

---

# Body and Mind in Early China: An Integrated Humanities–Science Approach

Edward Slingerland\*

---

This article argues against the strong “holist” position that the early Chinese lacked any concept of mind–body dualism, and more broadly against a “neo-Orientalist” trend that portrays Chinese thought as radically different from Western thought. In the first half, it makes the case against strong mind–body holism by drawing upon traditional archeological and textual evidence. In the second, it turns to resources from the sciences, arguing that large-scale quantitative–qualitative analyses of early Chinese texts suggest that they embrace a quite vigorous form of mind–body dualism, and further that a huge body of evidence coming out of the cognitive sciences suggests that this is not at all surprising. In this section, the role that deep humanistic knowledge can, and should, play in scientific approaches to culture is also explored. The article concludes by suggesting that a mutually informed, humanities–scientific approach to religious studies is the best way for our field to move forward.

---

\*Edward Slingerland, Department of Asian Studies, Asian Centre, 607-1871 West Mall, University of British Columbia, Vancouver, BC, Canada V6T 1Z2. E-mail: [edward.slingerland@ubc.ca](mailto:edward.slingerland@ubc.ca). I have benefited greatly from audience feedback at the venues where I have presented aspects of this work, including the Collège de France, Princeton University, Ca’Foscari (Venice), the 2011 Association of Asian Studies Annual Meeting, and the 2010 Pacific American Philosophical Association Meeting. In particular, I would like to thank Paul Goldin, Anne Cheng, Martin Kern, Ben Elman, and Willard Peterson for comments that have helped me clarify my arguments. This research was supported by a Social Sciences and Humanities Research Council of Canada grant and the Canada Research Chairs program.

*Journal of the American Academy of Religion*, pp. 1–50  
doi:10.1093/jaarel/lfs094

© The Author 2013. Published by Oxford University Press, on behalf of the American Academy of Religion. All rights reserved. For permissions, please e-mail: [journals.permissions@oup.com](mailto:journals.permissions@oup.com)

AN ALMOST UNIVERSALLY ACCEPTED TRUISM among scholars of Chinese religion is that, while “Western” thought is dualistic in nature, early Chinese thought can be contrasted as profoundly “holistic.” This sentiment can be traced back to the earliest reception of Chinese thought in Europe, where second-hand accounts of Confucian thought penned by Jesuit priests caused thinkers such as G. W. Leibniz and Voltaire to see Chinese mind–body holism, or their supposed lack of distinction between the secular and religious, as precisely the medicine needed to jolt sick European thought out of its doldrums.<sup>1</sup> One of the odd features of the modern Academy is the fact that, while the negative side of this sort of cultural essentialism—the denigration of China as psychologically and politically infantile by the likes of G. W. F. Hegel and Montesquieu—has been singled out and rejected as perniciously “Orientalist,” its normatively positive manifestation has continued to flourish. What I have come to think of as “Hegel with a happy face”—the idea that some essential Chinese holism can serve as a corrective to an equally essentialized Western thought—can be traced from the early European *philosophes* to scholars such as Lucien Lévy-Bruhl and Marcel Granet (Lévy-Bruhl 1922; Granet 1934) straight down to prominent contemporary scholars of Chinese thought such as Roger Ames, Henry Rosemont, Jr., and François Jullien (Jullien 2007; Rosemont and Ames 2009).<sup>2</sup>

The “radical holist” position embraced by these scholars has many components: the dualist binaries supposedly foreign to Chinese thought include transcendent–immanent (Needham 1974: 98), part–whole (Jullien 2007: 90), nature–culture (Sterckx 2002: 5), and individual–collective (Ames 2008: 29). This article focuses on one particularly important binary, that of body and mind, characterizing the radical mind–body holist position as well as briefly reviewing some of the traditional humanistic evidence against it.<sup>3</sup> I then turn to two new sources of evidence against radical holism, both borrowed from the sciences: a method for performing large-scale random sampling and multiple researcher coding as a check against our qualitative intuitions, and a

<sup>1</sup>See Jensen (1998) on the early reception of Confucianism in the West, and Cook and Rosemont (1994) on Leibniz and his reception of Chinese thought.

<sup>2</sup>See Brown (2006) for an excellent survey of the history of this debate, as well as Puett (2001: 4–20), Billeter (2006), Cheng (2009), Saussy (2001), McDonald (2009), and Zhang (1998) on the continued dangers of cultural essentialism in contemporary Chinese studies.

<sup>3</sup>Also see Farmer et al. (2000) for an excellent general critique of the position that holism is somehow unique to China, as well as Michael Puett’s commonly ignored, but nonetheless definitive, debunking of claims concerning nature–culture holism in early China (Puett 2001).

body of empirical evidence from the cognitive sciences concerning the likelihood of some form of mind–body dualism being a human universal.

My more limited goal in this article is to give scholars of religion a more accurate sense of how body and mind were conceived in early China, and to help us to move beyond culturally essentialistic stereotypes of China, positive or negative. I conclude that early Chinese thought is, in fact, characterized by an at least “weak” mind–body dualism—one in which mind and body are experienced as functionally and qualitatively distinct, although potentially overlapping at points—and moreover that such dualism is likely to be a human cognitive universal. At a very general level, this article aims to provide a concrete illustration of the benefits to religious studies of cooperation between the humanities and natural sciences (Slingerland 2008; Taves 2009; Slingerland and Collard 2012). On the one hand, I hope to show both how techniques borrowed from the sciences can be drawn upon as supplements to traditional humanistic methods, and how engaging with the literature from various branches of the cognitive sciences can allow scholars of religion to begin their interpretative projects from a more accurate hermeneutical starting point. On the other hand, I also discuss the manner in which religion scholars and other humanists can play an important role in helping cognitive scientists to think through their categories and get beyond often quite historically and culturally parochial models of human cognition.

### THE MYTH OF STRONG MIND–BODY HOLISM IN EARLY CHINA

One common focus of claims about supposed mind–body holism in early China is the character *xin* 心, variously translated as “heart” (the original graph is clearly a depiction of the physical organ), “heart–mind,” or “mind.” It is relatively uncontroversial in the field that, depending upon the text and historical period, *xin* can refer to the physical organ itself or, more abstractly, to a locus of both the sort of higher cognition typically associated with *mind* in Western cultures and emotions or feelings, which tend to be associated more with *body*. A relatively weak form of the holist position—one that will be defended below—would hold that we do not find in early China the sort of distinction between an entirely disembodied *mind*, *esprit*, or *Geist* and an ontologically distinct *body* that characterizes certain philosophical positions in the West. Unfortunately, all too commonly defenses of this more cautious, accurate view—that Cartesian ontological dualism was unknown in early Chinese thought—quickly slide into cultural

caricature: the actually rather odd position defended by Descartes *is* what “Western” thought always has been about, which means that, since the Chinese are not Cartesians, they must be somehow radically different, even a “different order of humanity” (Ames 1993a: 149).

Such radical difference characterizes what I call the *strong* holist position, which holds that, for the early Chinese (or “the Chinese” or even the “East” more generally), there exists no qualitative distinction at all between anything we could call *mind* and the physical body or other organs of the body. Roger Ames, for instance, claims that the early Chinese conceived of the person “holistically as a psychosomatic process,” and that the very idea of the body as a material substance was foreign to the Chinese: “the body is a ‘process’ rather than a ‘thing,’ something ‘done’ rather than something one ‘has’” (1993b: 168). François Jullien similarly explains that, because the Chinese saw what we would call body, soul, and mind as nothing more than points along a continuous, constantly transforming spectrum of energy, “no dualism is possible” (2007: 69); Chinese thought “eludes the great divide between body and soul . . . through which European culture has so powerfully shaped itself” (8). This holistic view of the *xin* has also penetrated other fields, where psychologists, anthropologists, and cognitive linguists have held up the Chinese concept of *xin* (or the Japanese *kokoro*) as evidence against mind–body dualism as a cognitive universal (Wierzbicka 2006; Yu 2007). Strong views about mind–body holism are also quite common—if not the default position—in contemporary Chinese scholarship: Zhang Zailin, for instance, observes that, in early Chinese thought, there is no dichotomy of mind versus physical body, but rather a holistic conception whereby mental processes are produced holistically by the body (Zhang 2008: 29; cf. Yang 1996; Tang 2007).

Even scholars who might seem, at first glance, to be adopting a stance consistent with weak holism often end up embracing positions that only make sense if one takes holism in a strong sense. Mark Edward Lewis, for instance, observes that “the Chinese”—in contrast to “the Western tradition”—“accepted that the mind was part of the body, more refined and essentialized, but of the same substance” (2006: 20), and then goes on to describe the body in early China as an apparently arbitrarily chosen, culturally constructed “marker of supreme value” (20), and the bodily surface as a constantly “fluid and shifting . . . zone of exchange” (61). Considering the obvious and intuitive importance of the body as a locus for value and discrete individuality in most Western traditions, this suggests that the early Chinese inhabited an intellectual milieu in which the concepts of body, mind, and self–other boundaries were quite alien to our own. A similar assumption of radical alienness

regarding mind and body informs Herbert Fingarette's famous claim that the Confucius of the *Analects* completely lacked anything like the concept of psychological interiority (Fingarette 1972; cf. 2008).<sup>4</sup> Indeed, strong forms of the holist position typically link a complete absence of mind–body dualism in early China to a lack of inner life, individualism, or concept of a personal afterlife. Paolo Santangelo, for instance, claims that, in contrast to “Western cultures,” in China:

there is no clear separation between spirit and matter, or soul and body . . . the concept of “mind–heart” (*xin*) is different from the idea of an exclusively human soul, endowed with reason and able to make free decisions. . . . Here, too, there is no place for the idea of the individual that rose in Europe from the concept of the immortality of the soul. (Santangelo 2007: 292)

We see here the quite-common coordination of mind–body holism with freedom from other supposedly Western dichotomies: spirit–matter/reason–emotion/essence–appearance/transcendence–immanence. As I discuss below, there is a kernel of truth to all of these claims—otherwise they would not enjoy such continued endorsement by knowledgeable scholars—but we need to resist the tendency to slip from reasonable claim into caricature, or to mistake explicit philosophical positions for actual human cognition. First, however, I would like to consider a variety of reasons for being skeptical about the strong mind–body holist position.

### Traditional Humanistic Evidence against Strong Holism

In a monograph in progress (Slingerland forthcoming), I review in some detail the historical and archeological evidence against the strong mind–body holist position; because of space constraints I confine myself here to merely a few observations, focusing on the Warring States (sixth–third century BCE) period that left us such a wealth of archeological and textual evidence.

*Afterlife Beliefs.* Our earliest written records from China are found on the so-called oracle bones, ox scapulae or turtle plastrons that were used in the Shang Dynasty (1600–1046 BCE)<sup>5</sup> as a means for communicating

<sup>4</sup>For a more targeted characterization and critique of Fingarette's position, see Slingerland (forthcoming).

<sup>5</sup>Although the traditional starting date for the Shang Dynasty is circa 1600 BCE, our earliest written records—the so-called oracle bones—date from circa 1250 at the earliest. For an introduction to Shang religion, see Eno (2009).

with the spirit world. These queries and petitions were directed to a variety of supernatural powers, ranging from what appears to be a non-ancestral high god, Di 帝, down through various nature deities and the ancestors of the royal line. Although ritual practices were directed toward a variety of supernatural agents, sacrifices and petitions tended to focus on the spirits (*shen* 神) of the ancestors, who—though described as dwelling “above” (*shang* 上) or with Heaven—were also in constant interaction with the living. They were thought to descend to earth and be present in some numinous form at sacrifices and other important ceremonies, where they were feted with food and drink (from which they extracted only the invisible essences) in order to secure their blessing and continued support. “The spirits are all drunk!” declares a narrator in one ancient poem with great satisfaction, sign that the ceremony could now safely be concluded.<sup>6</sup> Scholars have suggested that Western Zhou bronze vessel inscriptions were written on the inside of the vessels because the texts were meant to be read by the spirits, not their living descendants, implying that the spirits were thought to be not only conscious but literate (Shaughnessy 1991; von Falkenhausen 1995).

There are continuing controversies in the literature concerning how, precisely, to understand the early Chinese conceptions of the afterlife—which in any case clearly varied both regionally and chronologically—once we enter the Warring States.<sup>7</sup> In her detailed study of a Warring States tomb, Constance Cook argues that the material evidence of the tomb “firmly supports the idea of the detachment of an ethereal self from the corporeal body as an ancient and enduring Chinese belief” (2006: 17), and sees in this Warring States practice commonalities with later Han Dynasty accounts that undeniably concern disembodied spirit journeys. Cook’s interpretation of this particular tomb is by no means a universal consensus; other scholars, such as Wu Hung, have argued against seeing anything like Han spirit journey concepts at work in Warring States mortuary practices, interpreting Warring States tombs as instead “happy homes” meant to house the quasicorporeal spirit for eternity (Wu 1994). In either case, the fact remains that “the dead” (i.e., the disembodied minds/spirits of previously living persons) belong to a qualitatively different order of invisible, relatively intangible, powerful,

<sup>6</sup>*Book of Odes*, Mao #209. The fact that these relatively incorporeal spirits could consume at least the invisible essence of food and drink, and even become drunk, is a manifestation of the “weakness” of the folk’s dualism that will be discussed later.

<sup>7</sup>For helpful introductions, see Poo (1998) and Lai (2005); for an excellent recent survey focused on early Chinese mortuary practices, see Thote (2009).

and possibly dangerous beings. As Lothar von Falkenhausen has convincingly argued, early Chinese mortuary practices—at least by the late Warring States—reveal a view of the afterlife as “hermetically separate and independent from the world of the living” (2006: 300), with the spirits of the dead perceived as “categorically different from the living” (306). It is equally clear that early China was rife with vivid and widely distributed beliefs concerning elaborate spirit journeys and complex spiritual realms separate from, but modeled on, “our” world that predate the introduction of Buddhism to China. As Guolong Lai concludes in his broad review of a variety of late Warring States and early Han tombs, “the late-Warring States and early-Han conceptions of the afterlife generally agree upon the notion of a soul that retains consciousness after death; they also accommodate ideas of some type of land of the dead, postmortem paradise, and the travel of the soul beyond its state of entombment” (2005: 42; cf. Poo 1990).

Such dualism becomes even more explicit when we turn to textual accounts of the afterlife. Early transmitted textual sources, such as the *Zuo Zhuan*, make it clear that the deceased were thought to continue to exist in individual form, maintaining the same personalities and concerns that they possessed in life. A common theme is the appearance of a ghost or ancestor—often in a dream, but sometimes during waking life—complaining about the behavior of the living, making dire predictions about the future, seeking revenge for wrongs done to them during life, or extorting offerings from the living on the threat of supernatural punishment.<sup>8</sup> A bamboo text found a Warring States tomb from the late fourth century BCE appears to be a form that could be filled out by the living relatives of those who had died in battle, requesting that a certain deity named Wu Yi 武夷, apparently assigned by the Lord on High to care for and watch over war dead, allow the spirit of the deceased to return to his family to receive food offerings. This strongly suggests that, even by the Warring States, the dead were thought to be residing in some sort of afterworld, and to be capable of traveling between the two worlds under certain conditions.<sup>9</sup> These afterlife beliefs—as well as the belief in other supernatural beings such as ancestral spirits, nature deities, or high gods—were not only widespread, but

<sup>8</sup>See Kalinowski (2009) for a description of these accounts.

<sup>9</sup>See the account in Lai (2005); Lai notes that the place where the proper name would be expected is occupied by the character *mou* 某 (“so-and-so”), suggesting that this was a form text that had, for whatever reason, yet to be filled in. Also see Poo (2009) for a discussion that situates this text in the broader context of Warring States afterlife beliefs.

also fundamentally parasitic upon some sort of mind–body dualism: these beings were conceived of as human minds without bodies (or possessing only very tenuous and invisible bodies) who, nonetheless, were interacted with in a manner modeled upon ordinary social interactions because of their continued possession of minds and personal essence.

It is also apparent that, under the proper conditions, these disembodied spirits were viewed as capable of being brought back to life. In a famous passage from the *Zhuangzi* (late fourth century BCE) that recalls *Hamlet*, Zhuangzi has a conversation with a human skull—a metonymic anchor for the soul that once possessed it—and poses the question: “If I could get the Arbiter of Fate to bring your body back to life, to make you some bones and flesh, to return you to your parents, your wife and children, your old home and friends—wouldn’t you want that?” (Watson 1968: 193).<sup>10</sup> The fact that this question was not viewed as merely hypothetical is suggested by an account in a late Warring States archeological text of a certain individual named Dan who is returned to life after being released by underworld officials (Harper 1994). The officials in Dan’s case appear to have been paid off or otherwise propitiated by his living relatives, which suggests that the afterworldly bureaucracy was seen to be as corrupt as that of this world’s.

The idea that one’s physical body could be replaced or substituted makes it clear that one’s personal identity or essence—what makes a person who they are—was understood as something located in the extrasomatic spirit. Another passage from the *Zhuangzi* illustrates this very nicely. Confucius witnesses a set of piglets suddenly stop nursing at the body of their recently dead mother and run away; the reason for this reaction, he observes, is that:

they could no longer see themselves in her, they could no longer see her as one of their own kind (*lei* 類). That which they loved about their mother was not her body, but rather that which moved/commanded (*shi* 使) her body. When someone is killed in battle, he is buried without his battle paraphernalia; someone who has had his feet amputated has no reason to care about shoes. In both cases, the thing that is basic (*ben* 本) has been lost. (Watson 1968: 73)

We see here a clear conception of an incorporeal “essential” element to the self—an element that is the locus of personal agency and identity—that leaves the physical body upon death, leaving only an empty husk.

<sup>10</sup>Translations from Chinese texts cited are my own, unless otherwise noted, and keyed to the most commonly used English translations.

This makes absolutely no sense except in the context of mind–body dualism: while the corporeal body dies and decomposes, the *mind*—that is, the locus of consciousness and personal identity—lives on in some incorporeal, or at best quasicorporeal, form.<sup>11</sup> As Paul Goldin has observed, passages such as these make it clear that a view of the mind and body as “distinct entities” (2003: 228) is not at all unknown in early China, and in fact is necessary to begin to even make sense of beliefs in the afterlife, ghosts and spirits, and phenomena such as spirit possession.<sup>12</sup> Discussing a passage from the *Mozi* that describes a spirit descending into the body of medium and then using the medium’s body to inflict punishment on a lax religious functionary, Goldin notes that “here we have, in the starkest possible terms, a ghost in the machine. . . . The author of this text apparently had no difficulty in conceiving of a dualistic universe populated by material bodies and immaterial spirits” (236–237).

By the time we reach the early Han (third century BCE), this body–soul dualism becomes, if anything, even more distinct: both the received textual record and unearthed archeological texts are filled with detailed accounts of religious techniques for freeing the mind or spirit from the physical body, pre- and postmortem spirit journeys, and complex geographies of the afterworld, which was variously conceived of as located under, above, or at the far extremity of the visible world.<sup>13</sup> In texts such as the chronologically rather problematic *Liezi* 列子—most likely containing significant Warring States material, but assembled in the third century CE—we even begin to get hints of something approaching Cartesian substance dualism. In one very odd and interesting passage,<sup>14</sup> we read of an automaton—apparently made of out of leather and wood—so indistinguishable from a “real” person that it angers the king when it winks at one of his concubines during a performance. The king’s anger is only assuaged when the automaton is taken apart to

<sup>11</sup>As I discuss later, it seems that spirits and other supernatural beings in early China were not conceived of as completely immaterial: spirits are invisible and freed of physical bodies, but arguably are viewed as merely very tenuous or diffuse forms of matter. Nonetheless, this spectrum of tangibility/visibility is not continuous: there is a clear divide between the mundane world of physical bodies and other concrete, visible objects and the “numinous” (*shen* 神, *ling* 靈) realm of the ghost-demons (*gui* 鬼) and various spiritual beings and gods.

<sup>12</sup>Goldin also links such mind–body dualism to “folk psychology” (232), anticipating the connections to cognitive science work on ToM that I discuss later.

<sup>13</sup>Harper (1994), Campany (1996); as Lo (2008) notes, by medieval times, body–soul dualism is very firmly in place in Chinese religious thought.

<sup>14</sup>I am indebted to Wayne Kreger for bringing this passage to my attention, and to Paul Goldin for observing that, although this particular passage is almost certainly post-Buddhist, Jeffrey Ritchie has documented probably earlier versions from the *Liezi* in Ritchie (2011).

reveal that it is merely a machine—that is, nothing but material stuff, with no mind or soul present. Whatever the date of this passage, by the time of the Eastern Jin Dynasty (317–420 CE) commentator Zhang Zhan 張湛, the “automaton problem”<sup>15</sup> it poses is inspiring surprisingly defensive critiques of materialism from what is essentially a substance dualism perspective. “Nowadays there are people who say that the human spirit (*ling* 靈) is something merely produced by a mechanism (*jiguan* 機關),” Zhang reports. “How could this be?” In language that echoes contemporary Creationist diatribes against evolutionary theory, he contrasts the supreme mystery (*zhimiao* 至妙) of the created (*zao* 造), natural world with the clumsiness of human technology, and concludes by declaring, “How could anyone possibly say that living things lack a spiritual master / controlling spirit (*shenzhu* 神主)!” (Yang 2007: 181). We could not wish for a clearer expression of a sharp dichotomy between a mechanistic physical–material level of reality and the realm of the disembodied, creative, free, and intentional spirit.

*Philosophical Accounts of Xin–Body Relations.* One pillar of the strong holist position is the claim that the *xin* is simply one organ in the body, not in any way *qualitatively* different from other organs. The goal of Jane Geaney’s *On the Epistemology of the Senses in Early China* (2002), for instance, is to “undermine the view that the heartmind [*xin*] is *radically* distinct from the senses.” “The heartmind is,” she declares, “if not a sense itself, then very closely related to them” (84)—i.e., although the *xin* has its own particular functions to play in the organic self, its functions are in no sense qualitatively different from the those of the other organs.

This claim, unfortunately, simply does not hold up to scrutiny. While certainly identified in some way as an organ in the body, the *xin* in Warring States discourse is clearly singled out as a very special type of organ, with qualitatively unique powers: it is the locus of intentions, rational thought, language use, categorization, and voluntary willing. Because of these qualitatively unique powers, it is often contrasted with the other bodily organs, and is in fact the *only* organ to be singled out and contrasted with the body as a whole. Anyone familiar with Warring States literature will recognize that the rhetorical contrast of *xin* and, for instance, *xing* 形 (“physical form, body”; one of the three basic words for the physical body) is quite common. It is worth noting this fact precisely because it seems so unremarkable. Passages that contrast

<sup>15</sup>Anyone familiar with Descartes’ writings will note the parallel to Descartes’ own obsession with automatons.

the *xin* with the body are processed effortlessly and excite very little comment—either in traditional commentaries or contemporary secondary literature. This effortlessness is itself a data point when it comes to innate cognitive universals: one only needs to consider the immediate bizarreness of a passage that contrasted the body with, say, the liver to get a sense of how deep our own intuitive mind–body dualism runs. As I will touch upon again below, the qualitative “otherness” of the *xin* typically passes unnoticed—both by traditional commentators and by modern readers—precisely *because* of our shared innate dualism, and for this reason, it is worth doing a bit of work to tease it out.

One of the ways in which the *xin* is singled out in many Warring States texts is when it is identified as the natural “ruler” or “lord” (*jun* 君) of the rest of the body. As a passage from the recently discovered *Five Types of Action* puts it, “The ears, the eyes, nose, mouth, hands and feet—these six are all slaves to the mind. If the mind says, ‘yes,’ none of them dare say ‘no.’ If the mind says, ‘let it be so,’ none of them dare to disagree” (strips 45–46). Indeed, the permission of the *xin* is seen by some Warring States writers as necessary for the other organs to simply carry out their tasks. As a passage from the *Lushi Chunqiu* remarks, “It is the essential nature of the ear to desire [pleasant] sounds. However, if the mind is not pleased, the ear will not hear even if the five musical notes are right before it.” (5/4.1; Knoblock and Riegel 2000: 142–143). A similar passage in the *Xunzi* remarks, “If the *xin* is not exerted in the process of sensory perception, then black and white could be in front of one’s eyes and one would not see them, and thunder drums could be pounded by one’s side and one would not hear them” (21/1; Knoblock 1994: 100).

The *xin*’s authority to rule is not arbitrary: it is the ruler of the self because it possesses special, qualitatively unique powers. The *Liushi Chunqiu* passage just quoted attributes the sensory-blocking power of the *xin* to its unique ability to bracket simple desires and make broader normative judgments: “Those that [simply] desire are the ears, eyes, nose and mouth; that which is pleased or not pleased is the *xin*” (5/4.1; Knoblock and Riegel 2000: 143). This is because while the other organs of the self are drawn blindly to their sensory objects in a mechanistic fashion, the *xin* alone is able to think, reflect, and make free decisions. As *Mencius* 6:A:15 famously observes:

The organs of sight and hearing do not think (*si* 思), and therefore are dominated by things. When things interact with other things [i.e., unthinking senses], there is mechanical attraction, that’s all. The organ of the mind, on the other hand, is capable of thought. If it thinks, it

obtains its object; if it doesn't think it does not. (Van Norden 2008: 156)

One could not wish for a clearer expression of a central feature of folk mind–body dualism: a distinction between mental causation, which involves reflection and free will, and the sort of blind, mechanistic interaction characteristic of the physical world.<sup>16</sup>

The mind's function as the center of free will and reflection makes it, in turn, the center of moral responsibility. We see this theme summed up admirably in a passage from the *Xunzi* that both celebrates the freedom of the *xin* and the moral burden that comes with this power. The slavish, mechanical parts of the self cannot ultimately be held responsible for what they do, since they are merely following mechanistic causation or orders from above. On the other hand, the *xin*'s power of self-determination means that it alone bears responsibility for the moral or immoral behavior of the body as a whole:

The mind is the lord of the body, and master of its spiritual brightness. It issues commands, it does not receive commands. On its own initiative it forbids or commands, rejects or adopts, begins or stops. Therefore, although the mouth can be compelled to remain silent or speak, and the body can be compelled to crouch or stretch, the mind cannot be compelled to change its ideas. If it thinks something is right, it accepts it; if it thinks that something is wrong, it rejects it. (21/6; Knoblock 1994: 105, modified)

This is not to say that all Warring States thinkers share precisely the same view of the *xin*. Lee Yearley has argued convincingly that the Xunzian *xin*, for instance, is a rather autocratic, disembodied ruler, with preferences completely distinct from the first-order desires of the body and the power of absolute fiat over it. He contrasts this with Mencius' *xin*, which—though in charge—derives its moral direction from first-order desires, and must marshal the support of other parts of the self, such as the *qi* (Yearley 1980). Despite such differences of degree, however, the basic picture is the same: the *xin* alone of all the organs possesses the powers of thought and choice, and is the locus of a special sort of causality—free will—that is completely distinct from the sort of causation that governs the physical world and the other organs of the body.

<sup>16</sup>For a discussion of the link between the *xin* and free will, see Perkins (2009) and op. cit., particularly Jiang (2000/1: 34) and Ding (2000: 303–304).

We should also note that there are, in fact, at least some passages in Warring States texts that explicitly deny a special role to the *xin*. The most well-known example is *Mencius* 6:A:7, where we read:

With regard to the mouth, all palates find the same things tasty; with regard to the ears, all find the same things pleasant to listen to; with regard to the eyes, all find the same things beautiful. Now, when it comes to the *xin*, is it somehow unique in lacking such common preferences? What is it, then, that minds share a preference for? I say that it is order and rightness. (Van Norden 2008: 151)

This passage serves as a key piece of evidence for Geaney, who portrays it as a strong indication that the *xin* and other organs are not “radically different in nature” (2002: 101), and that, for the early Chinese, the *xin* “behaves like the senses and seems to be considered a sense function” (13), no different from the other organs. The basic point that is being missed here, though, is that the rhetorical structure of this passage makes it clear that Mencius, in claiming that the *xin* is like the other organs, is making an *argument*, not expressing an assumption—and making an argument that he clearly expects will be met with resistance or incredulity.<sup>17</sup> The “taste” for rightness and order that Mencius attributes to the *xin* is understood *metaphorically* on the analogy of physical taste: were the *xin* really viewed as on equal footing with the mouth or the body, there would be no necessity for Mencius to posit such analogies.

Anyone who doubts that passages such as 6:A:7 are fundamentally predicated on mind–body dualism should try substituting another organ for the *xin*: “Now, when it comes to the ear, is it somehow unique in lacking such common preferences?” sounds as ridiculous in classical Chinese as it does in English. Here again, processing fluency tells us much about the implicit background of cognitive universals that provides the very context of intelligibility within which philosophical argumentation can take place. Over a decade ago, Michael Puett explicitly identified the sort of conflation of argument and assumption described here as the key to many false stereotypes about early Chinese thought, such as the supposed holism between nature and culture, or the supposed lack of the concept of innovation (Puett 2001: 1–20). It is time for scholars of early China to take this point to heart, as it were.

---

<sup>17</sup>Cf. *Mencius* 7:A:27, where hunger and thirst are described as being able to distort one’s physical as well as metaphorical—i.e., *xin*-based—“taste.”

---

## THE HUMANITIES–SCIENCE INTERFACE: TWO NEW POINTS OF CONTACT

In this section, I would like to supplement the more traditional humanistic evidence presented above with two relatively new—at least for humanities scholars—sources of evidence. Both serve to strengthen the case that the early Chinese were mind–body dualists of a sort. They are also both intended as illustrations of the potential benefits of making use of techniques and specific findings about human cognition borrowed from the sciences, as well as how this interaction has to flow both ways.

### Points of Contact, Part I: Textual Analysis

One issue with the evidence that I provide above—as with the evidence presented in almost any exchange between humanities scholars—is the problem of cherry picking: defenders of holism tend to highlight particular textual passages or details of the archeological record, opponents others. This is less of a problem when it comes to extreme, culturally essentialistic claims to the effect that the early Chinese completely lacked a given concept—whether mind–body dualism or any other—where a handful of clear counter-examples are sufficient for debunking purposes. More reasonable claims concerning cultural differences, however, are typically less totalizing, and focus on general trends or dominant patterns rather than claims of complete exclusion. A. C. Graham, for instance, notes that defensible generalizations about “Chinese thought”—for instance, that it is relatively uninterested in formal logic—are reports of general trends, always admitting exceptions for particular thinkers or historical periods (1989: 6–7; cf. Van Norden 2007: 10–15).

I would argue that, when it comes to these sorts of more reasonable claims about general cultural trends, our traditional method of drawing upon textual evidence is undermined by the possibility of persistent bias. The cultural significance of individual passages suggesting a more or less “holistic” stance toward mind and body is difficult to assess without a clear sense of how representative they are of the corpus as a whole, and such a sense cannot be accurately captured by traditional methods. As scholars of religion, we have a deep familiarity with the textual corpus relevant to the tradition(s) we study, and we all at least implicitly assume that the passages that we draw upon when we make generalizations about our traditions are in some way more revealing or more representative than those of our opponents. It remains the case,

however, that intuitions are often misleading or intellectually self-serving.

This problem of individual bias is a central concern in the various branches of the natural sciences, which have developed a variety of methodologies to minimize its influence. When it comes to the qualitative analysis of any sort of corpus—written texts, transcripts of interviews, videos of human or other animal behavior—these methodologies include large-scale random sampling of data, coding or analysis of these data by independent researchers, checks of intercoder reliability, and statistical analysis in order to evaluate the significance of any discerned trends.

*Concepts of Xin in Early China: A Large-Scale Corpus Analysis.* Inspired by these methods, I recently ran a study that attempted to supplement the exclusively qualitative, but therefore necessarily somewhat *ad hoc*, methods typically employed by scholars of religion with methods borrowed from the natural sciences that combine qualitative and quantitative analysis. This study attempted to approach the question of the relative prevalence of mind-body dualism in early China by performing a keyword-focused random sampling of passages from the pre-Qin corpus of received texts, supplemented by the corpus of recently discovered Warring States archeological texts from Guodian.<sup>18</sup> To get a sense of changes over time, these texts were classified into three rough periods: pre-Warring States (circa 1500 to 475 BCE), early Warring States (late fifth to mid-fourth century BCE), and late Warring States (mid-fourth century BCE–221 BCE).<sup>19</sup> We extracted passages containing *xin* from an online database of the entire received pre-Qin corpus,<sup>20</sup>

---

<sup>18</sup>Preliminary results have been reported in [Slingerland and Chudek \(2011a\)](#), to which the reader is referred for more technical details and statistical analyses. Also see the critique by [Klein and Klein \(2011\)](#), and our response in [Slingerland and Chudek \(2011b\)](#).

<sup>19</sup>Of course the dating—even rough—of texts from the pre-Qin period is controversial, not least of all because, like most preprinting-press texts, they are rather permeable, taking in material from different time periods and subject to scribal and editorial whims. There are currently various factions within the field of early Chinese studies, ranging from scholars who still defend a very clear and “traditional” chronology of pre-Qin texts to what I would characterize as a “radical fringe” that has been arguing for extreme textual indeterminacy in all pre-Han texts (e.g., [Brooks and Brooks 1998](#)). I would place myself somewhere in the middle, and would stand by the claim that the three-part periodization that I employed in the study is broadly defensible on both philological and philosophical grounds (see [Slingerland 2000](#) and [Goldin 2011](#)). In any case, the contrast between the pre-Warring States texts on the one side and the early- and late-Warring States texts on the other is certainly uncontroversial, and the trends I discuss still hold if we collapse early- and late-Warring States into one category.

<sup>20</sup>An online database maintained by the National Palace Museum in Taipei, Taiwan (<http://210.69.170.100/s25/index.htm>).

TABLE 1. CODES APPLIED TO TEXTUAL PASSAGES (FROM SLINGERLAND AND CHUDEK 2011a, USED WITH PERMISSION)

Coding Criteria					
1	Implicitly/explicitly contrasted with body	}	Contrasts with body	}	Contrast codes
2	No clear hierarchy between xin and body				
3	Xin clearly more important than body				
4	Body clearly more important than xin				
5	Explicitly contrasted with other organs	}	Contrasts with other bodily organs		
6	Implicitly contrasted with other organs				
7	Explicitly identified with other organs				
8	Implicitly identified with other organs				
9	Listed with other organs, distinguished by position (first or last)	}			
10	Listed with other organs, not distinguished by position				
11	Literal physical organ	}	Body	}	Content codes
12	Locus of emotion	}	Emotion		
13	Locus of ambition/plans/motivation/intention/character	}	Cognition		
14	Locus of thought/reflection/knowledge/attention				
15	Locus of decision-making/free will/conscious choice/effort				
16	Dependent	}	Xin's role		
17	Object/passive/inferior				
18	Inside rather than outside	}	Xin's location		
19	Outside rather than inside				
20	A physical location/place				
21	Nonlocalizable				
22	Proper location of self	}	Xin's properties		
23	Container				
24	Mirror				
25	Water				
26	Literal center	}	Impairment		
27	Functioning impaired by physical/material causes				
28	Functioning impaired by nonphysical/material causes				
29	Uncodeable				

as well as a database of a cache of recently discovered pre-Qin archeological texts.<sup>21</sup> The result was 1,321 passages, automatically chunked

<sup>21</sup>An online database of the so-called Guodian corpus of bamboo texts (interred roughly 300 BCE and discovered in 1993), maintained by the Chinese University of Hong Kong (<http://bamboo.cuhk.edu.hk/>).

into traditionally established textual units by the search engine. Then my three coders (graduate students of mine, who were technically blind to the hypothesis that I wanted to explore, although—being my students—no doubt at least dimly aware of the purpose of the study) and I randomly sampled sixty passages and inductively developed a set of twenty-nine codes to classify its usage (see Table 1).

Next, the three coders applied these codes to 620 randomly sampled passages, presented in a randomized order. First, each passage was independently coded by two of the three coders. Passages for which both coders' decisions agreed on all twenty-nine codes were considered finalized at this point (310 passages, or about half). For the remaining passages a third coder (i.e., the one not in the pair who initially coded that passage) independently coded these passages, and where their twenty-nine decisions corresponded exactly to one of the first two coders, these passages were again considered finalized (159 passages, or approximately half of the remaining passages). The remaining disagreements were arbitrated and finalized by myself, with full access to the original coders' decisions and notes. Considering the rather high standards set for intercoder agreement—perfect agreement on twenty-nine separate decisions—intercoder reliability was quite good, with an initial 0.50 correlation in Round 1 and 0.76 correlation having been achieved by the end of Round 2. In order to assure that my own coding in Round 3 did not distort the results, we also did a check and confirmed that all of the trends discussed below were still significant after Round 2: all effects retained their statistical significance and directions, and their magnitudes remained close to those reported below.

Of the codes applied to the passages, two main categories bear directly on the analysis of our results that I would like to review here: (a) whether or not *xin* is contrasted with the body; and (b) whether it is used to refer to a bodily organ, locus of feelings and emotions, or a locus of cognition in the deliberate, reflective sense usually connoted by *mind*. To begin with, we found that passages involving an explicit contrast between the *xin* and the body<sup>22</sup> were quite common, constituting

---

[lib.cuhk.edu.hk/](http://lib.cuhk.edu.hk/)). The inclusion of archeological texts was intended to help offset the inevitable bias introduced in dealing with transmitted texts, which may have been subjected to editorial selection bias over the centuries. The Guodian corpus was chosen because of the ease of accessing and searching it online. As Paul Goldin has observed (personal communication), however, this introduces a potential new, and more avoidable, source of bias—the selection of one particular archeological corpus among the many now available—that should be corrected in future iterations of this study.

<sup>22</sup>Instances of *xing* 形, *shen* 身, *ti* 體, *li* 力 (“physical strength,” one instance in the late Warring States), and *qi* 氣 (when used in the sense of physiological energy) were all taken as references to the “body.”

4% of pre-Warring States passages (7 of 179) and roughly 10% of early (3 of 35) and late (42 of 406) Warring States passages. This increase in the frequency of contrasts over time was statistically significant, suggesting that mind–body disjunction was becoming a more prominent concern or theme.

One question that came up when I presented our preliminary results to groups of psychologists was how this frequency of *xin*–body contrasts compared to contrasts between other organs and the body. My initial response was that there *were* no examples of other organs being contrasted with the body—my intuition was that, although *xin*–body contrasts slip under the interpretative radar because they accord with our innate folk dualism, any mention of a liver–body or ear–body contrast would have come to my attention. In the spirit of quantitative demonstration, however, we put this to the test: to provide a baseline for comparison, we did a quick follow-up study looking for any contrasts between the body and four other commonly mentioned organs in Warring States texts, two external (*mu* 目 “eye” and *er* 耳 “ear”) and two internal (*gan* 肝 “liver” and *fu* 腹 “stomach”). Of the 864 passages containing occurrences of these terms in the received pre-Qin textual database, only 337 also contained one of the predominant “body” terms (*xing* 形, *shen* 身, *ti* 體) and thus were likely candidates for a contrast, and these 337 were coded by two coders working independently on mutually exclusive subsets. Only one contrast—a single passage where the stomach is contrasted with the body<sup>23</sup>—was found. This means that the odds of *xin* being contrasted with the body were about seventy-seven times greater than the other organs we examined: in other words, *xin* is essentially unique in being contrasted with the body. This finding alone renders completely untenable the claim that the *xin* is in no way qualitatively different from the other organs.

A second trend in which we were interested was the extent to which *xin* was portrayed as primarily a physical organ, a locus of emotion, or a locus of “higher” cognition,<sup>24</sup> and whether or not there were any patterns in such references that changed over time. What we found is that the frequency with which *xin* referred to body did not differ significantly between the three periods, but the rates of reference to *xin* as locus of cognition and emotion did. *Xin* as locus of cognition was

<sup>23</sup>*Mencius* 4:A:19 (Van Norden 2008: 99), where physically taking care of one’s parents is characterized as “merely caring for their mouths and limbs” (*yang kouti* 養口體); this arguably expresses a coordination rather than a contrast.

<sup>24</sup>Note that, for the purposes of the final analysis, content codes 13–15 (all referring to various aspects of what one might term “higher cognition”) were collapsed into one code.

much more frequent in the early and late Warring States compared to the pre-Warring States period, although there was no statistically significant difference in the frequency between the early and late Warring States. In contrast, *xin* as locus of emotion showed the reverse pattern: it was referred to significantly less in the early and late periods than the pre period, while also not significantly differing between the early and late period. The general pattern of our findings is illustrated in Figure 1.

Throughout all three periods, *xin* referred to a physical body organ at a consistently low rate (about 3%). During the pre-Warring States period, it referred about equally often to a locus of emotion or cognition. By the early Warring States period, it was being used to refer to the locus of cognition far more frequently (about 80% of the time) than emotions (about 10% of the time), and this pattern persisted into the late Warring States period. This change also corresponded to a rise in the frequency of explicit contrasts of *xin* with the physical body.

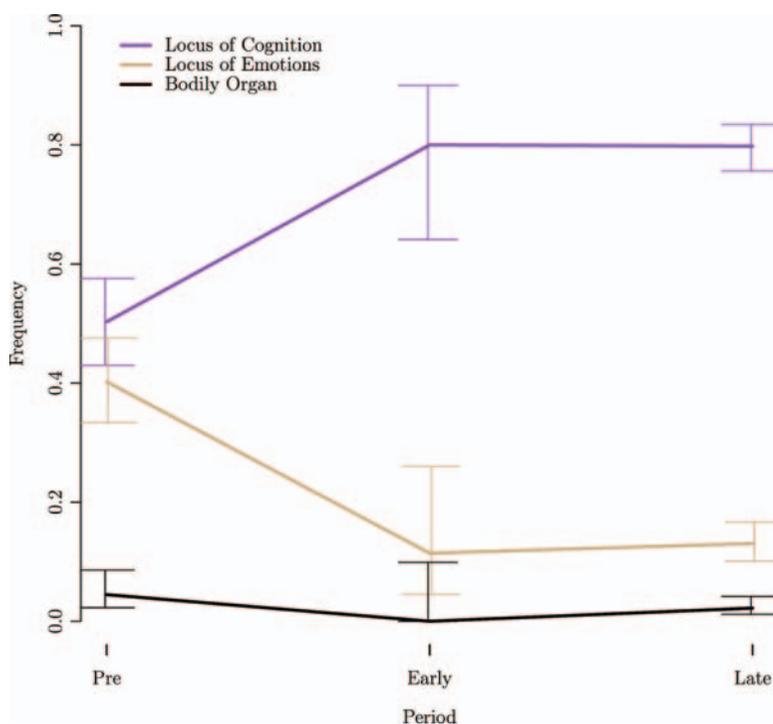


FIGURE 1. TEMPORAL TRENDS IN THE RATE AT WHICH *XIN* REFERS TO A PHYSICAL ORGAN, A LOCUS OF EMOTION, OR A LOCUS OF COGNITION, IN THE PRE, EARLY, AND LATE WARRING STATES PERIODS, WITH 95% CONFIDENCE INTERVALS—THE MARGIN OF POSSIBLE STATISTICAL ERROR (FROM SLINGERLAND AND CHUDEK 2011a, USED WITH PERMISSION).

Although the *xin* is often portrayed as the locus of emotion as well as other cognitive abilities in the pre-Warring States period (roughly 1500 BCE–450 BCE), this study suggests that, by the end of the Warring States (221 BCE), there is a clear trend whereby the *xin* is less and less associated with emotions and becomes increasingly portrayed as the unique locus of “higher” cognitive abilities: planning, goal maintenance, rational thought, categorization and language use, decision-making, and voluntary willing. This neatly maps onto a parallel trend in the translation of early Chinese texts: in pre-Warring States texts, *xin* is almost exclusively translated as “heart,” whereas translations begin to switch to “heart–mind” (or simply vary among themselves between “heart” or “mind”) by the early Warring States and then render *xin* almost exclusively as “mind” by the time we reach such late Warring States texts as the *Zhuangzi* or *Xunzi*. This trend, when noticed at all, has often been attributed to linguistic sloppiness on the part of the translators, but our study suggests that in fact the situation is quite the opposite, in that *xin* seems to gradually shed its associations with emotions—especially strong, “irrational” emotions<sup>25</sup>—and comes to be seen as a faculty whose abilities map on fairly closely to the folk notion conveyed by the English *mind*. Moreover, it alone of all the organs is singled out to be contrasted with the various terms used to refer to the physical body (*xing* 形, *shen* 身, *ti* 體).

What is so interesting about this early Chinese case is that linguistic resources seem to militate against mind–body dualism: the term that came to refer to the seat of cognition was represented by a graph denoting the physical heart, a concrete organ embedded in the body and also the locus of desires and emotions. Nonetheless, over a several hundred year period, texts employing classical Chinese still developed a strong form of mind–body dualism that strikingly mirrors modern Western folk conceptions, and that remained the default picture for the rest of its history.<sup>26</sup> While identification of potential causation is necessarily speculative, we think that the best explanation for the trend that we documented in this study is that it represents a semantic shift driven by a need for increased conceptual precision that accompanied the vast expansion of literacy as we move into the late Warring States, and that

<sup>25</sup>We did not systematically explore the issue of where these emotions go once they are expunged from the *xin*, but my qualitative intuition is that they are downloaded onto the *qi*, or bodily energy.

<sup>26</sup>Nothing like this sort of systematic study has yet been performed on post-Qin, let alone contemporary materials, but qualitative analysis suggests that, once Buddhism is introduced to China in the beginning of the Common Era, the conception of *xin* becomes, if anything, even more disengaged from the body.

was guided by intuitive folk dualism. In other words, as more and more human beings began using classical Chinese as a means of communication, the semantic range of words like *xin* converged on a cognitive anchorpoint provided by intuitive folk dualism.

*Methodological and Theoretical Issues.* One motivation in reporting this study here is that its techniques can be easily adapted for use in accessing other historical materials—“data from dead minds” (Martin and Beck forthcoming)—in order to address, in a rigorous and quantifiable manner, a wide variety of questions that interest scholars of religion.<sup>27</sup> The complete literary records of many cultures are now available in fully searchable, electronic databases, providing us with an incredibly powerful tool simply not available to any other generation of scholars. One of the next frontiers is automated or semiautomated coding. Fully automated coding involves using powerful search engines to scour large quantities of materials over time to look for specific patterns of usage specified by the researchers. This technique was employed in one high-profile study that involved querying the entire the Google Book archive, which contains over five million books—4% of the books ever published (Michel et al. 2011). Despite a couple intriguing results—particularly the idea of using proper name frequency patterns to document statistical signatures of active suppression or censorship—the results of this study probably strike most humanists as rather gimmicky, and there are problems with the source materials being queried (only books, and only books that have been entered in Google’s database). Nevertheless, as a proof-of-concept demonstration, I would submit that anyone not impressed and excited by the potential for such techniques to enhance humanistic research simply has not thought about it carefully enough. Another exciting approach is semiautomated coding, where—during a trial run or repeated iterations of trial runs—the qualitative judgments of a human coder can be tracked by an algorithm-generator or actively codified into “dictionaries,” with the resulting patterns then able to be instantly and automatically applied to mind-bogglingly large quantities of data.<sup>28</sup> This technique, still in its infancy, combines the best of

---

<sup>27</sup>See, for instance, the study by Clark and Winslett (2011) recently published in this journal, the methodology of which was inspired by an early version of the project reported in Slingerland and Chudek (2011a).

<sup>28</sup>See, for instance, James Pennebaker’s “Linguistic Inquiry and Word Count” program at <http://www.liwc.net/>. As part of a large, multiyear grant just awarded to us at the University of British Columbia to study “The Evolution of Religion and Morality,” we will be making such tools (along with summaries of their strengths and weaknesses and instructions on how to use them) available to scholars of religion; consult our web site at: <http://www.hecc.ubc.ca/cerc/project-summary/>.

qualitative and quantitative approaches, and is perhaps the most promising from the perspective of scholars of religion.

Although the methods employed in this study are standard for scientific qualitative coding excises, to anyone trained in interpreting texts for a living several potential limitations immediately leap out.<sup>29</sup> The formulation of the initial coding categories has an obvious role in shaping the results, coding decisions will be biased by individual coders' cultural models and individual assumptions about the texts, and the very idea of "hypothesis-blind" coding seems undermined by the signals sent by the chosen keyword and coding categories, as well as the high degree of personal knowledge on the part of the coders of my own preassumptions. Moreover, pre-Qin texts are notoriously difficult to understand: classical Chinese is a relatively uninflected language, and the inevitable ambiguities present in the original texts are often resolved in a very particular—but perhaps inaccurate—direction by the traditional commentaries and English translations that my coders were allowed to consult.

There is, moreover, the problem of proper rhetorical framing mentioned above. The single most common issue that ended up having to be adjudicated by me in Round 3 concerned the rather abstract codes having to do with *xin* being implicitly or explicitly contrasted or identified with the body and other organs. As we saw with *Mencius* 6:A:7, discussed above, even specialists in field would seriously disagree about which codes to apply to that passage: Jane Geaney and many others would have coded it as "0.3 Xin Conceptually (Explicitly) Identified with Other Organs," whereas I have argued that one needs to add the code "0.2 Xin Grammatically/Rhetorically (Implicitly) Contrasted with Other Organs" to pick up the proper rhetorical framework. This is difficult—and debatable—stuff. Finally, I think it is fair to say that humanities scholars in general are suspicious of attempts to handle the complexity of textual interpretation by means of a process that results in graphs and charts and statistical margins of errors: the statistical cleanliness masks a host of potential systemic complications. I anticipate that many of my colleagues will see our study as an instance of sciency-sounding smoke and mirrors being used to obscure the messiness of interpretation—an attempt to borrow the prestige of the "ethnoscience of the West" to push our own interpretative agenda.

I obviously disagree. Despite the many reasons for being cautious in both applying and interpreting the results of such methods, I think that they can serve as a useful example of how techniques from the natural

---

<sup>29</sup>See, for instance, the critique of our study in *Cognitive Science* by Klein and Klein (2011).

sciences—large-scale, team-based analysis, random sampling, statistical analysis—can be put to good use in the humanities. Humanists have always been empirically minded: scholarly claims are not taken seriously unless supported by textual or archeological evidence. This sort of evidence has, however, typically been gathered and presented in a highly biased and unsystematic manner. Scholars arguing for mind-body holism in early China, for instance, will cherry pick a dozen or so passages from among hundreds or thousands on the topic to defend their claim. François Jullien, to take a habitually egregious example, cites only a single substantive passage in support of his argument that the early Chinese concept of a holistic body-mind is quite alien to “our” dualism (Jullien 2007: chap. 4), and this passage is from a late Warring States text portraying the *xin* as a physical organ—a category that makes up 2% of the passages we coded from this period. Even careful scholars such as Geaney, who substantiates her claims with copious textual evidence, are constrained by the standard of our genre to limit themselves to a subset of available passages that have been chosen in anything but a disinterested manner. Of course, each partisan in any given debate works under the assumption that his or her chosen passages are somehow more representative or revealing than those of his or her opponents, but there has been a surprising lack of interest among humanists in adopting techniques to compensate for personal bias that have long been pillars of the scientific method.<sup>30</sup>

The sort of large-scale corpus sampling method employed in this study is expensive and, frankly, irritating to implement. As I quickly discovered upon embarking on this project, large-scale corpus coding projects share many of the liabilities of scientific inquiry in general: they are enormously time-consuming, expensive, full of administrative difficulties, and most of all *boring*. For a scholar used to working solo in the pristine silence of his or her office, managing a team of coders, with all of their personal dramas and idiosyncratic takes on the coding process, is surprisingly difficult. Methodological advances, automation, and hard-won lessons—coding sheets should be *simple*, coding schedules generous—can help to reduce the burden, but simple funding limitations (coders need to get paid, software needs to be purchased) will no doubt slow the adoption of these techniques. Despite these limitations, the ability of large-scale corpus analyses to give us relatively

---

<sup>30</sup>One prominent exception, as Luther Martin has observed (personal communication), has been the work of biblical scholars, who since the nineteenth century have used concordances (and more recently electronic databases) to perform word-count studies aimed at, for instance, distinguishing between “genuine” Pauline letters and the deutero-Pauline literature.

objective overviews of huge quantities of historical materials—using the power of sheer numbers to compensate for inevitable individual biases—should not be dismissed by scholars of religion. As we note in our reply to Klein and Klein (2011), who see the problems inherent in interpreting early Chinese texts as potentially fatal to our project, our approach is not intended to sidestep the problems of textual interpretation, but rather to use the power of sheer quantity to help put qualitative disagreements into perspective:

Large-scale coding and statistical analysis allow the noise of randomly distributed interpretative differences to be distinguished from the signal of genuine historical patterns by exploiting large samples and statistical inference. These methods also quantify qualitative disagreements, providing measures of inter-coder reliability that specify just how much difference in interpretation exists. They provide a path out of endless cycles of disagreement by specifying precisely documented techniques for resolving disagreements, which can be replicated, systematically altered and statistically analyzed. (Slingerland and Chudek 2011b)

These techniques can also provide counterintuitive results that help us to better situate our qualitative intuitions as well as reveal unexpected patterns. For instance, I was very much surprised by the sharp reduction in *xin* as locus of emotion in the late Warring States: my intuition, I think shared by most in my field, was that *xin* maintained a strong emotional component throughout the Warring States. Our study results suggest that this intuition is wrong. Large-scale corpus analyses therefore can, and should, play an important role in supporting, supplementing, and—when necessary—correcting traditional approaches.

At the same time, as humanists become more familiar with the manner in which qualitative analysis is undertaken in the sciences, their deep familiarity with the problems inherent to cross-cultural comparison—and hermeneutics more generally—can and should begin to have an impact. It is significant that, in the initial version of their piece in *Cognitive Science*, Klein and Klein strongly contrasted the more objective, “unproblematic” coding issues faced in most psychological experiments with the interpretative challenges inherent to studying early Chinese texts. In fact, interpretation is very much front and center in most areas of the sciences—a point that has been made loudly and clearly in the “science studies” literature—which means that injecting a bit of humanistic hermeneutic *Angst* into the sciences would be extremely helpful, provided that it is done in a constructive manner.

My experience with work in cognitive and social psychology suggests that most scientific researchers are much less concerned than they ought to be about potential complications that are screamingly obvious to anyone coming out of the humanities: problems of translation, differing cultural models, pervasive conceptual bias on the part of investigators, etc. This means that the quality of this sort of work would be vastly improved by input from humanities scholars, not merely as data-providers (glorified research assistants), but as theoretical and methodological advisors involved in the most preliminary steps of study design.

One reason for the growing gap between the sciences and the humanities is that—arguably under the influence of epistemologically skeptical “Theory”—humanists too often see the interpretative and methodological problems inherent to scientific research as an excuse to entirely dismiss scientific inquiry as a useful source of knowledge about the world (Slingerland 2008: chaps. 1–3), even though we presumably feel that there is something useful or informative about our *own* work. When presented with scientific studies informed by culturally or linguistically naïve assumptions, our response is too often to throw up our hands and completely dismiss the results, rather than to offer to work together to help overcome—to the extent that it is possible—the relevant naïveté. As someone trained the humanities, I am familiar with the stereotype of scientists as culturally and linguistically illiterate, blissfully unaware of their own cultural assumptions and unjustifiably confident of the validity of their own categories of understanding. I have also certainly met my fair share of scientists who fit this characterization. As I have come to spend more and more time collaborating with scientists, however, I have also become familiar with *their* stereotype of the stubbornly obscurantist humanist, who wrinkles up her nose at their ridiculous “data,” but who—when pressed for details or concrete suggestions for improvement—walks off with her nose in the air, muttering in French. Again, a cartoon, but again containing a modicum of truth. For all their faults, scientists are very keenly concerned with the accuracy of their results, and are very willing to listen to anyone who has concrete suggestions for how to improve this accuracy. It is time for us to begin talking.

### Points of Contact, Part II: Cognitive Science Evidence Regarding Mind–Body “Folk” Dualism

To anyone starting from a cognitive scientific standpoint, the idea that any *Homo sapiens* anywhere completely lacked any sense of mind–body dualism comes as a bit of a surprise. Cognitive scientists have been arguing for decades for the existence in human beings of a

tendency to project intentionality onto other agents, and the world more broadly. This tendency has come to be referred to by cognitive scientists as “Theory of Mind” (ToM),<sup>31</sup> being “theory”-like because it goes beyond the available data to postulate the existence of unobservable, causal forces: mental forces such as *thoughts*, *desires*, or *beliefs*. It is apparent that, from a very early age, human beings conceive of intentionality as a distinct sort of causality, and distinguish it from both the kind of physical causation that characterizes folk physics and teleological, “vitalistic” causation. Infants and very young children suspend contact requirement for interpersonal causality, and understand that agents—as opposed to objects—harbor goals and desires and experience emotions (Spelke et al. 1995). Intentionality is viewed by children as a special type of “internal” cause that can work at a distance, and that invites responses from affected agents (Premack and James-Premack 1995). Even very young children also seem to expect agents to be self-propelled, as opposed to objects, which should only move when contacted by another object (Spelke et al. 1995; Rakison 2003).

There is a massive, and rapidly growing, literature on ToM. Here I will merely note that this tendency appears to emerge quite early in development (e.g., Spelke et al. 1995; Bloom 2004; Phillips and Wellman 2005); has a largely automatic and perceptual component in addition to cognitive components emerging later in development (Scholl and Tremoulet 2000); is present cross-culturally in contemporary populations (Avis and Harris 1991; Barrett et al. 2005; Cohen 2007; Cohen et al. 2011); is vulnerable to selective and at least partial damage in conditions such as autism (Baron-Cohen 1995; Tager-Flusberg 2005); and would appear to be distributed in human populations in a spectrum ranging from autism (deficient ToM) to schizophrenia (excessive ToM) with a clear genetic basis (Crespi and Badcock 2008; Crespi et al. 2009). As Paul Bloom (2004) has observed, this ToM or “intentional stance” (Dennett 1987) lies behind a disjunction in the humanly experienced world between mind-possessing, intentional agents and mindless things governed by mechanistic causality. Moreover, there is increasing evidence that something at least functionally analogous to ToM may cross the species barrier. Although there is a heated controversy over whether or not other great apes possess full-blown ToM—that is, the ability to model belief systems in other agents that differs from one’s own belief system—primates and other mammals clearly possess some elements of ToM, and recent studies

<sup>31</sup>Perhaps the best recent (and quite readable) introduction to ToM is Bloom (2004).

have suggested that some sort of fundamental distinction between animate agents and inanimate objects may be deeply rooted in the vertebrate brain (Mascalzoni et al. 2010). The fundamental nature of this disjunction—its early onset in infant development, automaticity, and apparent universality—motivates Paul Bloom’s argument that mind–body dualism is not an accidental philosophical legacy of Plato or Descartes, but rather a universal feature of embodied human “folk” cognition.

*The Impact of Cognitive Science: Shifting Our Hermeneutical Starting Point.* As I have argued in great detail elsewhere (Slingerland 2008), taking seriously scientific work on the nature of human cognition would have a salubrious constraining effect on the humanities by challenging some of our fundamental assumptions. Humanistic inquiry in Western academy has, especially over the last half-century or so, been dominated by disembodied models of human cognition. Whether rationalistic and universalist or social constructivist and radically particularistic, these models have been based on the assumption that the basic architecture of human thought arises in a manner completely independent of our evolved, biological embodiment. Such a position is no longer empirically tenable. The human mind is inextricably embodied, and like all embodied minds is the product of evolutionary processes. In the case of humans, these evolutionary processes occur in both biological (genetic) and cultural forms,<sup>32</sup> but neither one has the effect of magically extracting us from the physical world in which we are embedded.

As we all know, the manner in which a hermeneutic journey unfolds depends very much upon its point of departure. In both my broader field of Religious Studies and my more specialized field of early Chinese thought, the default point of departure has become the assumption of radical cultural difference that naturally falls out of a disembodied, culturally or linguistically constructed model of human cognition. As several scholars of Chinese thought have observed, the result has been a continuation of the kind of exoticization of China one finds in early European Orientalism, whereby China is transformed into a culturally monolithic, timeless, and eternal Other that can be juxtaposed with a similarly monolithic, static West (Zhang 1998; Saussy 2001; Billeter 2006).

A representative example of this phenomenon is François Jullien’s treatment of the same passage from the *Zhuangzi* that I discussed

---

<sup>32</sup>For more on “dual inheritance theory,” see Richerson and Boyd (2005) and Henrich and McElreath (2007).

above—Confucius’s observations concerning the nursing piglets. Being perfectly capable of reading classical Chinese, Jullien is forced to acknowledge that the passage suggests the presence of something “that puts the physical being to good use, something that Aristotle would no doubt have named ‘the soul’ [*qui fait oeuvrer l’être physique à son service, nul doute qu’Aristote l’aurait nommée l’<âme>*]” (Jullien 2007: 65). However, he then dismisses the importance of this entity because it is not explicitly named, and “in the absence of a substantial notion of the soul”—Jullien’s asserted, but never genuinely demonstrated assumption—it can be nothing more than a vague capacity. In fact, Zhuangzi *does* give this entity a variety of names: it is likely the *shen* 神, the guiding force in Zhuangzian *wu-wei* (Slingerland 2003: chap. 5), which Zhuangzi sometimes refers to as the “true ruler,” with essence but no form, or the “Heavenly Lord” (*tianjun* 天君). This, however, is not my point. We have here a case where two Sinologists who know the relevant texts quite well diametrically disagree on their proper interpretation, and these disagreements are very much a product of relative interpretative starting points. Jullien’s interpretative starting point—the complete absence of anything like “our” notion of a soul, and (more deeply) radical conceptual difference produced by linguistic/cultural/historic difference<sup>33</sup>—leads him to dismiss as an aberration what might otherwise be seen as definitive evidence against his position.

This is, of course, the nature of the hermeneutical beast: specific bits of evidence take on varying significances when embedded in incommensurable explanatory frameworks, or seen from the perspective of different “horizons” of understanding (Gadamer 2004). What I would like to suggest here is that, as scholars of religion, we need to change our horizon of understanding in light of our current best understanding of the mind coming out of the cognitive sciences. If it were, in fact, the case that we were disembodied consciousnesses, inscribed upon or constructed by language and culture all the way down, radical difference between, say, Greek-inspired thought and Chinese-inspired thought would be a reasonable starting assumption—the languages and social systems are quite different. However, the overwhelming weight of empirical evidence about human cognition strongly suggests that we are not, in fact, so deeply embedded in language and culture: we are *embodied* animals, with a conceptual world co-structured by genes and the

<sup>33</sup>For example, the fact that “the fabric of our thought . . . is woven by Indo-European languages” (Jullien 1995: 18), while “the structure of ancient Chinese . . . gave rise to an interplay of correlations and alternations that led to the expression of constant variation within a process” (2007: 111).

physical-cultural environment (Slingerland 2008: chap. 3). Taking cognitive science, and a fully embodied picture of human beings, seriously transforms radical cultural-linguistic difference into something that needs to decisively *demonstrated*, rather than merely *assumed*.

Just as work on ToM should make us profoundly skeptical of claims that *any* people anywhere lacked a basic sense of mind-body dualism, work on basic-level cognitive categories, innate human essentialism, and folk physics (basic causality) similarly changes the burden of proof for scholars who would argue for other aspects of early Chinese holism—that, for instance, they lacked a concept of psychological interiority, of biological essences or teleology, the distinction between fact and appearance, or anything resembling “our” concepts of causation or time. Cognitive scientific evidence about human cognition changes the burden of proof for all of these claims on two scales. In the broader context, it is simply a priori unlikely that we would find such radical differences in such basic concepts among members of the same species—even a species as “hyper-cultural” as our own. In a narrower context, there is also a large, and constantly growing, body of specific experimental findings that argue against each particular claim (Slingerland 2008: chap. 3; De Jesus 2010). This combined burden is one that claims of radical incommensurability simply cannot bear.

*Integrating Cognitive Science with Cultural Studies.* Having argued that we scholars of religion tend to fetishize cultural difference to our professional detriment, I would like to close with a discussion of the benefits of focusing upon difference. Arguably one of the primary rationales for studying other cultures is that they are often founded upon distinct conceptions of the self, the self’s relationship to society, the relationship between reason and emotion, etc., and that difference can provide space for reconsidering deep assumptions of one’s own culture. Some of the scholars who have been most active in promoting the uniqueness of early Chinese thought, such as Roger Ames or Henry Rosemont, Jr., are motivated by the conviction that Western economic rationalism and extreme individualism have led to social alienation and ecological disaster, and that the more “holistic” view of the self and society that we find in certain forms of Confucianism might present an alternative, more positive vision.<sup>34</sup> Although I oppose these scholars’ more extreme claims about radical cultural difference, this aspect of their projects represents an important contribution to our understanding of both early

---

<sup>34</sup>On this topic, see Rosemont and Ames (2009) and Ames’ thoughtful celebration of Rosemont’s work in Ames (2008).

China and ourselves. In the remainder of this section, I explore the kernel of truth behind the myth of radical Chinese holism, as well as how a serious consideration of early Chinese mind–body concepts has much to offer contemporary conceptions of the self and models of ethical education.

Paul Bloom, in arguing for universal mind–body folk dualism, has portrayed this dualism as Cartesian in nature (xii)—that is, as an ontological substance dualism. Even within cognitive science circles, this claim has not gone unchallenged, and some important recent work in cognitive science, combined with data from early China, allows us to add nuances to the basic schema outlined in Bloom (2004). Challenges to the idea that we are all *Cartesian* dualists have been advanced on at least three fronts: (1) whether or not it is the case that our division of the world and agents boils down to only two parts; (2) if that *is* the case, whether or not we distinguish entirely sharply and cleanly between the two parts; and (3) whether or not any fundamental divisions in human cognition, if they exist at all, map onto the semantic ranges picked out by the English words *mind* and *body*. I will focus upon each of these challenges in turn, exploring the manner in which knowledge of early China bears upon the debate, hoping thereby to illustrate how humanistic knowledge—deep, textured knowledge of other cultures—can and should inform work in the cognitive sciences.

*Are Folk Views of the Self “Dualistic”?* Cartesian dualism posits a stark dichotomy between a single, indivisible consciousness-soul and a body, only the latter of which may be divisible into subcomponents. For scholars of early China, one of the most obvious problems with claiming universality for this schema is the fact that, at least by the time that we reach the Warring States, “the” soul is generally not conceived of as unitary, but made up of several components related to one another in a complex and probably somewhat inconsistent manner—the specific conceptions varying over time and by region, and not even showing ritual consistency within single texts.

From the earliest texts, we have the body being contrasted with the “spirit” (*shen* 神), a more-or-less unitary entity that represents the personal essence of the deceased, leaves the body at death to take residence somewhere “up” above the visible world, and serves as the focus of sacrificial rituals or prognostications. Even in the early texts, however, and with increasing frequency as we move into the Warring States, the spirit is discussed alongside at least two other subsouls, the *po* 魄 and the *hun* 魂. The standard scholarly position has long been that these two souls were conceived of as separate and as having different fates after

the death of the body. A classic article by Kenneth Brashier (1996) has called this neat dichotomy into question, demonstrating that, although there is considerable evidence for a *hun-po* dualism in the elite literati tradition, there were multiple other scholarly and popular conceptions in which *hunpo* was used as a compound, or the two terms were used interchangeably. The only constant seems to be that, despite their varying degrees of entanglement with the “body complex” (149), terms like *hun* and “spirit” were all consistently linked to mental activity and the continuation of consciousness—as well some degree of personal identity—beyond the death of the physical body. This sort of contrast between the body or “body complex” and a more rarefied spirit is a dualism of a sort, but significantly weaker than the ontological substance dualism we find in Descartes.

Interestingly, similar challenges to Bloom have been presented by cognitive scientists familiar with cross-cultural data. Rebekah Richert and Paul Harris (2008), for instance, provide a variety of cross-cultural evidence suggesting the prevalence of a tripartite (body–mind–soul) model of the self, rather than simple mind–body dualism. As is the case with early Chinese conceptions, this tripartite schema can still be brought under the umbrella of folk dualism if we note that concepts such as that of “soul” or personal essence are fundamentally parasitic on the concept of mind: things without minds do not have souls. In this respect, the various soul-like concepts that we find in the world’s religious traditions—as well as the fact that these souls themselves can have quite numerous subtypes—can be understood as cultural fine-tunings and subdivisions of a more fundamental and universal concept of mind. Nonetheless, too simplistic a picture of the self as consisting of two, and only two, components is clearly inadequate.

“Weak” or “Sloppy” Folk Dualism: *Mind and Body Interpenetrate*. There is a rather large and constantly growing literature on the “embodied” or mind–body integrated nature of Chinese thought.<sup>35</sup> Since this is a well-trodden path, I keep this portion of my discussion brief. To begin, with regard to *xin*–body relations, the early Chinese conception of *xin* is undeniably different from Cartesian *esprit* or Kantian *Geist* in that it refers to a concrete organ in the body, the seat of emotions and desires—or at least *certain* emotions and desires—as well as “reason” and language ability. As part of the body, the *xin* interacts with body and bodily energies (*qi* 氣) in multitudinous and complex ways, a fact

<sup>35</sup>For a sampling, see Ames (1993), Csikszentmihalyi (2004), Geaney (2002), Yu (2009), Wu (1996), Yang (1996), and Zhang (2008).

that is highlighted both in the philosophical literature—see particularly *Mencius* 2:A:2—and the later medical literature.<sup>36</sup> This means that, as Henry Rosemont, Jr., has noted, we do not find in early Chinese thought the sort of widespread and sharp “cognitive/affective split” (2001: 78) that characterizes much post-Enlightenment thought in the West. For many early Chinese thinkers, the *xin* is the locus not only of the sort of rational functions that thinkers such as Descartes or Immanuel Kant associate with the mind—abstract thought, free will, reflection—but also a panoply of normative emotions, such as compassion or moral disgust, that such thinkers would relegate to the “heteronymous” realm of the body. Even some of the Chinese thinkers who in fact posit a rather sharp divide between the *xin* and the emotions still embrace a relatively “holistic” model of the perfected sage, who has reshaped his emotions and desires to accord with the normative order.<sup>37</sup> This is why many early Chinese thinkers also value embodied “know-how” or tacit knowledge over the sort of abstract, explicit theoretical knowledge that is prized in most of post-Enlightenment Western thought (Fingarette 1972; Billeter 1984; Eno 1990; Ivanhoe 1993/2000; Slingerland 2003).

Another sense in which the early Chinese conceptions of mind and body could be considered “holistic” is that neither the mind nor the postmortem spirit is completely immaterial. The *xin* is, as noted above, very much a part of the body, and despite its special powers does not consist of a separate substance. Ancestral spirits and other supernatural beings occupy a space somewhere between the visible human world and the very rarified abode of heaven, and interact causally with the visible world in a variety of ways. The kernel of truth behind claims that the early Chinese had a radically “immanent” conception of the universe is that they appeared to have seen minds, souls, or spirits as not completely immaterial—that is, “made” out of a different stuff than the visible world—but rather as consisting of very rarified stuff, on some sort of continuum with the material making up the visible world.

<sup>36</sup>Harper (1998) and Porkert (1974) provide helpful discussions of the medical literature; Ishida (1989) serves as a representative example of how the conception of *xin* in a particular medical text is too commonly reified into “the” Chinese view, as if that view were both monolithic and eternal.

<sup>37</sup>Xunzi, for instance, has a quite “rationalistic” model of the *xin*, one of the main functions of which is to monitor and control the emotions and desires. “The likes and dislikes, delights and angers, griefs and joys of the inborn nature are called emotions,” he says in one typical passage. “When the emotions are aroused and the mind makes a choice among them, this is called thought” (22/1b; Knoblock 1994: 127). See Yearley (1980) for more on the Xunzian model of the mind.

Even a cursory examination of non-Chinese traditions, however, makes it clear that this kind of overlap or interpenetration of mind and body, or reason and emotion, is by no means unique to China or “the East.” To begin with, it is important to recognize that conceiving of the mind as exclusively a seat of amodal, algorithmic reason—completely detached from and ontologically distinct from the body and the material world—is by no means a hegemonic position even within the Western philosophical tradition. Aristotle, for instance, based his entire ethics upon virtues, which are essentially a type of “intelligent” emotional-somatic capacity, linked to the body and to a type of “skill” or implicit knowledge (Wiggins 1975/76). In the Aristotelian model of the self—one that dominated scholastic philosophy throughout the Middle Ages—such capacities occupy a third place in between abstract cognitive capacities and more gross bodily functions. Although the disembodied model of the mind came to assert a fairly broad hold on the Western philosophical mind during the European Enlightenment, there were prominent holdouts—including Leibniz and Spinoza—and the development of post-Enlightenment philosophy in the West has arguably been a story of attempts move beyond Cartesianism and reintegrate the body and mind. As Bryan Van Norden has observed, philosophical Cartesianism in fact only represents a small portion of the Western philosophical tradition, and is no longer seriously defended by most Western philosophers; the portrayal of “Western” philosophy as characterized by some kind of monolithic Cartesianism is thus an unfortunate example of a “methodologically dualist” approach that caricatures both “Eastern” and “Western” thought (2002: 167–168).

Once we leave the realm of philosophy, it becomes clear from even a cursory survey of the literature on folk intuitions that strong Cartesianism is, in fact, a rather strange and counterintuitive view even for “us Westerners.” When reasoning about topics such as spirit possession or the afterlife, study participants in the Western world have intuitions about which capacities clearly go with “the mind” (abstract thoughts and personal identity); which clearly go with “the body” (physiological functions); and which are intermediate capacities, such as appetites and habits, that straddle body and mind (Cohen 2007; Cohen and Barrett 2008). In one recent study, Emma Cohen et al. (2011) found that, when asked to imagine having left their own body and entered a rock or a plant, subjects in both rural Brazil and Oxford viewed their capacities as more or less “body dependent.” For instance, they were quite likely to say that, even if they had entered a rock, they would still *remember* things, *see* things, or *know* things, but relatively unlikely to say that they would *feel achy or sore* or *feel hungry*. The

sorts of capacities that we typically associate with *mind* tended to be seen as body-independent—easily migrating to the rock or the plant—while others remained tightly yoked to the physical body and many hover somewhere in between. In all of these studies, the sorts of capacities that often, but not always, migrate with the spirit or survive the death of the physical body map quite nicely onto the functions of the Chinese *xin* that are often cited as examples of radical “holistic” thinking. What is particularly interesting about this study is that the rural Brazilian subjects—most of them entirely without formal education—were *more* dualistic than the U.K. subjects. Cohen et al. speculate that this may be due to the U.K. subjects’ exposure to Western biomedical and neurological education, with its message of an integrated mind–body system. That is, education in “Western” science—so typically associated with the supposedly monolithically Cartesian Western mind—may in fact serve to undermine innate folk dualism. Very similar results were obtained by a recent study by Maciek Chudek et al., which found that, among rural Fijian subjects, mind–body dualism *decreased* in subjects who had more exposure to Western education (*forthcoming*).

Another helpful set of illustrations (both figuratively and literally) of folk mind–body overlap is provided by K. Mitch Hodge in an important study that explicitly critiques Bloom’s theory of “innate Cartestianism” (Hodge 2008). Examining examples of funerary rites, mythology, iconography, and religious doctrine drawn from a variety of world cultures, Hodge points out that the folk’s dualism is clearly not one whereby mind and body are conceived of as entirely different, non-interacting substances. Inert bodies continue to contain traces of the minds that once inhabited them, which is why corpses present such a profound religious and emotional problem: they are objects—and, within a short period of time, threats to public health—that somehow seem different from ordinary objects. Indeed, one could argue that the primary purpose of mortuary rituals is to break this connection in a workable fashion, allowing the corpse to be disposed of safely while either gradually detaching the mind-traces from it completely or transferring these traces to another, more durable object (a gravestone, ancestor tablet).<sup>38</sup> In a similar fashion, minds never free themselves entirely from their mortal coil: the dead continue to be imagined as possessing ethereal bodies resembling those they “possessed” in life, as

<sup>38</sup>In his “Discourse on Ritual” (*lilun* 禮論), Xunzi offers an extremely detailed and sophisticated account of how Confucian funerary rites are designed to perform this psychological function (Knoblock 1994: 49–73).

well as being subject to the sorts of physical limitations typically imposed by bodies.<sup>39</sup>

There are a myriad of parallels in early China to the sort of physical representations of the dead that Hodge documents, in which the deceased are visually represented as possessing very much the same form in the afterlife—although sometimes rather more attenuated or vague—as the one they possessed in life, and where the human and supernatural realms are portrayed as distinct but connected in some fashion.<sup>40</sup> Artistic portrayals of this sort are extremely revealing precisely because they are not explicitly *about* worldviews—i.e., they are not consciously formulated theological or philosophical accounts—but rather their indirect expressions, and therefore arguably much better at revealing the contours of real-life cognition in a given culture. If we set side-by-side, for instance, a silk tomb painting from Zidanku (fourth century BCE) representing the deceased as a male figure riding on a dragon (Lai 2005) and any randomly chosen Renaissance painting depicting the soul of the dead as a rather buff and well-dressed Italian aristocrat, one would be hard-put to single out one of the two as more or less “holistic”: in both cases, the dead person is imagined as body-like in form but somehow less than material. The famous Changsha Mawangdui name banner of Lady Dai portrays the universe as consisting of distinct registers—most scholars see them as at least threefold, representing an immanent realm sandwiched by a heavenly realm above and underworld below (Wu 1992: 121–127)—populated by somewhat ethereal, but nonetheless body-like, figures. Compare this painting to, say, Paolo Veronese’s *The Battle of Lepanto* (1572),<sup>41</sup> depicting the famous battle in 1571 where a fleet of galleys from the Christian Holy League defeated the Ottoman fleet in a battle off Greece. In the painting, we see the two fleets locked in combat below, while in the clouds above a gathering of quite vigorous-looking saints, led by St. Justina, is pleading with the Virgin to grant victory to the Christian forces. They are apparently winning her over, because to the upper right we see a cherub beginning to rain flaming arrows down on the Turkish forces. Which of the vertical schemas depicted in these paintings is more disjunctive? I fail to see any principled reason for seeing either depicted universe as any more or less “immanent” or involving more or less interpenetration of otherworldly realms, than the other.

---

<sup>39</sup>Cf. notions concerning the epistemological and physical limitations of supposedly omnipotent and omniscient supernatural beings (Barrett 1996, 1998; Barrett and Keil 1996).

<sup>40</sup>See Lai (2005) for an excellent review of early Chinese funerary materials.

<sup>41</sup>Now housed in the Gallerie dell’Accademia, Venice.

“*We*” Are Neither Greek Nor Cartesian. Henry Rosemont, Jr., observes that “the ancient Chinese did not have Cartesian bodies; they did not have Cartesian minds either” (Rosemont 2001: 78). Similarly, G. E. R. Lloyd declares:

No Chinese philosopher presents a radically conflictual theory of a bi-, tri-, or multi-partite soul: no more do we find a stark dichotomy between soul and body conceived, as by Plato, as two distinct substances, the one invisible and destined for immortality, the other visible, the soul’s prison. (2007: 75)

It is hard to take strong issue with any of these statements. Rosemont and Lloyd seem to feel, however, that “not Cartesian,” “not like Plato,” “not Western,” and “not like us” are synonymous phrases. This is, in fact, a common—and crucial—rhetorical move in the neo-Orientalist literature: setting up a straw-man “West” (Cartesian, Greek, rationalistic), and then using the fact that most Chinese thinkers are not Cartesian or Greek or rationalistic to demonstrate a profound gulf between the West and East.

The evidence that we have reviewed above suggests that Descartes’ austere mind–body substance dualism is a rather counterintuitive philosophical position, alien to *any* person’s everyday cognition. Cartesianism represents an intellectually rigorous working out of a rather “sloppy” folk intuition, but like many philosophical or theological concepts—e.g., a completely transcendent immaterial God, Calvinistic predestination, or Buddhist “no-self” doctrines (Barrett 1996; Slone 2004)—online human cognition seems somewhat impervious to its logic.

Looked at in this light, the fact that the early Chinese were not Cartesian dualists is not much to write home about, and in no way entails that mind–body dualism of some sort was entirely alien to their thought. While the early Chinese did not posit a scalpel-sharp, perfectly clear divide between mind and body—or “higher” cognitive abilities residing in the “mind” as opposed to lower ones located in the body—they clearly saw *xin* and the various words for the physical body as two qualitatively distinct points of attraction on a spectrum, with some intermediate abilities or features potentially falling on one side of the line or the other depending upon the exact time period, the school of thought, or the pragmatic context (for instance, medical diagnosis and treatment vs. philosophical reflection on methods of self-cultivation). In this sense, they were no more or less dualistic than “we” are.

---

## CONCLUSION: DOING COMPARATIVE RELIGION

Once the shift from radical cultural–linguistic constructivism to embodied commonality is made, the landscape of comparative religious studies begins to appear to us in a very different light. Not only does comparison as a very project actually begin to make sense (Slingerland 2004), but perhaps the ambitions of the early pioneers of comparative religion also begin to seem a bit less ridiculous. Recognition of the cultural and intellectual limitations of scholars such as James Frazer and Edward Tylor has caused adjectives such as “Tylorian” to become terms of abuse—synonymous with theoretically and culturally naïve, colonialist, “hegemonic.”<sup>42</sup> The result, arguably, has been to transform religious studies from a science of human cultural patterns to an endless process of interpretation (“turtles all the way down” [Geertz 1973: 29]) and accumulation of massive quantities of “thick description” with no analytic goal in mind—indeed, with the explicit assumption that any attempt to “explain” our material would be to betray it. This has brought the progressive research projects of the early pioneers of our field to a screeching halt (Slingerland and Bulbulia 2011), throwing the comparative baby out with the colonialist bathwater and ceding the task of exploring the origins and nature of human religious life to scholars coming from other fields who too often lack the linguistic and cultural backgrounds to do the job well. We scholars of religion need to get back in the explanation game.

As Roger Ames, Henry Rosemont, Jr., and François Jullien have argued quite convincingly, early Chinese conceptions of the self—and we should acknowledge that there are many of them—do present us with models of mind–body, reason–emotion, and individual–society relations that, on the whole, provide edifying contrasts to the disembodied, hyperrationalist models that have dominated recent Western philosophical thinking. This has implications that go far beyond philosophy or religion, since these psychologically unrealistic models coming out of philosophy have had—and continue to have—deleterious impacts on legal, political, and educational policy (Slingerland 2011a, 2011b). They also played a role in sending so-called first-generation cognitive science down some ultimately dead-end paths—an influence that the field as a whole has only recently recovered from. In these respects, engaging with early Chinese models of the self can clearly serve as an important,

---

<sup>42</sup>See, for instance, Clifford Geertz’s comment that “even to consider people’s religious beliefs as attempts to bring anomalous events or experiences . . . within the circle of the at least potentially explicable seems to smack of Tyloeanism *or worse*” (1973: 100; emphasis added).

substantive corrective to recent philosophical–religious excesses and wrong turns.

However, it is also imperative that the sort of conceptual variation that emerges from comparative religion be contextualized within a framework of basic human cognitive universals—indeed, it is this very framework that allows texts or thinkers from another era or cultural context to be comprehensible in the first place. It is important to recognize that a fully exoticized “Other” cannot engage us at all, and that the religious or philosophical challenge of texts such as those of early China can only be felt against a background of cognitive universality. As Jean-François Billeter has noted in his book-length critique of Jullien:

We can begin with the myth of the fundamental “otherness” [*l’altérité foncière*] of China . . . and we will then merely develop a vision of China that confirms the “otherness” posed at the outset. . . . When we begin with this *a priori* assumption of difference, we lose sight of the shared foundation; when we begin from the standpoint of a shared foundation, the differences will then naturally emerge on their own. (2006: 82; cf. Saussy 2001: 111–112; Cheng 2009)

Zhang Longxi further observes that an obsession with radical cultural difference is not only intellectually paralyzing—what can one really say about the incommensurably different?—but also creates a situation where it becomes difficult to see why anyone else outside of Chinese studies would care about what we do. Speaking of his own field, he notes that, to the extent that study of Chinese literature remains constrained by cultural myths, it is likely to remain a kind of “cultural ghetto . . . closed and of little interest to outsiders in the academic environment of the American university” (1998: 118).

If the study of Chinese religion is to move out of the ghetto and engage with the broader academic world, it is necessary to ground it in a more realistic model of human cognition and culture-cognition interaction. Embodied cognition and a dual-inheritance model of gene-culture coevolution provide precisely this sort of model, an ideal new starting point for cross-cultural comparative work. Embodied experience of a shared world can serve as a bridge to the cultural “Other” and provide us with powerful new theories of how this shared cognitive structure can be elaborated by culture, language, and history into quite idiosyncratic—but ultimately still comprehensible—forms (Slingerland 2008: chap. 4). If comparative thought and some sense of progressive research agenda are to regain their proper place at the core of religious studies, an approach

that combines the best knowledge and practices of both the sciences and the humanities is our most promising way forward.

## REFERENCES

- Ames, Roger  
1993a "On Body as Ritual Practice." In *Self as Body in Asian Theory and Practice*, ed. T. Kasulis, R. Ames, and W. Dissanayake, 149–156. Albany, NY: State University of New York Press.
- 1993b "The Meaning of the Body in Classical Chinese Philosophy." In *Self as Body in Asian Theory and Practice*, ed. T. Kasulis, R. Ames and W. Dissanayake, 157–177. Albany, NY: State University of New York Press.
- 2008 "Rosemont's China: All Things Swim and Glimmer." In *Polishing the Chinese Mirror: Essays in Honor of Henry Rosemont Jr.*, ed. M. Chandler and R. Littlejohn, 19–31. New York, NY: Global Scholarly Publications.
- Avis, M. and P. Harris  
1991 "Belief-Desire Reasoning among Baka Children: Evidence for a Universal Conception of Mind" *Child Development* 62:460–467.
- Baron-Cohen, Simon  
1995 *Mindblindness: An Essay on Autism and Theory of Mind*. Cambridge, MA: The MIT Press.
- Barrett, Justin L.  
1996 "Anthropomorphism, Intentional Agents, and Conceptualizing God." PhD dissertation, Cornell University.
- 1998 "Cognitive Constraints on Hindu Concepts of the Divine." *Journal for the Scientific Study of Religion* 37:608–619. doi:10.2307/1388144
- Barrett, Justin L. and  
Frank C. Keil  
1996 "Conceptualizing a Nonnatural Entity: Anthropomorphism in God Concepts." *Cognitive Psychology* 31/3:219–247. doi:10.1006/cogp.1996.0017
- Barrett, H. Clark,  
Peter Todd,  
Geoffrey Miller, and  
Philip Blythe  
2005 "Accurate Judgments of Intention from Motion Cues Alone: A Cross-cultural Study." *Evolution and Human Behavior* 26:313–331. doi:10.1016/j.evolhumbehav.2004.08.015

- Billetter, Jean François  
1984 “Pensée occidentale et pensée chinoise: Le regard et l’acte.” In *Différences, valeurs, hiérarchie*, ed. J.-C. Galey, 25–51. Paris, France: Ecole des Haut Etudes en Sciences Sociales.
- 2006 *Contre François Jullien*. Paris, France: Editions Allia.
- Bloom, Paul  
2004 *Descartes’ Baby: How the Science of Child Development Explains What Makes Us Human*. New York, NY: Basic Books.
- Brashier, K. E.  
1996 “Han Thanatology and the Division of ‘Souls’.” *Early China* 21:125–158.
- Brooks, E. Bruce and  
A. Taeko Brooks  
1998 *The Original Analects: Sayings of Confucius and His Successors*. New York, NY: Columbia University Press.
- Brown, Miranda  
2006 “Neither ‘Primitives’ Nor ‘Others,’ but Somehow Not Quite Like ‘Us’: The Fortunes of Psychic Unity and Essentialism in Chinese Studies.” *Journal of the Economic and Social History of the Orient* 49/2:219–252. doi: 10.1163/156852006777502054
- Campany, Robert  
1996 *Strange Writing: Anomaly Accounts in Early Medieval China*. Albany, NY: State University of New York Press.
- Cheng, Anne  
2009 *La chine, pense-t-elle?* Paris, France: Éditions Fayard.
- Chudek, Maciek,  
Rita McNamara,  
Susan Burch, Paul Bloom,  
and Joseph Henrich  
Forthcoming “Developmental and Cross-cultural Evidence for Intuitive Dualism.” *Psychological Science*.
- Cohen, Emma  
2007 *The Mind Possessed: The Cognition of Spirit Possession in an Afro-Brazilian Religious Tradition*. Oxford, UK: Oxford University Press.
- Cohen, Emma and  
Justin Barrett  
2008 “When Minds Migrate: Conceptualizing Spirit Possession.” *Journal of Cognition and Culture* 8: 23–48. doi:10.1163/156770908X289198

- Cohen, Emma, Emily Burdett, Nicola Knight, and Justin Barrett  
2011 "Cross-cultural Similarities and Differences in Person-body Reasoning: Experimental Evidence from the United Kingdom and Brazilian Amazon." *Cognitive Science* 35:1282–1304. doi: 10.1111/j.1551-6709.2011.01172.x
- Cook, Constance  
2006 *Death in Ancient China: The Tale of One Man's Journey*. Leiden, The Netherlands: Brill.
- Cook, Daniel and Henry Rosemont Jr., eds.  
1994 *Gottfried Wilhelm Leibniz, Writings on China*. La Salle, IL: Open Court.
- Crespi, Bernard and Christopher Badcock  
2008 "Psychosis and Autism as Diametrical Disorders of the Social Brain." *Behavioral and Brain Sciences* 31:284–320.
- Crespi, Bernard, Philip Stead, and Michael Elliott  
2009 "Comparative Genomics of Autism and Schizophrenia." *Proceedings of the National Academy of Science of the United States of America* 107:1736–1741. doi:10.1073/pnas.0906080106
- Csikszentmihalyi, Mark  
2004 *Material Virtue: Ethics and the Body in Early China*. Leiden, The Netherlands: Brill.
- De Jesus, Abraham  
2010 "The Foundations of Chinese Logic." Master of Arts, Asian Studies, University of British Columbia, Vancouver.
- Dennett, Daniel  
1987 *The Intentional Stance*. Cambridge, MA: MIT Press.
- Ding, Sixin 丁四新  
2000 *Guodian chumu zhujian sixiang yanjiu* 郭店楚墓竹簡思想研究 (Research on the Thought of the Guodian Chu Tomb Bamboo Slips). Beijing, China: Dongfang Chubanshe.
- Eno, Robert  
1990 *The Confucian Creation of Heaven*. Albany, NY: State University of New York Press.
- 2009 "Shang State Religion and the Pantheon of the Oracle Texts." In *Early Chinese religion: Part one: Shang through Han (1250 BC–22 AD)*, ed. J. Lagerwey and M. Kalinowski, 41–102. Leiden, The Netherlands: Brill.

- Farmer, Steve, John Henderson, and Michael Witzel  
2000 "Neurobiology, Layer Texts, and Correlative Cosmologies: A Cross-cultural Framework for Premodern History." *Bulletin of the Museum of Far Eastern Antiquities* 72:48–90.
- Fingarette, Herbert  
1972 *Confucius: Secular as Sacred*. New York, NY: Harper Torchbooks.  
2008 "Discovering the Analects." In *Confucius Now: Contemporary Encounters with the Analects*, ed. D. Jones, 1–12. Chicago, IL: Open Court.
- Gadamer, Hans-Georg  
2004 *Truth and Method*, trans. J. Weinsheimer and D. G. Marshall. 2nd revised ed. New York, NY: Crossroad.
- Geaney, Jane  
2002 *On the Epistemology of the Senses in Early Chinese Thought*. Honolulu, HI: University of Hawaii Press.
- Geertz, Clifford  
1973 *The Interpretation of Cultures: Selected Essays*. New York, NY: Basic Books.
- Goldin, Paul  
2003 "A Mind-body Problem in the Zhuangzi?" In *Hiding the World in the World: Uneven Discourses on the Zhuangzi*, ed. S. Cook, 226–247. Albany, NY: State University of New York Press.  
2011 "Confucius and His Disciples in the Analects, or: Why the Traditional Chronology Is Right." In *The Analects: A Western Han Text?* Princeton, NJ: Princeton University.
- Graham, A. C.  
1989 *Disputers of the Tao*. La Salle, IL: Open Court.
- Granet, Marcel  
1934 *La pensée chinoise*. Paris, France: La Renaissance du livre.
- Harper, Donald  
1994 "Resurrection in Warring States Popular Religion." *Taoist Resources* 5/2:13–28.  
1998 *Early Chinese Medical Literature: The Mawangdui Medical Manuscripts*. New York, NY: Kegan Paul International.

- Henrich, Joseph and Richard McElreath  
2007 "Dual Inheritance Theory: The Evolution of Human Cultural Capacities and Cultural Evolution." In *Oxford Handbook of Evolutionary Psychology*, ed. R. Dunbar and L. Barrett, 555–570. Oxford, UK: Oxford University Press.
- Hodge, K. Mitch  
2008 "Descartes' Mistake: How Afterlife Beliefs Challenge the Assumption that Humans Are Intuitive Cartesian Substance Dualists." *Journal of Cognition and Culture* 8:387–415. doi: 10.1163/156853708X358236
- Ishida, Hidemi  
1989 "Body and Mind: The Chinese Perspective." In *Taoist Meditation and Longevity Techniques*, ed. L. Kohn, 41–71. Ann Arbor, MI: University of Michigan Center for Chinese Studies.
- Ivanhoe, Philip J.  
1993/2000 *Confucian Moral Self-cultivation*. 2nd ed. Indianapolis, IN, and Cambridge, UK: Hackett Publishing Company.
- Jensen, Lionel  
1998 *Manufacturing Confucianism: Chinese Traditions and Universal Civilization*. Durham, NC: Duke University Press.
- Jiang, Guanghui 姜廣輝  
2000/1 "The Guodian Chu Slips and Early Confucianism." *Contemporary Chinese Thought* 32/2:6–38.
- Jullien, François  
1995 *The Propensity of Things: Toward a History of Efficacy in China*, trans. J. Lloyd. New York, NY: Zone Books.
- 2007 *Vital Nourishment: Departing from Happiness*, trans. A. Goldhammer. New York, NY: Zone Books.
- Kalinowski, Marc  
2009 "Diviners and Astrologers under the Eastern Zhou." In *Early Chinese Religion: Part One: Shang through Han (1250 BC–22 AD)*, ed. J. Lagerwey and M. Kalinowski, 341–396. Leiden, The Netherlands: Brill.
- Klein, Esther and Klein Colin  
2011 "Did the Chinese Have a Change of Heart?" *Cognitive Science* 36:179–182.

- Knoblock, John  
1994 *Xunzi: A Translation and Study of the Complete Works*. Vol. 3. Stanford, CA: Stanford University Press.
- Knoblock, John and  
Jeffrey Riegel  
2000 *The Annals of Lü Buwei: A Complete Translation and Study*. Stanford, CA: Stanford University Press.
- Lai, Guolong  
2005 “Death and the Otherworldly Journey in Early China as Seen through Tomb Texts, Travel Paraphernalia, and Road Rituals.” *Asia Major* 18/1:1–44.
- Lévy-Bruhl, Lucien  
1922 *La mentalité primitive*. Paris, France: Alcan.
- Lewis, Mark Edward  
2006 *The Construction of Space in Early China*. Albany, NY: State University of New York Press.
- Lloyd, G. E. R.  
2007 *Cognitive Variations: Reflections on the Unity and Diversity of the Human Mind*. Cambridge, UK: Cambridge University Press.
- Lo, Yuet Keung  
2008 “From a Dual Soul to a Unitary Soul: The Babel of Soul Terminologies in Early China.” *Monumenta Serica* 56:1–22.
- Martin, Luther and  
Roger Beck, eds.  
Forthcoming *Data from Dead Minds? Challenges on the Interface of History of Religions (in Graeco-Roman Antiquity) and the Cognitive Science of Religion*. London, UK: Equinox.
- Mascalzoni, Elena,  
Lucia Regolin, and  
Giorgio Vallortigara  
2010 “Innate Sensitivity for Self-propelled Causal Agency in Newly Hatched Chicks.” *Proceedings of the National Academy of Science of the United States of America* 107/9:4483–4485. doi:10.1073/pnas.0908792107
- McDonald, Edward  
2009 “Getting over the Walls of Discourse: ‘Character Fetishization’ in Chinese Studies.” *The Journal of Asian Studies* 68/4:1189–1213. doi:10.1017/S0021911809990763

- Michel, Jean-Baptiste, Yuan Kui Shen, Aviva P. Aiden, Adrian Veres, Matthew K Gray, The Google Books Team, Joseph P. Pickett, Dale Hoiberg, Dan Clancy, Peter Norvig, Jon Orwant, Steven Pinker, Martin A. Nowak, Erez Lieberman Aiden  
2011  
“Quantitative Analysis of Culture using Millions of Digitized Books.” *Science* 331: 176–182. doi:10.1126/science.1199644
- Needham, Joseph  
1974  
*Science and Civilization in China*. Vol. 5.2. Cambridge, UK: Cambridge University Press.
- Perkins, Franklin  
2009  
“Motivation and the Heart in the Xing Zi Ming Chu.” *Dao* 8/2:117–131. doi:10.1007/s11712-009-9106-0
- Phillips, Ann and Henry Wellman  
2005  
“Infants’ Understanding of Object-directed Action.” *Cognition* 98:137–155. doi:10.1016/j.cognition.2004.11.005
- Poo, Mu-Chou  
1990  
“Ideas Concerning Death and Burial in pre-Han and Han China.” *Asia Major* 3/2:25–62.
- 1998  
*In Search of Personal Welfare: A View of Ancient Chinese Religion*. Albany, NY: State University of New York Press.
- 2009  
“Ritual and Ritual Texts in Early China.” In *Early Chinese Religion: Part One: Shang through Han (1250 BC–22 AD)*, ed. J. Lagerwey and M. Kalinowski, 281–313. Leiden, The Netherlands: Brill.
- Porkert, Manfred  
1974  
*The Theoretical Foundations of Chinese Medicine: Systems of Correspondence*. Cambridge, MA: MIT Press.
- Premack, D. and A. James-Premack  
1995  
“Intention as Psychological Cause.” In *Causal Cognition. A Multidisciplinary Debate*, ed. D. Sperber, D. Premack and A. James-Premack. Oxford, UK: Clarendon Press.

- Puett, Michael  
2001 *The Ambivalence of Creation: Debates Concerning Innovation and Artifice in Early China*. Stanford, CA: Stanford University Press.
- Rakison, David H.  
2003 "Parts, Motion, and the Development of the Animate–Inanimate Distinction in Infancy." In *Early Category and Concept Development: Making Sense of the Blooming, Buzzing Confusion*, ed. D. H. Rakison and L. M. Oakes, 159–192. London, UK: London University Press.
- Richerson, Peter J. and  
Robert Boyd  
2005 *Not by Genes Alone: How Culture Transformed Human Evolution*. Chicago, IL: University of Chicago Press.
- Richert, Rebekah A. and  
Paul L. Harris  
2008 "Dualism Revisited: Body vs. Mind vs. Soul." *Journal of Cognition and Culture* 8:99–115. doi: 10.1163/156770908X289224
- Ritchie, Jeffrey  
2011 "I, Robot: Self as Machine in the Liezi." In *Riding the Wind with Liezi: New Perspectives on the Daoist Classic*, ed. R. Littlejohn and J. Dippman, 193–208. Albany, NY: State University of New York Press.
- Rosemont, Henry Jr.  
2001 *Rationality and Religious Experience: The Continuing Relevance of the World's Spiritual Traditions*. La Salle, IL: Open Court.
- Rosemont, Henry Jr. and  
Ames Roger  
2009 *The Chinese Classic of Family Reverence: A Philosophical Translation of the Xiaojing*. Honolulu, HI: University of Hawai'i Press.
- Santangelo, Paolo  
2007 "Emotions and Perception of Inner Reality: Chinese and European." *Journal of Chinese Philosophy* 34/2:289–308. doi:10.1111/j.1540-6253.2007.00414.x
- Saussy, Haun  
2001 *Great Walls of Discourse and Other Adventures in Cultural China*. Cambridge, MA: Harvard University Press.
- Scholl, Brian J. and Patrice  
D. Tremoulet  
2000 "Perceptual Causality and Animacy." *Trends in Cognitive Sciences* 4/8:299–309. doi:10.1016/S1364-6613(00)01506-0

- Shaughnessy, Edward  
1991 *Sources of Western Zhou History: Inscribed Bronze Vessels*. Berkeley, CA: University of California Press.
- Slingerland, Edward  
2000 “Review: Why Philosophy Is Not ‘Extra’ in Understanding the Analects. Review of The Original Analects by Brooks, E. Bruce; Brooks, A. Taeko.” *Philosophy East and West* 5/1: 137–141.
- 2003 *Effortless Action: Wu-wei as Conceptual Metaphor and Spiritual Ideal in Early China*. New York, NY: Oxford University Press.
- 2004 “Conceptual Metaphor Theory as Methodology for Comparative Religion.” *Journal of the American Academy of Religion* 72/1:1–31. doi: 10.1093/jaarel/lfh002
- 2008 *What Science Offers the Humanities: Integrating Body & Culture*. New York, NY: Cambridge University Press.
- 2011a “‘Of What Use Are the Odes?’ Cognitive Science, Virtue Ethics, and Early Confucian Ethics.” *Philosophy East and West* 61/1:80–109.
- 2011b “The Situationist Critique and Early Confucian Virtue Ethics.” *Ethics* 121/2:390–419. doi: 10.1086/658142
- Forthcoming *Body and Mind in Early China: Beyond the Myth of Holism*.
- Forthcoming “Cognitive Science and Religious Thought: The Case of Psychological Interiority in the Analects.” In *Mental Culture: Towards a Cognitive Science of Religion*, ed. D. Xygalatas and W. L. McCorkle. London, UK: Equinox.
- Slingerland, Edward and Joseph Bulbulia  
2011 “Evolutionary Cognitive Science and the Study of Religion.” *Religion* 41/3:1–23.
- Slingerland, Edward and Maciej Chudek  
2011a “The Prevalence of Mind–Body Dualism in Early China.” *Cognitive Science* 35:997–1007. doi:10.1111/j.1551-6709.2011.01186.x

- 2011b “The Challenges of Qualitatively Coding Ancient Texts”. *Cognitive Science* 36:183–186.
- Slingerland, Edward and Mark Collard, ed. 2012 *Creating Consilience: Integrating the Sciences and the Humanities (New Directions in Cognitive Science)*. New York, NY: Oxford University Press.
- Slone, D. Jason 2004 *Theological Incorrectness: Why Religious People Believe What They Shouldn't*. Oxford, UK, and New York, NY: Oxford University Press.
- Spelke, E. S., A. Phillips, and A. L. Woodward 1995 “Infants’ Knowledge of Object Motion and Human Action.” In *Causal Cognition: A Multidisciplinary Debate*, ed. D. Sperber, D. Premack, and A. James-Premack, 44–78. Oxford, UK: Clarendon Press.
- Sterckx, Roel 2002 *The Animal and the Daemon in Early China*. Albany, NY: State University of New York Press.
- Tager-Flusberg, Helen 2005 “What Neurodevelopmental Disorders Can Reveal about Cognitive Architecture.” In *The Innate Mind: Structure and Content*, ed. P. Carruthers, S. Laurence, and S. Stich, 272–288. New York, NY: Oxford University Press.
- Tang, Jijie 汤一介 2007 “Ruxue de xiandai yiyi 儒学的现代意义.” *Jiangnan Luntan 江汉论坛* 1:1–14.
- Taves, Ann 2009 *Religious Experience Reconsidered: A Building-block Approach to the Study of Religion and Other Special Things*. Princeton, NJ: Princeton University Press.
- Thote, Alain 2009 “Shang and Zhou Funeral Practices: Interpretation of Material Vestiges.” In *Early Chinese Religion: Part One: Shang through Han (1250 BC–22 AD)*, ed. J. Lagerwey and M. Kalinowski, 103–142. Leiden, The Netherlands: Brill.
- Van Norden, Bryan 2002 “The Dao of Kongzi.” *Asian Philosophy* 12/3: 157–171. doi:10.1080/09552360216396

- 2007 *Virtue Ethics and Consequentialism in Early Chinese Philosophy*. New York, NY: Cambridge University Press.
- 2008 *Mengzi: With Selections from Traditional Commentaries*. Cambridge, MA: Hackett Publishing Company.
- von Falkenhausen, Lothar 1995 "Reflections on the Political Rôle of Spirit Mediums in Early China: The Wu Officials in the Zhou Li." *Early China* 20:279–300.
- 2006 *Chinese Society in the Age of Confucius (1000–250 BC): The Archeological Evidence*. Los Angeles, CA: Cotsen Institute of Archeology, UCLA.
- Watson, Burton 1968 *The Complete Works of Chuang Tzu*. New York, NY: Columbia University Press.
- Wierzbicka, Anna 2006 "On Folk Conceptions of Mind, Agency and Morality." *Journal of Cognition and Culture* 6: 165–179. doi:10.1163/156853706776931286
- Wiggins, David 1975/76 "Deliberation and Practical Reason." *Proceedings of the Aristotelian Society* 76:29–51.
- Wu, Hung 1992 "Art in a Ritual Context: Rethinking Mawangdui." *Early China* 17:111–144.
- 1994 "Beyond the 'Great Boundary': Funerary Narrative in the Cangshan Tomb." In *Boundaries in China: Critical Views*, ed. J. Hay, 81–104. London, UK: Reaktion Books.
- Wu, Kuang-ming 1996 *On Chinese Body Thinking: A Cultural Hermeneutic*. Leiden, The Netherlands: Brill.
- Yang, Bojun 楊伯俊 2007 *Collected Explanation on the Liezi 列子集釋*. Beijing, China: Zhonghua Shuju.
- Yang, Rubin 楊儒賓 1996 *Rujia shentiguan 儒家身體觀*. Taipei, Taiwan: Zhongyang Yanjiuyuan.
- Yearley, Lee 1980 "Hsun Tzu on the Mind." *Journal of Asian Studies* 39/3:465–480.
- Yu, Ning 2007 "Heart and Cognition in Ancient Chinese Philosophy." *Journal of Cognition and Culture* 7:27–47. doi:10.1163/156853707X171801

- 2009 *The Chinese Heart in a Cognitive Perspective: Culture, Body, and Language*. Berlin, Germany: Mouton de Gruyter.
- Zhang, Longxi 1998 *Mighty Opposites: From Dichotomies to Differences in the Comparative Study of China*. Stanford, CA: Stanford University Press.
- Zhang, Zailin 張再林 2008 *Traditional Chinese Philosophy as the Philosophy of the Body 作為身體哲學的中國古代哲學*. Beijing, China: Zhongguo Shehui Kexue Chubanshe.