

Toward a Second Wave of Consilience in the Cognitive Scientific Study of Religion

Edward Slingerland¹

University of British Columbia, Canada
edward.slingerland@ubc.ca

Abstract: As a classicist religious studies scholar and someone involved in the growing cognitive science of religion movement, I find the essays in this inaugural issue of the *Journal of Cognitive Historiography* exciting, despite the fact that I know little about the Graeco-Roman world. In my contribution I have been asked to make a few concluding comments, and because I do not have a special area of interest I will focus primarily on some general theoretical and methodological issues raised by the essays in this issue of the journal.

Keywords: Cognitive Science; History; Religion.

As Luther Martin notes in his introduction to the issue, the problem of how a scholar of Classics could access ancient minds has long troubled us. Our confidence that solid method could somehow get us there – or at least quite close – perhaps peaked in Germany in the nineteenth century, and has been in steady decline since then. In the contemporary academy, faith in method to deliver an accurate picture of the past is now considered terribly naïve and unfashionable, although there is a revealing gap here between theory and practice. We still value solid philological skills and historical sophistication, even though we have trouble saying precisely *why*, if the author is indeed dead and any accurate account of the past forever receding just beyond our hermeneutical horizons. In my own field, the study of early Chinese thought, we are rigorously trained in graduate school in the relevant languages and the historical context in order to prepare us for going out into the world and saying apparently anything we like about the texts we study, depending upon the theoretical bent of our advisers and the

1. Edward Slingerland is Professor of Asian Studies and Canada Research Chair in Chinese Thought and Embodied Cognition at the University of British Columbia, as well as Director of the Cultural Evolution of Religion Research Consortium (CERC).

particular sub-field we end up entering. The idea that the study of the past should be a *progressive* discipline – accumulating knowledge, discarding implausible interpretations, converging on widely-accepted views of particular texts – now seems as old-fashioned as, well, the study of Schleiermacher. (My apologies to Schleiermacher scholars out there.)

As I have argued at some length elsewhere (Slingerland 2008), the only way for the humanities to extract themselves from this theoretical and methodological confusion and malaise is to reestablish the connections between the sciences and humanities that were broken, coincidentally enough, at some point in the late nineteenth or early twentieth centuries. The German university system has left us an image of a unified system of *Wissenschaft*. For practical purposes, this project of inquiry was divided into *Geistes-* vs. *Naturwissenschaften*, but in principle these two branches were conceived of as parts of a larger tree of accumulated knowledge. The early pioneers in Religious Studies saw themselves very much as involved in a broader, *scientific* project, although this attitude has, since the 1970s and 1980s, become increasingly dismissed as colonialist and intellectually naïve. Religious Studies has, in recent decades, rejected *explanation* as a desirable scholarly goal, and has turned almost exclusively to endless thick description, enlivened by various flavours of postcolonialist and postmodern critique. The results have been less than impressive – especially to those not trained in humanities graduate departments (including both scientists and ordinary citizens), who have not eaten of the magic mushroom that allows one to take the goings-on down the rabbit hole seriously.

Many traditionally-trained scholars of religion, including myself, have turned to the cognitive science of religion precisely because, conceived very much in the Victorian spirit of unified inquiry, it promises to bring our field back to an older model of integrated inquiry. CSR borrows from the sciences certain overarching theoretical frameworks – most notably, evolutionary theory and basic models of embodied cognition – and, as we have seen in several of the essays in this volume, certain domain-specific hypotheses and concrete experimental methodologies. This gets us out of the postmodern dead-end and gives us a plausible and empirically-defensible theoretical framework for performing historical and cross-cultural work. It also helps to bring humanistic disciplines out of their individual intellectual ghettos and into the infinitely broader intellectual community represented by modern scientific inquiry.

“Consilience”, as conceived of in fields like CSR, is very much a two-way street, with humanistic methods informing the inquiry at a very basic level (Slingerland and Collard 2012). One thing that fields like Classical Studies and Religious Studies offer the sciences is the exciting prospect of gaining

access to “data from dead minds”, which is becoming increasingly recognized as a crucial corrective for distortions resulting from overly narrow subject bases and culturally-parochial categories. Regarding subject pools in contemporary academic psychology, for instance, Steven Pinker once observed that, “When psychologists say ‘most people’, they usually mean ‘most of the two dozen sophomores who filled out a questionnaire for beer money’” (Pinker 2008). This is no joke: as my colleagues at the University of British Columbia have since documented in a now widely-discussed piece (Henrich, Heine and Norenzayan 2010), our contemporary state of psychological knowledge has been potentially greatly distorted by its focus on “WEIRD” – Western, Educated, Industrialized, Rich, and Democratic – societies. They describe the manner in which academic psychology has based its picture of supposedly universal human cognition primarily upon data gathered from 19–20 year-old, North American university undergraduates, mostly psychology majors. As they illustrate with copious data, this group can safely be said to represent the most bizarre sub-group (undergrad psych majors) of an already strange sub-set (North Americans) of the weirdest collection of people ever to live (inhabitants of modern, industrialized societies).

For a discipline that still aims to get things right, this is now widely seen as a problem, and psychologists are becoming increasingly eager to tap into “non WEIRD” data. So far, this has mostly taken the form of branching out into community samples (i.e., grown-ups with families and jobs) and contemporary non-Western societies, especially the few remaining hunter-gatherer and hunter-horticulturalist societies scattered around the globe. However, their mouths positively water when the prospect of gathering data from dead minds is presented to them. As several of the authors in this volume note, the great disadvantage of working with dead subjects is that you cannot perform controlled experiments on them. What are too often overlooked, however, are the many unique advantages of studying the dead:

- they are an extraordinarily diverse bunch;
- there are a *lot* of them;
- they are easily accessed (especially as many textual traditions are becoming available in on-line, searchable databases);
- you don’t need to pay them; and (perhaps most importantly),
- you don’t need human subject approval to study them.

Given these advantages, the potential represented by the sheer volume of data from ancient cultures greatly outweighs the limitations in the ways in which we can interrogate this data.

Classics and Religious Studies scholars have, of course, much more to offer than simple data. A helpful illustration of this point is an observation made by the New Testament scholar Colleen Shantz in a presentation on “Ecstatic Minds” in early Christianity that was part of the conference session upon which the current special issue is based (Shantz 2010). She observes that the contemporary cognitive science of mysticism has tended to neglect the role of the cultural environment and cultural transformation of thought, treating mystical experience in the sort of ahistorical fashion that has – quite rightly – become *dépassé* in the contemporary academic study of religion. Since at least the 1970s, scholars of religion have tended to focus their attention more on the manner in which individuals are prepared for certain types of mystical experience by cultural models and norms, as well as the role that these cultural models play in defining the experience itself. This trend has arguably gone too far, as it has been yoked to the increasingly common view of human beings as constructed by language and culture from the ground up. Yet Shantz is right to emphasize that attention to cultural milieu is not only indispensable for any responsible contemporary exploration of mystical experience, but also a task that only properly-trained historians and scholars of religion are prepared to do well.

This observation, in turn, can help us to get beyond an attitude that is all-too-common among scientists of religion: one that sees historians and scholars of religion as mere providers of data – essentially glorified research assistants. David Sloan Wilson, in his otherwise exciting work attempting to bring historical data under the umbrella of evolutionary explanation, *Darwin’s Cathedral* (2002), notes at one point that “religious scholars are the natural historians for our subject” (2002: 87), in the same way that pre-Darwinian natural historians provided the raw material that allowed Darwin to assemble his theory of evolution. The analogy here is clear: Religious Studies scholars busily collect butterflies, organizing them in various completely arbitrary manners (by colour, by shape) or not at all, awaiting the theory of evolution to come along and tell them what all of their data actually means. As harsh as this image might be, there is a great deal of truth to it: too much work in Religious Studies – and the humanities more generally – amounts to aimless butterfly collecting (Bulbulia and Slingerland 2012). However, there is an important disanalogy with Darwin and the pre-Darwinian naturalists: when it comes to a phenomenon such as “religion”, the formulation of the very category itself requires humanistic expertise, and research into the possible evolutionary origins of religion risks going radically awry if not guided by such knowledge. This means that, when it comes to the scientific study of human-level phenomena, scholars

with humanities expertise need to be on the ground floor of basic theorizing and experimental design, and not seen merely as passive providers of cultural and historical data. To their credit, psychologists of religion – who, for the most part, are coming from Psychology departments and entirely lacking in formal training in religious studies – are becoming increasingly aware that the category of “religion” is not necessarily coextensive with the category “North American and Northern European Protestantism”, which makes them more eager to engage at a substantive, theoretical level with professional scholars of religion.

I have elsewhere argued that, in order to mark off this more recent trend in science-humanities integration – which sees foundational insights flowing in both directions – from earlier, more reductionistic models, it might be helpful to speak of a “second wave” of consilience (Slingerland and Collard 2012). The essays in this special issue give us a concrete sense of how this second wave might develop, with benefits flowing in two directions: science informing the humanistic inquiry, and humanistic inquiry enriching the science. The piece by Roger Beck, for instance, is a wonderful example of how this cross-fertilization can work. Beck draws upon contemporary cognitive scientific work on symbols to tell us something new about how ancient Mithraic systems of meaning may have worked. At the same time, his analysis of how this “star-talk” might have been physically built into the structure of the mithraeum also expands our contemporary concept of what we might mean in defining a “language” or a “text”, an excellent example of data from dead minds enriching our modern conceptual repertoire. Alison Griffith’s contribution similarly cuts both ways: while drawing upon experimental methodologies derived from the contemporary science of memory to adjudicate between competing historical theories, her hypotheses about the structure and function of Mithraic iconography suggests some novel designs for future memory studies.

Moving away from the mithraeum, the contribution by Aleš Chalupa aims to use contemporary anthropological work on spirit possession to gain a better understanding of Delphic mantic procedures. At the same time, the detailed account he provides of the cult at Delphi provides a wonderful new data point for those interested in using the phenomenon of spirit possession as a tool to explore the outlines of innate human mind-body dualism: Emma Cohen’s groundbreaking work on spirit possession in Brazilian cults (Cohen 2007) is gradually being supplemented by work from other times and traditions (e.g. Slingerland and Chudek 2011), and Chalupa’s essay helps to extend this work to another area of the ancient world. Similarly, Panayotis Pachis’ essay on incubation healing practices attests to a universal need for meaning creation, while simultaneously contributing

to contemporary theorizing by suggesting how “alternative” healing practices might work, as well as where and when they may be desirable as supplements to, or replacements for, mainstream western medical techniques.

Olympia Panagiotidou’s related discussion of the Asklepios healing cult in the Hellenistic and Graeco-Roman world draws upon cognitive scientific work on the “extended mind” or human brain-culture interdependence. This work argues, as Panagiotidou notes, that human cognition, properly understood, “is not only the product of the capacities, functions and processes taking place within the human brain, but develops through a continual interplay between the brain and the surrounding world through the sensory organs of the human body” (p. 15). In other words, human thought is subserved not only by individual brains, but also by an extended network of physical and cultural systems: writing, oral traditions, material artefacts, tools, architecture, and embodied social practices. Extended mind hypotheses are best known to the general scholarly public through the work of Andy Clark, David Chalmers, Merlin Donald and Alva Noë (Clark and Chalmers 1998; Clark 2008; Donald 1991; Noë 2004), but have – as Panagiotidou notes – been championed in the field of Religious Studies by a group of scholars at Aarhus University in Denmark, including Armin Geertz, Jeppe Sinding Jensen and Andreas Roepstorff.

The radicalness of the extended mind or embodied cognition standpoint *vis-à-vis* the individual-focused approaches more common in evolution psychology and cognitive science has sometimes been exaggerated (see e.g., Barrett 2010 for a particularly dramatic account that edges into the mystical). At the end of the day, the “continual interplay between the brain and the surrounding world through the sensory organs of the human body” that Panagiotidou describes is pretty much bread-and-butter cognitive science. Moreover, the metaphor of the “extended mind” is misleading if taken too strongly. The physical world is in itself dumb; it is only individual human brains – embodied though they are – that allow it to speak. Considering the extent to which early CSR tended to neglect the role of culture and history in conditioning religious cognition, however, the emphasis on the interdependence of mind and culture that has been pushed for over a decade by the Religion, Cognition and Culture (RCC) research unit at Aarhus University can be seen as an important corrective. As more and more historians of religion become interested in adopting a cognitive scientific perspective when approaching the objects of their study – “the material artefacts, symbolic expressions and written testimony which the people of the past left in space and time” (p. 16) – they are going to require models that take seriously the intensely social, cultural and technological dimensions of human experience.

Although not always included under the rubric of “cognitive science of religion”, some of the earliest work applying insights from cognitive science to religious traditions was inspired by the cognitive linguistics movement: first George Lakoff and Mark Johnson’s conceptual metaphor theory (Lakoff and Johnson 1999), and more recently conceptual blending theory pioneered by Gilles Fauconnier and Mark Turner (Fauconnier and Turner 2002). Both theories have proved enormously helpful in grounding human linguistic meaning-making in the embodied mind, and thereby providing a coherent grounding for the comparative study of historical religious texts (Slingerland 2004; Fuller 2007). Hugo Lundhaug applies the tools of blending theory – the “second generation” of cognitive linguistics that encompasses Lakoff and Johnson’s metaphor theory, but also covers a broader range of cognitive phenomena – to ancient Egyptian monastic texts. His analysis presents us with a thick, sophisticated, scientifically-informed model of “memory” and recollection as culturally instantiated in a particular historical community. Again, we have here work from cognitive science – memory studies and Andy Clark’s particular concept of extended cognition discussed above – serving as a helpful lens through which to view ancient religious practices. At the same time, this example allows us to put some serious meat, as it were, on the bare bones outlines of extended mind and similar theories. Lundhaug gives us a historically sophisticated account of how cognition and memory were encoded in a material culture, as well as a focus on an ecologically valid, real-life community rather than isolated subjects in a lab.

One final observation is aimed at my fellow humanists, and concerns our need to move beyond our venerable, but increasingly outdated, “lone wolf” model of research. As humanities scholars, we have been trained in an intellectual environment where solitary researchers tackle particular topics, performing their research in more or less total isolation, and then produce single-authored research reports. Exceptions to this rule tend merely to confirm how deeply-ingrained it is. For instance, a recent intriguing book on ritual studies (Seligman *et al.* 2008) was produced as a fully co-authored work by four scholars at Harvard, including one of my colleagues in early Chinese thought. In the introduction, they spend quite a bit of time describing this fascinating new mode of scholarly inquiry they apparently feel they have just discovered. The co-authoring of the book is compared to a conversation, or ritual itself, a coming together in “fellowship and trust”, like a dance: “it requires coordination, circumspection, precision in practice, and a well-tempered attention to what one is about. These are skills that seem somewhat low on our priorities these days, but this is part of our great misfortune” (2008: xi).

While I applaud their general motivation, I couldn't help finding their process statement a somewhat overly dramatic description of what working scientists do every day. The fact that these scholars – all of whom, we might note, are firmly located within humanistic disciplines – feel so strongly that they have created an entirely new model of intellectual production merely goes to show how little most humanities scholars know about the way things work on the other side of campus. Of course, as anyone who has worked at all in the sciences is aware, almost *nothing* in science is produced by lone researchers. This is not merely the case in large projects that rely upon a variety of technical expertise (running behavioural experiments, fMRI equipment, etc.), but in almost any scholarly undertaking, because of the recognition that many minds are almost always better than one. Since I began seriously hanging out with scientists about seven years ago, I have come to see the immense advantages of collaborative work, including the ability to tackle projects that are simply in principle beyond the expertise of any single human being. Sole-authoring, as I am doing now, has come to feel a bit like tightrope walking naked: exhilarating, perhaps, but with an intense feeling of vulnerability, stripped of the usual comfort of co-authors filling in conceptual gaps and catching missed references and silly mistakes.

The specific demands of humanities scholarship mean that sole-authored work will continue to have its place, especially in cases where we are attempting to bridge widely-separated disciplines. However, it seems to me that there is no substitute for team-based research. To take one example from this special issue, Alison Griffith's efforts to adapt contemporary experimental techniques to a specific research question in her field is heroic, and considering her lack of formal training in experimental methods it is an impressive achievement. Think about how much more exciting and productive this project could be, however, if instead of merely consulting with colleagues in Psychology she actually teamed up with them, making the case to Psychology faculty and their graduate students why her project would be interesting to them, and then allowing the experts to design and run the data gathering, perform the statistical analysis, etc. In CSR, this is a model that is being promoted at genuinely interdisciplinary centres that bring together historians, linguists, philosophers, anthropologists, psychologists, neuroscientists, and mathematicians around shared interest in specific issues in human religious experience. Noteworthy examples include the Religion, Cognition and Culture (RCC) research unit at Aarhus University (Denmark), the Centre for Anthropology of Mind (CAM) at the University of Oxford (UK), the Institute of Cognition and Culture (Queen's University Belfast), David Sloan Wilson's Evolutionary Religious

Studies (ERS) program based at SUNY Binghamton (USA), and the newly-established Cultural Evolution of Religion Research Consortium (CERC), centred at the University of British Columbia (Canada). This approach allows researchers from across the university with similar intellectual goals to network and find collaborators, giving them the chance to pursue interdisciplinary projects with an unprecedented level of expertise on both the humanities and sciences sides.

The inimitable Clifford Geertz once declared that:

bringing culture into Psychology amounts to adopting a position that can fairly be called radical, not to say subversive. It seems very doubtful that such views... can be absorbed into ongoing traditions of psychological research (or indeed human sciences more generally) without causing a fair amount of noise and upheaval (Geertz 2000: 196).

I think that the new intellectual undertaking represented by the contributions to this volume illustrates how Geertz was both right and wrong. Data from dead minds will not completely subvert the field of psychology, but it will certainly shake it up, to the mutual benefit of both psychology and historical religious studies.

References

- Barrett, N. F. 2010. "Toward an Alternative Evolutionary Theory of Religion: Looking Past Computational Evolutionary Psychology to a Wider Field of Possibilities". *Journal of the American Academy of Religion* 78(3): 583–621. <http://dx.doi.org/10.1093/jaarel/lfq019>
- Bulbulia, J., and E. Slingerland. 2012. "Religious Studies As a Life Science". *Numen* 59(5): 564–613. <http://dx.doi.org/10.1163/15685276-12341240>
- Clark, A. 2008. *Supersizing the Mind: Embodiment, Action, and Cognitive Extension*. New York: Oxford University Press. <http://dx.doi.org/10.1093/acprof:oso/9780195333213.001.0001>
- Clark, A., and D. Chalmers. 1998. "The Extended Mind". *Analysis* 58(1): 13. <http://dx.doi.org/10.1093/analys/58.1.7>
- Cohen, E. 2007. *The Mind Possessed: The Cognition of Spirit Possession in an Afro-Brazilian Religious Tradition*. Oxford: Oxford University Press. <http://dx.doi.org/10.1093/acprof:oso/9780195323351.001.0001>
- Donald, M. 1991. *Origins of the Modern Mind*. Cambridge, MA: Harvard University Press.
- Fauconnier, G., and M. Turner. 2002. *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities*. New York: Basic Books.
- Fuller, R. 2007. "Spirituality in the Flesh: The Role of Discrete Emotions in Religious Life". *Journal of the American Academy of Religion* 75(1): 25–51. <http://dx.doi.org/10.1093/jaarel/lfn064>
- Geertz, C. 2000. *Available Light: Anthropological Reflections on Philosophical Topics*. Princeton, NJ: Princeton University Press.
- Henrich, J., S. J. Heine and A. Norenzayan. 2010. "The Weirdest People in the World?" *Behavioral and Brain Sciences* 33(2-3): 61–83. <http://dx.doi.org/10.1017/S0140525X0999152X>

- Lakoff, G., and M. Johnson. 1999. *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*. New York: Basic Books.
- Noë, A. 2004. *Action in Perception*. Cambridge, MA: MIT Press.
- Pinker, S. 2008. "The Moral Instinct". *The New York Times Magazine* (January 13).
- Seligman, A., R. Weller, M. Puett and B. Simon. 2008. *Ritual and Its Consequences: An Essay On the Limits of Sincerity*. New York: Oxford University Press. <http://dx.doi.org/10.1093/acprof:oso/9780195336009.001.0001>
- Shantz, C. 2010. Ecstatic Minds. In Twentieth Quinquennial Congress, International Association for the History of Religions. Toronto.
- Slingerland, E. 2004. "Conceptual Metaphor Theory as Methodology for Comparative Religion". *Journal of the American Academy of Religion* 72(1): 1–31. <http://dx.doi.org/10.1093/jaarel/lfh002>
- 2008. *What Science Offers the Humanities: Integrating Body & Culture*. New York: Cambridge University Press.
- Slingerland, E., and M. Chudek. 2011. "The Prevalence of Mind-Body Dualism in Early China". *Cognitive Science* 35: 997–1007. <http://dx.doi.org/10.1111/j.1551-6709.2011.01186.x>
- Slingerland, E., and M. Collard. 2012. "Creating Consilience: Toward a Second Wave". In *Creating Consilience: Integrating the Sciences and the Humanities*, edited by E. Slingerland and M. Collard. New York: Oxford University Press, 3–40.
- Wilson, D. S. 2002. *Darwin's Cathedral: Evolution, Religion, and the Nature of Society*. Chicago: University of Chicago Press. <http://dx.doi.org/10.7208/chicago/9780226901374.001.0001>