic transcription of movement have long been of interest to choreographers and directors of performance. The tradition of

martial arts manuals also has an extensive history in China across martial arts and ritual practice, of which the *Book of Etiquette and Rites* is just one example. Relatively new in the West, the main systems prevalent in western movement notion and analysis are the Laban/LMA or Labanotation (1947) and Benesh (1977). These techniques have been effectively used to create knowledge and transmission systems for the “aesthetic transcription” of choreographic and other forms of embodied or performed cultural knowledge (Brown et al. 2003; Kenderdine 2016; Kenderdine and Shaw 2009). Furthermore, they facilitate a semantic system for perceiving and recording what movements mean through annotation that enables abstract and aesthetic physical actions to be transcribed into a legible and communicable visual and textual language.

One of the earliest influential works to emerge in this vein is William Forsythe’s *Improvisation Technologies* (1999). Created as a tool for the visual analysis of choreographic forms, it features a series of performed choreographic lectures augmented with an overlay of motion graphics to describe or transcribe the principles of Forsythe’s movement, as well as the “mental architectures” for real-time choreography (see deLahunta and Barnard 2018). Multimedia artist, designer and project co-creator Chris Ziegler (2016, 49) writes that, “in *Improvisation Technologies* we used rotoscoping techniques,²⁰ animating lines on top of video images as a tool to follow movements, constructing space over time”. Ziegler adds (2016, 45) that such aesthetic transcription is designed to help dancers generate movement material as a “multi-layered language re-organizing an architecture of space and time”.

Building on this approach is the project *That’s Kyogen!* (1999–2001), an interactive anthology of Japanese Kyogen comic theater selected by the master Nomura Mansaku, and released in 2001 as an interactive DVD-ROM. Similar to ritual archery, yet in contrast with the *Improvisation Technologies* project, the learning and performance of the comedy plays is passed down from one generation to the next. The interactive component of the DVD-ROM version gives an in-depth analysis of Kyogen theater, its plays, roles, acting styles, staging and props, to enable the continued study and teaching of this important form of traditional Japanese theater.²¹

Even more sophisticated transcriptions of expressive embodied motion have been realized for the Hong Kong Martial Arts Living Archive, which since 2012 has dynamically visualized the aesthetics and spatial-temporal dimensions underlying the movements of kung fu masters through color and motion graphics (Kenderdine and Shaw 2017, 2018). This specific application of visual transcription as annotated and real-time visualization layers allows for an in-depth analysis of the aesthetics of one performer that can be subsequently demonstrated in others. As it permits reflexive scholarly re-reading of manuscripts and the adjustment of interpretations,

²⁰ Rotoscoping is an animation technique that involves tracing (lines or marks) over multiple frames of film or video footage to generate enhanced illustrations of movement.

²¹ Other recent projects using LMA to record movement include folk dancing, Chinese opera, and hand gestures for music and handcrafts. See Aristidou et al. 2015, 2018; Hu et al. 2014; Hamilton 2015.

rather than a simple a priori motion analysis, the annotation of ritual reenactment has great potential for the scholarship of ritual archery and Confucian *li*-rites.

Professor Peng Lin (2020) describes how the innovative application of multimedia technology to the RCR project has already proven to be a crucial tool, both for bringing the *Book of Etiquette and Rites* to life, as a reperformable ritual and as a means of implementing novel scholarship on the reconstruction of embodied ritual practice. As previously mentioned, it is the fifth chapter of the *Book of Etiquette and Rites*, titled *Rites of the Provincial Archery Competition*, that provides intricate descriptions of the Archery Rite. Peng writes, there are more than “seventy characters in the *Rites of the Provincial Archery Competition*, each with different roles and changing positions, making it difficult to grasp in pure text research”. He elaborates that, as part of the digital reconstruction, the RCR team realized 600 ritual diagrams that were used to construct a 3D space. During the Archery Rite performance, the actors’ movements in the real space were documented using motion capture and tracked in 3D, building on the unique aesthetic and movement transcription techniques developed for *That’s Kyogen!* and *Improvisation Technologies*, work that RCR collaborator Jeffrey Shaw had played a key role in developing. This information was used to create a database of animations for scholarly purposes, which the RCR team have been populating with “annotations of past rituals,” as Peng explains. RCR researchers are already exploiting this active data archive to test hypotheses drawn from the philological and compare the literature, paragraph by paragraph, against the performance of the ritual acts, and then make deductions to identify and correct previously unsolvable problems.

10 Exhibiting the Rites of the Provincial Archery Competition

The ultimate goal of the above array of digital documentary methodologies is to create a database of descriptive and narrative assets for the Provincial Archery Competition that can then be shaped into to a range of presentation platforms for a variety of public contexts and interests. Some outputs include: archival recordings to encompass the entire real-time rendering of the Archery Ceremony (around twelve hours), also edited for linear single-screen documentary movies (from ten to one hundred and twenty minutes), for online, television and cinema viewing, or multi-screen installations for exhibition. Multi-viewpoint displays of the performance can moreover be creatively explored and offer an affective compression of the real-time duration of the original performance. The core objective is to create the means for the Confucian Archery Competition to be apprehended in terms of its twofold ritual aesthetics and social ethics through both artistic and scientific processes. Of the three Rites reenacted so far, the Archery Ceremony is the most developed and ready for digital

reconstruction, and was released as an application for Android and iOS in 2021, alongside an online version.²²

Creating online and application-based publications of the recordings of the Archery Rite poses unique challenges. Over eight hours of video data was captured, and any meaningfully complete exposition of the entire ceremony requires more than three hours of viewing. On the other hand, offering such an enormous archive to interested viewers on a mobile phone or tablet must deal with the issue of the general public expectation for more compact modes of information reception and data transfer. The solution the RCR team has developed is to provide three levels of access and appreciation. Firstly, there is a video interview with Professor Peng Lin, in which he outlines the entire project in a few minutes. Secondly, there is a traditionally-edited, linear documentary film that presents the entire ceremony in about thirty minutes. But the most important and innovative aspect of this application is its third modality, which offers the viewer interactive access to its complete database—an archive that encompasses over eight hours of video documentation, plus additional metadata in the form of other footage, photographs, drawings and texts concerning attire, ceremonial objects, ritual gestures, and academic commentary.

The highly original interaction design of this archive is presented as a grid of sixteen video windows that surround one larger central video window. The Archery Rite plays out along a semi-autonomous timeline of approximately three and a half hours' duration, divided into twelve individually accessible chapters. During this timeline, the documentary videos show up at different moments in the surrounding grid of windows. They also appear on different sides of the central window (above, below, left, or right), depending on whether the camera view of temple compound is facing north, south, east, or west. In this way, the viewer can select another simultaneous video at any time from those in perimeter videos, and bring it into the central viewing area, thereby becoming the real-time editor of the entire database. Also synchronized to this timeline are various metadata data offerings that appear when their respective buttons light up, features that can again be dynamically edited by the viewer and added to the central window experience (see Fig. 7).

The goal of inventing this application was to create a new model for the online experience and investigation of a complex and expansive intangible cultural heritage performance. This was achieved by bringing together traditional documentary modes with the power of a novel interactive multimedia editing engine, whose design enables the entire Archery Rite's big data archive to be not only presented but also to be interactively explored. Furthermore, it offers an effective paradigm for the online publication of all future Confucian Rites performances, as well as other intangible cultural heritage expressions, which will in turn stimulate and satisfy the interests of the general public as well as academic researchers.

²² "Rite of Archery Digital Platform", application for Android/ iOS, released 2021. Accessible at: <https://apps.apple.com/in/app/rite-of-archery/id1527969843>.



Fig. 7 “Rites of Archery” application, screenshot, 2020 (Remaking the Confucian Rites research project © Tsinghua University, Lia Jin Hall Foundation, École Polytechnique Fédérale de Lausanne, and City University Hong Kong)

11 Immersive Visualization Platforms

Replete with multimodal immersive, tactile, interactive, and sonorous forms of engagement, today’s multisensory museum (Classen 2017) is a prime site for the future transmission of embodied knowledge systems and intangible cultural heritage practices. Immersive virtual reality environments also provide a mode of learning that dynamically immerses viewers in multi-dimensional experiences which enhance embodied cognition (see Stefaniak 2014). Specifically for RCR, the panoramic photography and videography deployed in the recording of the Provincial Archery Competition will be used to present an immersive and interactive in-situ experience via head-mounted displays (HMDs), along with a 360-degree surround video projection. In other words, the viewer will be able to see, explore, and participate in the Ritual Archery performance by being present and moving around in the same space as the archers at one-to-one scale.

A specific iteration undertaken for RCR has involved the construction of a virtual 3D set that represents the entire temple and exterior environment of the rites performance. This “virtual world” is an all-surrounding realistic scene that the viewer inhabits and freely navigates through the HMD interface. Within this scene are moving video panels that display the various recordings of the Archery ritual performance. These are spatially positioned with respect to the original camera position and orientation in the temple on set. This also means that the panels will reorient in tandem with any camera movements, such as in a dolly shot. Furthermore, these video panels may appear and disappear in synch with the temporal and narrative flow of the original video recordings.

The videographic documentation undertaken for the Archery Rite means that viewers will be able to freely navigate simultaneous real-time recordings between multiple points of view, including total, medium, and close-up shots, or panoramic

and aerial perspectives. As a consequence, the viewer has the interactive freedom to constantly reposition themselves in relation to the performed environment, as well as to amplify attention to detail through access to analytical assets. The viewer in the virtual set may opt to simply observe videoed events from a distance as they occur and follow them in and about the surrounding space. Alternatively, they can approach and “enter” any one of these video panels at any time, at which point their field of view will be completely filled by the video recording. They can also step back from the entire video image at any moment, returning to the virtual set and thus be free again to wander about and choose another video to enter. This presentation methodology offers a form of mixed reality and hybrid space, which merges an interactive virtual world typical of computer games with the modality of cinematic moving images, a duality of presence in keeping with the simultaneity of the archer’s spirit and body.

12 Conclusion

China sits at a juncture of a global future inextricable from its historical past. After a century of radical politics, of violent destruction and the denial of history, it is time to excavate “deep history” in order to reconnect with the roots of China’s aesthetic sensibility, and to grasp the structure of its moral being (Chang 2017). Today, a growing number of scholars consider the investigation of *li* to be central to understanding modern China (see Billioud 2007; Leng and Salzman 2016; Peng 2002; Peng and Liu 2017; Wu 2014). Not only a philosophical concept, *li* is a belief system embedded in both China’s social structure and ancient laws. Despite the renewed embrace of Confucian ideology in China, Confucian rituals are only being recreated on a symbolic level or as a scholarly exercise, rather than through deep spiritual engagement and everyday lived experiences of ordinary people (Hammond and Richey 2015; Maags and Svensson 2018).

The Archery Rite is an exceptional opportunity to revive and practice *li* as a system of awareness and thus interpret its moral cosmology from an embodied perspective. Confucius, according to Selby (2000, 70), “sought to establish an alternative ideal from the macho warrior: an ideal of scholarship, peaceful coexistence and submission among the clearly defined hierarchical groups, at family level, between the citizen and the state and between the state and Heaven... [and] part of this package of beliefs was the magical power of the bow and arrow”.

The RCR’s reconstruction of the Rites of the Provincial Archery Competition offers a means to assimilate the rapid changes that have taken place in Chinese people’s sensibilities in terms of the physical body, and is thus a crucial conduit to reconcile the *li*-rites in Chinese corporeality today. Nonetheless, the dissemination and reprisal of this lost artform and practice remains a major ongoing challenge. Commenting on RCR’s Archery reenactment in 2017, contemporary artist and curator Li Zhenhua asks “who is going to perform it ... who will transfer its inner meaning? How can we travel there, to 2000 years ago?” This dilemma is echoed by performance studies scholar Katherine Johnson, who aptly asks (2015,

193) how “can we experience history?” In response, she claims that its reenactment is a crucial way to “facilitate an ongoing development of kinesthetic empathy that not only alters the physicality of those re-enacting bodies, but also some of the culture embodied therein” (Johnson 2015, 203). Downey (2010, 23) likewise expounds that reenactment is “history made flesh, a corporeal enculturation”. The large-scale operation to record, encode and display the tacit contents of the Archery Rite is therefore vital for making these embodied archives alive and available for the renewed transmission through their presence and immersion into Confucian ritual knowledge systems. Coupling reenactment with the power of computational modelling is the key to revitalizing the *li*-rites embedded in the Archery Rite and the modern Confucian body.

References

Confucian Classics and Manuscripts

- Liji* 禮記 [A concordance to the Liji]. 1992. Edited by D.C. Lau and Chen Fong Ching. Hong Kong: The Commercial Press.
- Liji* 禮記 [The record of rites]. 1992. In *Zhongguo da baike quanshu: Zhongguo lishi* 中國大百科全書: 中國歷史, edited by Liu Qiyu 劉起鈞, 2 fascicles. Beijing & Shanghai: Zhongguo da baike quanshu chubanshe 中國大百科全書出版社.
- Lunyu* 論語 [A concordance to the Analects of Confucius]. 1966. Harvard-Yenching Institute Sino-logical Index Series. Supplement no. 16. Taipei: Chinese Materials and Research Aids Service Center Inc.
- Lunyu* 論語 [Analects of Confucius]. Warring States period.
- Shijing* 詩經 [Book of songs/Book of odes]. 1974. In *Shiji zhuan* 詩集傳 [Book of poetry], edited by Zhu Xi 朱熹. Taipei: Yee Wen Publishing Co. 藝文印書館.
- Yili* 儀禮 [Book of etiquette and rites]. 1957. In *Yili zhushu* 儀禮注疏, edited by Zheng Xuan 鄭玄 [Han dynasty] and Jia Gongyan 賈公彥 [Tang Dynasty], 50 fascicles. Beijing: Zhonghua shuju 中華書局.

English Translations of Confucian Manuscripts and Classics

- Ames, Roger T. and Henry Rosemont. 1998. *The Analects of Confucius: A philosophical translation*. New York: Ballantine.
- Boltz, William G. 1993. “I-li.” In *Early Chinese texts: A bibliographical guide*, edited by Michael Loewe, 234–244. Berkeley, CA: Society for the Study of Early China.
- Legge, James. 1861. English translation of “The Analects of Confucius (480–350 BC).” In *The Chinese classics*, 1 volume. Reprinted in 1893. Oxford: Clarendon Press.
- Legge, James. 1871. English translation of “‘The She King,’ or the ‘Book of poetry’.” In *The Chinese classics*, 4 volumes. London: Frowde.
- Nylan, Michael. 2001. *The five Confucian classics*. New Haven, CT: Yale University Press.
- Steele, John. 1917. *The I-li or Book of etiquette and ceremonial*. London: Probsthain.
- Waley, Arthur. 1996. *The book of songs: The ancient Chinese classic of poetry*. New York: Grove.

Other References

- Aristidou, Andreas, Efstathios Stavrakis, Panayiotis Charalambous, Yiorgos Chrysanthou, and Stephania Loizidou Himona. 2015. "Folk dance evaluation using Laban movement analysis." *Journal of Computing Cultural Heritage* 8 (4). <https://doi.org/10.1145/2755566>.
- Aristidou, Andreas, Efstathios Stavrakis, Margarita Papaefthimiou, George Papagiannakis, and Yiorgos Chrysanthou. 2018. "Style-based motion analysis for dance composition." *Visual Computing* 34: 1725–1737. <https://doi.org/https://doi.org/10.1007/s00371-017-1452-z>.
- Bell, Catherine. 1997. *Ritual: Perspectives and dimensions*. Oxford & New York: Oxford University Press.
- Benesh, Rudolf. 1977. *Reading dance: The birth of choreology*. London: Souvenir Press.
- Billioud, Sébastien. 2007. "Confucianism, 'cultural tradition' and official discourses in China at the start of the new century." *China Perspectives* 2: 50–65.
- Billioud, Sébastien, and Joel Thoraval. 2015. *The sage and the people: The Confucian revival in China*. Oxford & New York: Oxford University Press.
- Branch, Boyd, and Erika Hughes. 2014. "Embodied historiography: Rupture as the performance of history." *Performance Research* 19 (6): 108–115.
- Brown, Neil, Dennis Del Favero, Jeffrey Shaw, and Peter Weibel. 2003. "Interactive narrative as a multi-temporal agency." In *Future cinema. The cinematic imaginary after film*, edited by Jeffrey Shaw and Peter Weibel, 312–315. Cambridge, MA: The MIT Press.
- Chang, Tsong-Zung. 2017. Panel member with Jeffrey Shaw, "Deep time machine II: Jeffrey Shaw's screening of the remaking of Confucius rites." *Potential Spaces Conference*. ZKM, Karlsruhe. Retrieved from: <https://www.youtube.com/watch?v=ry2leciY58Q>.
- Chang, Tsong-Zung, and Gao Shiming. 2016. "Installation #2' *Re-making the Confucian rites – Capping ceremony*. Retrieved from: <http://www.mg-lj.si/en/exhibitions/1717/u3-the-body-of-confucius/>.
- Channon, Alex, and George Jennings. 2014. "Exploring embodiment through martial arts and combat sports: a review of empirical research." *Sport in Society: Cultures, Commerce, Media, Politics* 17 (6): 773–789. <https://doi.org/https://doi.org/10.1080/17430437.2014.882906>.
- Chao, Hing, Matt Delbridge, Sarah Kenderdine, Lydia Nicholson, and Jeffrey Shaw. 2018. "Kapturing Kung Fu: Future proofing the Hong Kong martial arts living archive." In *Digital Echoes: Spaces for Intangible and Performance-based Cultural Heritage*, edited by Sarah Whatley, Rosamaria K. Cisneros, and Amalia Sabiescu, 249–264. London: Palgrave Macmillan.
- Chard, Robert. 2014. "Poetic depictions of Confucian rituals and the aesthetics of ritual." The Third International Conference on Ritual Studies 第三屆禮學國際學術研討會, Zhongguo meishu xueyuan 中國美術學院, Hangzhou 杭州, 7 December 2014.
- Chen Chunhui 陈春慧. 2002. "Lun sheli xingshuai yu wenhua shanbian" 论射礼兴衰与文化嬗变 [On the rise and fall of archery rites and the evolution of culture]. *Nanjing ligong daxue xuebao (shehui kexue ban)* 南京理工大学学报 (社会科学版) [Journal of Nanjing University of Science and Technology (Social Science Edition)] 1: 20–23.
- Classen, Constance. 2017. *The museum of the senses: Experiencing art and collections*. London: Bloomsbury Academic.
- Daugbjerg, Mads, Rivka Syd Eisner, and Britta Timm Knudsen. 2014. "Re-enacting the past: Vivifying heritage 'again'." *International Journal of Heritage Studies* 20 (7/8): 681–87. <https://doi.org/https://doi.org/10.1080/13527258.2014.939426>.
- deLahunta, Scott, and Philip Barnard. 2018. "Seeing the 'Choreographic Mind': Three analytic lenses developed to probe and notate creative processes in dance." In *The neurocognition of dance: Mind, movement and motor skills*, 2nd edition, edited by Bettina Bläsing, Martin Puttke, and Thomas Schack, 88–11. London: Taylor and Francis.
- Do-Dinh, Pierre. 1969. *Confucius and Chinese humanism*. New York: Funk and Wagnalls.
- Downey, Greg. 2010. "'Practice without theory': A neuroanthropological perspective on embodied learning." *Journal of the Royal Anthropological Institute* 16 (s1): S22–S40.

- Forsythe, William. *Improvisation technologies. A tool for the analytical dance eye*. 1999. (CD-ROM). Produced at ZKM Karlsruhe, Germany.
- Gao, Bingzhong. 2014. "How does superstition become intangible cultural heritage in post-socialist China?" *Positions Asia Critique* 22 (3): 551–572.
- Gapps, Stephen. 2009. "Black-facing for the explorers." In *In settler and creole re-enactment*, edited by Vanessa Agnew and Jonathan Lamb, 208–220. New York: Palgrave MacMillan.
- Guo, Bei. 2007. *The theory and method of archery training in preparation for major competitions*. Harbin: Heilongjiang Science and Technology Press.
- Hamilton, Kelly. 2015. "Mapping motion II: Motion capture and the visualization of dance." *Proceedings of the Conference on Electronic Visualization and the Arts*: 46–55.
- Hammond, Kenneth J., and Jeffrey L. Richey. 2015. *The sage returns: Confucian revival in contemporary China*. Albany, NY: State University of New York Press.
- Hu, Huaichin, Rayuan Tseng, Chyicheng Lin, Likuo Ming, and Katsushi Ikeuchi. 2014. "Analyzing Taiwanese indigenous folk dances via labanotation and comparing results from interdisciplinary studies." In *Digital heritage. Progress in cultural heritage: Documentation, preservation, and protection*, edited by Marinós Ioannides, Nadia Magnenat-Thalmann, Eleanor Fink, Roko Žarnić, Alex-Yianing Yen, and Ewald Quak, 196–206. Cham: Springer.
- Jiang Nan 姜楠. 2004. "'Sheli' yuanliu kao" "射礼"源流考 [The origin of "archery rites"]. *Beijing ligong daxue xuebao (shehui kexue ban)* 北京理工大学学报 (社会科学版) [Journal of Beijing Institute of Technology (Social Science Edition)] 3: 94–96.
- Johnson, Katherine. 2015. "Rethinking (re)doing: historical re-enactment and/as historiography." *Rethinking History* 19 (2): 193–206.
- Kenderdine, Sarah. 2016. "Embodiment, entanglement and immersion in digital cultural heritage." In *A new companion to digital humanities*, edited by Susan Schreibman, Ray Siemens, and John Unsworth, 22–41. Hoboken, NJ: John Wiley and Sons.
- Kenderdine, Sarah, and Jeffrey Shaw. 2009. "New media in situ: the re-socialization of public space." *International Journal of Arts and Technology* 2 (4): 258–276. <https://doi.org/https://doi.org/10.1504/IJART.2009.029235>.
- Kenderdine, Sarah and Jeffrey Shaw. "Archives in motion. Motion as meaning." In *Museum and archive on the move: Changing cultural institutions in the digital era*, edited by Oliver Grau. Berlin: De Gruyter, 211–233. doi: <https://doi.org/10.1515/9783110529630-014>.
- Kenderdine, Sarah and Jeffrey Shaw. 2018. "The museological re-enactment of Lingnan Hung Kuen." In *Lingnan Hung Kuen across the century: Kung Fu narratives in cinema and community*, edited by Hing Chao, 137–159. Hong Kong: City University of Hong Kong Press.
- Laban, Rudolf. 1947. *La Maîtrise du Mouvement Essai*. Paris: Actes Sud. Translated by J. Challet-Haas and M. Bastien in 1994. London: Macdonald and Evans.
- Lash, Scott. 2010. *Intensive culture: Social theory, religion and contemporary capitalism*. London: Sage.
- Lavrillier, Alexandra. 2012. "The Tungusic community, which who brought us the term 'Shaman'." In *The Asian side of the world: Editorials on Asia and the Pacific 2002–2011*, edited by Jean-François Sabouret. CNRS Éditions. doi:<https://doi.org/10.4000/books.editions-cnrs.12726>.
- Leng, Lu, and Michael Salzman. 2016. "The renaissance of Confucianism in contemporary China from the perspective of terror management theory." *Sociology and Anthropology* 4 (2): 52–58. <https://doi.org/10.13189/sa.2016.040202>.
- Li, Zhenhua. 2017. Panel member with Jeffrey Shaw, "Deep time machine II: Jeffrey Shaw's screening of the remaking of Confucius rites." *Potential Spaces Conference*. ZKM, Karlsruhe. Retrieved from: <https://www.youtube.com/watch?v=ry2leciY58Q>.
- Lian Xiuli 连秀丽. 2019. "Xi Zhou qingtong mingwen sheli yanjiu" 西周青铜铭文射礼研究 [Study on bronze inscription archery rites in the Western Zhou dynasty]. *Hunan daxue xuebao (shehui kexue ban)* 湖南大学学报 (社会科学版) [Journal of Hunan University (Social Science Edition)] 6: 113–118.

- Lin Ling 林铃. 2020. "Yili sheli yongyue kaobian" 《仪礼》射礼用乐考辨 [A textual research on the use of music for archery rites in the Book of Etiquette and Rites]. *Zhenjiang gaozhuan xuebao* 镇江高专学报 [Journal of Zhenjiang College] 4: 112–115.
- Ling Tingkan 凌廷堪. 2012. *Lijing shili* 礼经释例 [Translation and commentary on rituals], edited by Peng Lin 彭林. Beijing: Beijing daxue chubanshe 北京大学出版社.
- Liu, Yucai, and Luke Habberstad. 2014. "The life of a text: A brief history of the *Liji* (Rites Records) and its transmission." *Journal of Chinese Literature and Culture* 1 (1/2): 289–308. <https://www.muse.jhu.edu/article/565263>.
- Louie, Kam. 1980. *Critiques of Confucius in contemporary China*. New York: St. Martin's Press.
- Louie, Kam. 1986. *Inheriting tradition: Interpretations of the classical philosophers in Communist China*. Oxford: Oxford University Press.
- Maags, Christina, and Marina Svensson. 2018. *Chinese heritage in the making: Experiences, negotiations and contestations*. Amsterdam: Amsterdam University Press.
- Ma, Lianzhen. 2004. "Summary of Chinese archery research." *Sports Culture Guide*, 10.
- Ma, Mingda. 2009. "Reconstructing the indigenous physical culture in China." Translation by Zhao Shi-qing, *Journal of Chinese Martial Studies* 1 (Summer).
- Ma Mingda 马明达, and Ma Lianzhen 马廉祯. 2004. "Zhuixun shiluo le de zhonghua 'shexue': Du Xie Sufang 'Chinese Archery' you gan" 追寻失落了的中华“射学”: 读谢肃方《Chinese Archery》有感 [Pursuing the lost Chinese 'archery': Impressions on Xie Sufang's 'Chinese Archery']. *Tiyu wenhua daokan* 体育文化导刊 [The Journal of Sport History and Culture] 6: 71–72.
- Mansaku and Mansai. 2001. *That's Kyogen!* (DVD-ROM). Initiated by Waseda University and Tokyo Media Connections. Produced by ZKM, Karlsruhe. Tokyo: Kadokawa shoten Publishing.
- Morgan, Daniel. P. 2017. "Calling out Zheng Xuan (127–200 CE) at the crossroads of ritual, math, sport and classical commentary." *Commentaries on Mathematical Texts in a Comparative Perspective*, August 2017, Berlin, Germany. Retrieved from: <https://halshs.archives-ouvertes.fr/halshs-01490864>.
- Mulhe, Maria. 2020. "Mediality." In *The Routledge handbook of reenactment studies*, edited by Vanessa Agnew, Jonathan Lamb, and Juliane Tomann, 133–137. London: Routledge.
- Myerhoff, Barbara. 1997. *Secular ritual*. Amsterdam: Van Gorcum.
- Peng Lin. 1998. "On the characteristics of the emendation of *I-Li* by the Qing dynasty." *Journal of Chinese Historical Studies* 1.
- Peng Lin. 2004. *Rituals and civilizations of ancient China*. Beijing: Zhonghua shuju 中华书局.
- Peng Lin. 2013. "Rujia yuejiao yu dexing yuanman" 儒家乐教与德性圆满 [Confucianism and the completeness of virtue]. *Wen, shi, zhe* 文史哲 [Literary History, Philosophy] 6: 5–13.
- Peng Lin. 2015. "Yifeng yisu yu liyue jiaohua" 移风易俗与礼乐教化 [Changing the customs and rituals]. *Lingnan xuebao* 岭南学报 [Lingnan Journal of Chinese Studies] 1: 215–228.
- Peng Lin 彭林. 2016. "Gengxu yu zhuanxing: Lixue chuantong zhi shanbian" 赓续与转型: 礼学传统之嬗变 [Continuation and transformation: The evolution of ritual tradition]. *Hebei xuekan* 河北学刊 [Hebei Academic Journal] 4: 71–83.
- Peng Lin. 2017. "Rujia rensheng liyi zhong de jiaohua yihan" 儒家人生礼仪中的教化意涵 [The implication of moralization in Confucian life etiquette]. *Guangxi daxue xuebao (zhexue shehui kexue ban)* 广西大学学报 (哲学社会科学版) [Journal of Guangxi University] 3: 1–7.
- Peng Lin. 2018a. "Lide zhengji zhi li: Sheli" 立德正己之礼: 射礼. *Zhonghua huoye wenxuan (jiaoshi)* 中华活页文选 (教师) 3: 4–9.
- Peng Lin. 2018b. "'Zhou Guan' 'liudai dawu' shuo kaobian" 《周官》“六代大舞”说考辨 [A textual research on music dance in the Six Eras of Officers of the Zhou dynasty]. *Qinghua daxue xuebao (zhexue shehui kexue ban)* 清华大学学报 (哲学社会科学版) [Journal of Tsinghua University (Philosophy and Social Sciences)] 1: 92–119.
- Peng Lin. 2020. "Zhishang delai zhong jueqian—Weihe 'Yili' xuyao zuo fuyuan yanjiu" 纸上得来终觉浅——为何《仪礼》需要做复原研究 [Practice gives deeper understandings than theoretical readings—Why is the reenactment of Confucian rites critical?] *Guangming ribao* 光明日报 [Guang Ming Daily], December 12, 2020, p. 15. Retrieved from: https://epaper.gmw.cn/gmrb/html/2020-12/16/nw.D110000gmr_b_20201216_2-15.htm.

- Peng Lin, and Han Bingxue. 2016. *Lishe chujie* 禮射初階 [Early stages of ritual archery]. Beijing: People's Sports Publishing House of China.
- Peng Lin, and Liu Junya. 2017. *Ritual, music and ethos of culture in ancient China* (English only). Beijing: China Renmin University Press.
- Ren Yuqiao 任语桥. 2012. "Sheli" 射礼 [Archery rites]. *Jingu chuanqi* (Wuxiabian shangbanyue ban) 今古传奇(武侠版上半月版) [Legends of Modern and Ancient (First Half of Martial Arts Edition)] 1: 25.
- Schechner, Richard. 1993. *The future of ritual. Writing on culture and performance*. London: Routledge.
- Schneider, Rebecca. 2011. *Performing remains. Art and war in times of theatrical reenactment*. New York: Routledge.
- Selby, Stephen. 2000. *Chinese archery*. Hong Kong: Hong Kong University Press.
- Stefaniak, Jill. 2014. "Immersive simulation: The replication of environments to practice problem solving." In *Curriculum models for the 21st century: Using learning technologies in higher education*, edited by Maree Gosper and Dirk Ifenthaler, 313–324. New York: Springer.
- Su, Junjie. 2018. "Conceptualizing the subjective authenticity of intangible cultural heritage." *International Journal of Heritage Studies* 2 (9): 919–937. <https://doi.org/https://doi.org/10.1080/13527258.2018.1428662>.
- Taylor, Diana. 2003. *The archive and the repertoire. Performing cultural memory in the Americas*. Durham, NC: Duke University Press.
- Ten Brink, Joram, and Joshua Oppenheimer. 2012. *Killer images. Documentary film, memory and the performance of violence*. New York: Wallflower Press.
- Tu, Wei-Ming. 1985. *Confucian thought: Selfhood as creative transformation*. Albany, NY: Suny Press; State University of New York Press.
- UNESCO. 1972. "Convention concerning the protection of the world cultural and natural heritage." UNESCO World Heritage Centre. Retrieved 17 December 2020 from: <https://web.archive.org/web/20200526200434/https://whc.unesco.org/en/convention/>
- UNESCO. 2016 edition of "Convention for the safeguarding of the intangible heritage." Retrieved from: <https://ich.unesco.org/en/convention>
- Waterton, Emma, and Steve Watson. 2013. "Framing theory: Towards a critical imagination in heritage studies." *International Journal of Heritage Studies* 19 (6): 546–561.
- Whalen-Bridge, John, and Douglas S. Farrer. 2011. "Martial arts, transnationalism and embodied knowledge." In *Martial arts as embodied knowledge: Asian traditions in a transnational world*. Albany, NY: Suny Press.
- Wu, Shufang. 2014. "The revival of Confucianism and the CCP's struggle for cultural leadership: A content analysis of the People's Daily, 2000–2009." *Journal of Contemporary China* 23 (89): 971–991. <https://doi.org/https://doi.org/10.1080/10670564.2014.882624>.
- You, Ziyang. 2015. "Shifting actors and power relations: Contentious local responses to the safeguarding of intangible cultural heritage in contemporary China." *Journal of Folklore Research* 52 (2/3): 253–268. <https://doi.org/https://doi.org/10.2979/JFOLKRESE.52.2-3.253>.
- Yu, Hua. 2015. "A vernacular way of 'safeguarding' intangible heritage: The fall and rise of rituals in Gouliang Miao Village." *International Journal of Heritage Studies* 21 (10): 1016–1035. <https://doi.org/https://doi.org/10.1080/13527258.2015.1048813>.
- Yu Shuisheng 俞水生. 2013. "Yu Sheli—Cong 'she' zi yanbian kan chuantong fanzhan linian" 与射礼—从“射”字演变看传统反战理念 [Archery rites—The traditional anti-war concept based on the evolution of the Chinese character 'shooting']. *Wenshi zhishi* 文史知识 [Knowledge of Literature and History] 1: 89–92.
- Zhang, Tong, and Barry Schwartz. 1997. "Confucius and the Cultural Revolution: A study in collective memory." *International Journal of Politics, Culture and Society* 11 (2): 197–202.
- Zhu, Yujie. 2012. "Performing heritage: Rethinking authenticity in tourism." *Annals of Tourism Research* 39 (3): 1495–1513.
- Ziegler, Chris. 2016. "William Forsythe's improvisation technologies and beyond: a short design history of digital dance transmission projects on CD-ROM and DVD-ROM, 1994–2011." In

Transmission in motion: The technologizing of dance, edited by Maaïke Bleeker, 41–52. London: Routledge.

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