

Religion as a Human Capacity

A Festschrift in Honor of E. Thomas Lawson

Edited by Timothy Light & Brian C. Wilson



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2. IS RELIGION A RUBE GOLDBERG DEVICE? OR OH, WHAT A DIFFERENCE A THEORY MAKES!

ROBERT N. McCAULEY

Introduction

Prudence, if not sheer logical necessity, dictates that when discussing something, it helps to have some idea of what you are talking about. This is why even the most experienced scholars periodically discuss their terms. Those discussions rarely, if ever, settle anything more than discussants' (sometimes differing) words for a few readily recognizable regions in the relevant semantic sea, but, even so, obtaining clarity is no small accomplishment and often a valuable preliminary to achieving substantive progress within a field.

Scholarly shorthand for such exchanges holds that they concern "definitions,"¹ but, at best, that is misleading—at least if it presumes that "definitions" are capable of ever doing anything *definitive*, i.e., once and for all. *Up front*, with empirical matters at least, clarifying the (provisional) meanings of terms is simply a useful tool for either initiating or renewing inquiry. *In media res*, it is one means for delineating some of the points of conflict between competing accounts of things. The best we get—when a few such competitions actually result in a clear course—are some semantic buoys. Comparatively fixed points (after all, buoys still bob around on the waves), they mark a few safe channels for our communicative comings and goings. But from the surface (where all of us are simultaneously repairing and bailing the *S. S. Neurath*), not even those familiar with the locale know *for sure* whether the cables anchoring those buoys continue to

¹ I shall throughout this paper employ the punctuation used in most contemporary American philosophy. Standard quotation marks (" ") will serve two purposes: (1) as designating text produced by someone else specifically or as scare quotes indicating broader, accepted but questionable usage or (2) to indicate a term (as opposed to the corresponding concept). Single quotation marks (' ') will indicate concepts (as opposed to their corresponding terms). Both uses of standard quotation marks in the sentence at hand are scare quotes.

hold. Moreover, such buoys are always close to shore, and the definitive pretenses of dictionaries of both the common and scholarly varieties notwithstanding, sailing beyond the horizon to catch big fish, let alone to explore new worlds, requires crossing vast buoyless stretches of that semantic sea. Because definitions are far more limited markers than they are usually cracked up to be, Tom Lawson and I have not hesitated to discuss them or propose them *tentatively* in the process of theorizing about religious ritual. Their value turns primarily on the value of the waterways they mark and our resulting ability to find our way around.

Scrupulous conceptual analysis of the sort analytic philosophers undertake will enable inquirers to sail further from shore, but it still requires keeping landmarks or, at least, some of those buoys within sight. By contrast, the most interesting semantic conflicts in science arise further out to sea. They are the latent consequences of the competition of theories following different courses as they sail throughout the world. Such theories are the things wherein we catch those big fish, including such scientific trophy fish as novel predictions, penetrating explanations, and solutions to our practical problems. In science many of the concepts deployed are, finally, only as good as the empirical success of the theories in which they figure. Because empirical theories are conjectural, they are tentative. Their fates are always subject to the next new set of empirical findings. But if the theories are tentative, then so are at least some of their most central concepts' contents. Thus, talk of "definitions" in empirical domains is *never* the final word, because wherever empirical science is introduced, there are no *final* words.

If—within the framework of semantic analysis—the activity of empirical science is to be metaphorically associated with traversing the oceans, then the cognitive accounts of religiosity that Lawson and I and others have advanced over the past decade have sailed through some rough waters (see, for example, Lawson and McCauley 1990 and McCauley and Lawson 2002; Whitehouse 1992 and 2000; Guthrie 1993; Boyer 1994 and 2001b; Hinde, 1999; Pyysiäinen 2001 and Atran 2002). These proposals vary in their ambition (since my and Lawson's theory focuses on religious ritual only, it is probably the least ambitious in this group), but each aims to explain familiar features of religion on the basis of various proclivities of the human mind.

Why have the waters been rough, i.e., why should such cognitive proposals prove *semantically* disruptive? So imbalanced are inquiries

about religion that the pursuit of *any* explanatory theory induces disorientation in most traditional scholars in that field. Confronting cognitive theories in particular can be downright vertiginous. Cognitive proposals about religion are theoretically novel,² and nothing matches the potential of novel scientific theories to disrupt accepted categories.

The conceptual explosiveness of such an account may not be instantly obvious. These cognitive theories' novelty begins with a broad fundamental commitment they all share, viz., that *from a cognitive standpoint* religious thought and action involve nothing out of the ordinary. That assumption runs thoroughly contrary to the predilections of conventional scholars of religion (and, *not coincidentally*, of the religious as well), who forestall even the possibility of empirically disconfirming their views by insisting that religious phenomena pose unique epistemic challenges that can never be solved by the standard methods of rational inquiry. By contrast, cognitive theorists maintain that what makes religion what it is turns on perfectly *ordinary* variations arising and persisting in the course of the operations of comparably *ordinary* mental machinery. Thus, accounting for religious belief and conduct requires neither employing special methods nor even postulating distinctively religious faculties. Lawson and I, for example, have steadfastly argued that participants' representations and knowledge of their religious rituals relies on garden variety cognitive capacities (concerning the representation of agents and their actions), which develop quite naturally in every normal human being.

Endangering the standard picture of *homo religiosus* as the manifestation of the extraordinary and the corresponding pleas of scholars of religion for special methods for its study are only the first two of at least three important conceptual challenges these cognitive theories pose for conventional approaches in the study of religion. Lawson and I have explicated these first two in earlier papers (Lawson and McCauley 1993 and McCauley and Lawson 1996, respectively). Closely connected to these two is a third that turns on specific empirical implications of these cognitive theories that simultaneously threaten the coherence of religion (and religions) as *socio-cultural* phenomena yet support a conception of these phenomena in which their comparatively

² Such accounts have been around for nearly three decades, though. Dan Sperber began to outline this approach to symbolism generally in the 1970s, e.g., Sperber 1975.

simple-minded counter-intuitiveness is one of their *necessary* features. It is this third challenge to many standard approaches to religion that this paper explicates.

*Religion as a Rube Goldberg Device*³

Cognitive theories of religion hold that the various attitudes, values, beliefs, and behaviors associated with religion emerge from routine variations in the functioning of common components of our mental equipment. The mind does not contain a specific department of religion. Instead, religion exploits a diverse collection of emotional and cognitive inclinations in human beings that enjoy neither logical nor psychological unity. The upshot of this analysis is that *cognitively speaking* religion is a Rube Goldberg device, which is to say that it is an exceedingly complicated contraption calling on all sorts of psychological propensities that are, otherwise, usually unlinked. The standard features of religious mentality and conduct are cobbled together from the susceptibilities of a disparate compilation of psychological dispositions⁴ that typically develop in normal human minds for very different reasons—both from one another and from anything having to do with religion.

Those dispositions develop typically, because the resulting mental reflexes they undergird served our ancestors well in dealing with a host of problems their physical and social environments presented, just as they continue most of the time to serve us well when we deal with the same problems. These various mental capacities and their instantaneous operations conferred adaptive advantages on the organisms who possessed them. The abilities to do such things as detect agents, recognize individual conspecifics, and read their minds from their faces (and their behaviors) are just the sorts of capacities that not only increase organisms' inclusive fitness but make life a lot more interesting overall. Whether these abilities begin as dedicated, task

specific systems, many end up seeming to operate that way as a result of standard cognitive development. Since, comparatively early in human development, the mind responds to some stimuli (facial, social, linguistic, etc.) instantly, automatically, and unreflectively, the resulting knowledge is overwhelmingly intuitive and any underlying principles that might be guiding such behavior—if such principles are psychologically real—are tacit. (Elman et al. 1996 suggests that the psychological reality of such “principles” need not entail the possession of either symbolic representations or the rules that allegedly govern them.)

Sometimes quite specific stimuli seem sufficient to trigger these systems. Often the cuing of such mental reflexes engenders powerful feelings in human beings as well as characteristic intuitions and behaviors (Boyer 2001b). The effects are often transparent not just to observers but sometimes even to the subject. Consider, for example, the feelings and behaviors associated with the perception of contaminated food or of the inability of an informant to make eye contact or of unfairness in assessments or of the influence of social hierarchies in the distribution of opportunities and resources. All other things being equal, the human beings in each of these scenarios typically experience distinctive feelings that can instantly propel them into characteristic behaviors—here, acts and attitudes of avoidance, suspicion, complaint, and obsequiousness, respectively.

But how do such dispositions outfit human beings for *religion*? The crucial point is that such features of modern human minds have rendered them susceptible to generating and retaining a variety of representations, beliefs, and practices that presume *counter-intuitive* arrangements, i.e., representations that do not conform to our instant, automatic, unreflective expectations. These include *representations* of Yogi Bear, talking wolves that can plausibly be mistaken for grandmothers, and Superman, *beliefs* in everything from Lassie, Santa Claus, fairies, and leprechauns to ghosts, ancestors, angels, and gods, and *practices* such as theater and ritual. Precisely what form these representations, beliefs, and practices take is mostly a function of what is in the air locally and, needless to say, not all of them are religious (a point to which I shall return later in this paper). So, this is only part of the story, but it is a very important part.

Cognitive theorists offer at least three (mutually consistent) accounts of how counter-intuitive representations that we regard as religious come about. The first two concentrate on their origins, the first and

³ Named after the humorous imaginary machines created by the Pulitzer-Prize winning American cartoonist, Rube Goldberg (1883–1970), a “Rube Goldberg device” is any device that is “unnecessarily complicated, impracticable or ingenious” (Oxford English Dictionary). (eds.)

⁴ For a discussion of the relation between adaptive cognitive dispositions and their various latent susceptibilities, see Sperber 1996a: 66–67.

third on their persistence. Inspired, in part, by a long tradition of intellectualist theorizing in anthropology that holds that humans entertain religious beliefs because they explain things, the first account maintains that when humans confront anomalous phenomena, i.e., phenomena that violate their intuitive expectations, they naturally generate *counter-intuitive* representations in order to make sense of these states of affairs. Surprising, unexpected counter-intuitive experiences inspire the construction of otherwise unexpected, counter-intuitive representations to make sense of them. Note, such experiences are just as capable of stimulating what we may come to deem scientific speculations as religious ones. Science, however, inevitably advances proposals that are far less modestly counter-intuitive than those religion recruits. Science invariably traffics in representations that arise from *genuinely extraordinary* variations on our standard mental contents. So, for example, sooner or later, it abandons appeals to agent causality. One firm correlate of scientific progress has been its steadily increasing restriction of the domains in which teleological explanations are licit (Churchland 1989). Religions, by contrast, rely overwhelmingly on the states of mind and actions of counter-intuitive agents to explain things (McCauley 2000).

The second account (Guthrie 1993—but also see Burkert 1996) is that these counter-intuitive representations arise, in effect, as the results of cognitive false alarms. Although plenty of theorists, at least since Tylor, have made much of dreams, they are not the central issue here. The range of conditions capable of activating the mental reflexes I have been discussing do not infallibly correlate with the objective variables that led to their development. Consequently, they err on the side of liberality. They are not perfect detectors. So, for example, even when we have compelling evidence to the contrary, our default hypothesis for explaining unexpected sounds (especially in the dark) is that they have resulted from some agent's actions (and we begin searching for the agent responsible). The force of the associated emotions and intuitions is such that it is a very short step to explanations of the unsuccessful searches in terms of hypothesizing empirically undetectable agents. Because every normal human being is susceptible to such emotionally compelling, cognitive misfires (in a variety of domains), every culture has emerged with a panoply of ancestors, angels, brownies, cherubim, demons, devils, elves, genies, ghosts, ghouls, gnomes, goblins, gods, gremlins, fairies, fiends, imps, leprechauns, mermaids, nymphs, phantoms, pixies, poltergeists, saints,

seraphim, sirens, sorcerers, specters, spirits, sprites, vampires, warlocks, witches, and wizards, let alone golems, sylphs, or zombies or representations of animals, plants, objects, and places possessing counter-intuitive properties. Cultures the world over take forms that manipulate such dispositions. They have developed all sorts of ways of stimulating these false positive responses by activating the relevant perceptual systems—from fashioning simple human-like objects that visually cue the presence of additional agents to producing motion pictures that visually cue the presence of additional worlds. The questions remain, though, why only some of the representations that these false alarms create persist and why some, but not others, among those that persist count as religious.

The third account (e.g., Sperber 1975 and 1996a) focuses on the first of these two questions. On this account how such counter-intuitive representations originate is not the critical issue. They may just occur randomly. The more pressing question is why they persist and get transmitted to others. The answer, broadly speaking, is that the persisting representations are the ones that survive the culling wrought by processes of selection. Just as humans find some foods particularly good to eat, they find some symbols—as Lévi-Strauss suggested—representations that are particularly good to think. What makes representations psychologically appealing constitutes most of the operative selection forces here. We tend to transmit representations when they have enough of the following properties. First, they are not only readily *recognizable* but often *attention grabbing*. Physical structures that manifest a symmetry along a vertical axis are rare in nature (outside of the animal kingdom) but abundant in culture. Structures of this sort with two spots resembling eyes commandeer humans' attention particularly effectively. Second, they are *easily remembered*. Persisting representations, especially in non-literate settings, provide important insights about the character of human memory (McCauley 1999). So, for example, people tend to remember verbal representations that rhythmically rhyme. Third, like diseases, they are *communicable*. Frequently, the features that make a representation memorable will also make it easier to transmit. Usually, tunes are unforgettable precisely because they are so easy to sing, hum, or whistle. By contrast, representations that possess none of these features, like scientific theories, are far less likely to get transmitted spontaneously (McCauley 2000). Finally, these representations *motivate* people to spend their time and energies transmitting these representations to other people.

If we believe God is the secret to happiness and human fulfillment and we want those whom we care about to have happy, fulfilled lives, then we will tend to transmit representations of God to those whom we care about. Or if part of some idea is that rewards will accrue to those who propagate that idea, this will increase the probability that it gets propagated. On this third account religions should mostly be understood in terms of distributions of similar representations, attitudes, and beliefs about counter-intuitive agents in human populations, where those mental representations are causally related to one another and to a set of public representations (such as statements, practices, clothing, icons, statues, buildings, etc.).

Each of the various cognitive theorists subscribes to some or all of these accounts. The crucial point, though, is that all three presume that the eruption of religious representations in human populations relies neither on a uniquely religious set nor even on any integrated set of sensibilities or cognitive capacities. Instead, religion (along with such things as civil ceremonies and superstition, folk tales and fantasy, and magic and music) largely results from *the latent consequences of normal variation* in the operations of fallible perceptual and cognitive heuristics enshrined in human minds that otherwise aid us in managing problems from a wide array of domains.⁵ (Had he thought of it, portraying religion for what it is at the cognitive level might have won Goldberg another Pulitzer.)

Whither 'Religion'?

But the second question remains. Why do some but not all of those persisting counter-intuitive representations count as *religious* representations?

Perhaps, one of these cognitive theories' most interesting implications for the study of religion is the suggestion that this query already begs a critical question itself, viz., whether there is, any longer, a

⁵ Consider, for example, Burkert's observation (1996: 22–23) that: "There is probably a cluster of factors in evolution and a cluster of functions served by new avenues of communication; functions may also be lost or altered. Nonetheless certain persistent and permanent patterns emerge and even seem to control interactions, since all these events occur within a unique landscape to which they are adapted. What we discern are the tracks of biology followed by cultural choice."

principled basis for delimiting a subset of our representations as the "religious" ones. If, cognitively speaking, human religiosity is a Rube Goldberg device, what, then, are the scientific grounds for identifying specific socio-cultural phenomena as religious? Because human religiosity is a hodgepodge at the psychological level, are religions—construed at the socio-cultural level—comparable miscellanies? Is 'religion' (whether the term is preceded by an article or not) a viable, analytical category for social science? These cognitive analyses suggest some grounds for skepticism about the conceptual glue that purportedly holds these outcomes (of our diverse dispositions' susceptibilities) together as distinct, socio-cultural systems that the term "religion" denotes. It appears that theorists in the social sciences must bear the burden of demonstrating the respects in which 'religion' is an explanatorily useful category in order to stave off the suspicion that, like the concept 'constellation,' it only delineates superficial (indeed, accidental!) patterns that reveal little or nothing about the phenomena it designates but only something about the perspective humans are inclined to take on these things prior to self-consciously reflecting on them theoretically.

Psychological analyses are not the only source of these skeptical worries. Straightforward observations about religion at the socio-cultural level also introduce problems. At least two additional considerations contribute to pessimism about the explanatory probity of the concept 'religion.' On the one hand, religion turns out to be too many things, while on the other, too many *other* things that are clearly *not* religion turn out to share some of the most prominent features of religion. Consequently, many suggest that 'religion' seems likely to be a family resemblance concept *at best* (Saler 1993).

First, no one has come up with a property that all and only religions possess. From High Church Anglicanism to Theravada Buddhism, from the Ghost Dancers of the Sioux to worshipers of the Japanese Emperor, from the religions of the Nuer, the Zande, and the Zulu to resurgent Islamic fundamentalism, from Hinduism to the Quakers and Shakers, pondering the diversity of phenomena that constitute even the paradigmatic examples of what we call "religions" quickly hints at the challenge that formulating jointly necessary and sufficient conditions for the concept's application poses (see Boyer 2001b: 6–10). Pyysiäinen (2001: 4) holds that "... it is doubtful whether a scientific category of religion can be constructed, because the category includes so many different kinds of phenomena that the cohesiveness of the

category cannot be accounted for by any one theory." Boyer (2001b) explains some of this diversity by stressing the differences in the subsets of the cognitive dispositions and their susceptibilities—from one case to the next—that get exploited. Ultimately, both are suggesting, though, that the things that we call "religions" pre-theoretically include too sprawling a range of phenomena to render 'religion' a very penetrating explanatory concept.

Nor is establishing sufficient conditions for religion easy. It seems every bit as challenging to identify a property that *only* religions have as it is to identify one that all and only religions do. Sampling the assortment of counter-intuitive representations that humans are capable of entertaining prefigured this second basis for pessimism. The problem is that religions piece together patterns of emotion, thinking, and conduct that occur in many other settings that certainly fail to square with our pre-theoretic views of the "religious."

As the list I supplied earlier revealed, religion has not cornered the market on agents with counter-intuitive properties. They abound in folk tales and fiction as well as in cartoons, comic books, and commercials. They are also sometimes one of the marks of lunacy. However normal it may seem, it is striking that humans have *no* problem with Mickey, Minnie, Donald, and Goofy talking, having pets, and going on picnics. These short steps to the counter-intuitive are not confined to proliferating non-standard agents. Not only could Mighty Mouse fly, he produced contrails, which could function like ropes to bind up bad guys (who, incidentally, were almost always cats who wore clothes and drove cars).

The same is true with ritual. All religions include rituals, but many other forms of human activity and association employ ritual as well. Whether loosely characterized as nothing more than the repetition of specific actions (reading the same bedtime story night after night) or more technically portrayed in terms of those repeated actions' absence of instrumentality and (in many cases) their provocation of human emotions, rituals thrive in many other areas of human endeavor. From commencement exercises, to the opening and closing ceremonies of the Olympics, to the initiations of fraternal organizations, repeated, non-instrumental actions are utilized for marking events, which sometimes have no trace of the religious about them.

Accompanying the invention of agriculture, centralized governments employed both religion and the mechanisms it exploits for their own preservation (Diamond 1998). These regimes enlisted many

of the most standard religious gimmicks. They apotheosized rulers. They created civil ceremonies. Some of the most venerated sites in the world pervaded by some of the most rigidly ritualized forms of human conduct are those associated with national and political identities, such as tombs of unknown soldiers. So, it seems that appeals to counter-intuitive representations or to ritual or to sacred spaces will not suffice to differentiate the religious.

Any number of interested parties to debates about the definition of "religion" over the past few decades will see vindication for their views, first, in these failures to supply even sufficient criteria for religion (let alone necessary and sufficient criteria) and, second, in the consensus among the new cognitive theories that religion relies on a psychological infrastructure that only Rube Goldberg would have designed. For additional reasons having to do with the status of their discipline, cultural anthropologists have typically regarded religion overall as well as its characteristic accouterments—myths, rituals, and sacred spaces—as instances of *general* cultural patterns in which humans find meanings. Religion is (only) one among many cultural systems; religious myths shade indistinguishably into secular myths, fables, and folk tales; religious ritual operates no differently than ritual operates anywhere else. Whether they hoped to delineate general theories of the cultural patterns or, eschewing such goals, they aimed to explicate the webs of implied meaning, cultural anthropologists have largely resisted the notion that the religious constitutes a unique domain worthy of specialized theories. Since the 1950s the interpreters of symbolic meanings (and the subsequent post-modern elaborations of their stance) have dominated this discipline.⁶

These trends are similar to ones in the academic study of religion over the same time period. Scholars of religion have also generally preferred to be interpreters of meanings rather than theorists about patterns. If they wish to avoid even the appearance of an interest in explanatory theorizing and if meanings are wherever they can be found, then formulating precise criteria for what should count as religion in order to test scientific proposals holds no attractions. It only restricts their purview.⁷ Prominent religious thinkers of the time

⁶ Clifford Geertz's *The Interpretation of Cultures* (1973) has emerged as a *locus classicus* of this approach to religion (however, see Pyysiäinen 2001, chapter 3).

⁷ Because civic ceremonies or, for that matter, football games, occasion the sorts of passion, ritual, and group solidarity that we find in many religious communities,

gave these scholars added support for advocating a wide-open account of what might count as religion.⁸ Wilfrid Cantwell Smith (1964) noted how various ancient cultures did not even possess the concept 'religion,' and Paul Tillich maintained that the religious included any object or expression of "ultimate" human concern. The possibilities are endless (see Lawson 1999).

The notion of religion as a thoroughly open concept presents no problems for the newest manifestations of interest in religion—either scholarly or devotional. With regard to the former, whatever objections and qualifications recent post-modern thinkers may have advanced in response to the broadly hermeneutic agenda of interpretive anthropologists and scholars of religion, the former do not substantially differ from the latter on the questions at hand. If anything, post-modern thinkers are even less sympathetic with proposing definitions, let alone ones linked to the theoretical projects of social or psychological science. On the views of most post-modernists, even the attempt to advance testable theories about human thought and action that employ comparatively precise definitions of key concepts does nothing more than perpetuate restrictive "essentializing" activities that result in repressive formulations restricting human freedom. On the devotional front, the newest forms of popular religiosity are (in)famous precisely for blurring traditional religious conceptions with considerably less elaborated ideas that emphasize the primacy of religious feeling and experience. On these views meditation, aroma therapy, or listening to the latest New Age musicians can just as authentically instantiate human religiosity as reading the Qur'an, saying the Rosary, or attending services on the High Holy Days.

it does not follow that either nationalism or football are religions or that civic celebrations or football games are best understood as religious events. Without the formulation, testing, and corroboration of explicit explanatory theories that treat all of these phenomena on a par, assertions of this sort remain suggestive metaphors at best.

⁸ Pyysiäinen (2001: 152–54) identifies a further contributing factor. In effect, he argues that those who insisted that all religions are worldviews also ended up diluting the concepts in question by eventually confusing this claim with its converse, viz., all worldviews are religions. The conversion of a universal affirmative proposition is, of course, an invalid inference.

Oh, What a Difference a Theory Makes!

Up to this point, I have mostly been sailing with the wind, but I must now begin to tack. That is because far too often scholars of religion have—from our inability to establish either necessary and sufficient conditions or even just sufficient conditions for religion—drawn the stronger conclusion that we, therefore, cannot make sense of any *necessary* conditions for religion either, i.e., that there is no property that all religions share. This conclusion is stronger, because the standard of stating some necessary condition is so weak. Although this conclusion may be true, I tack here for three reasons.⁹ First, not only is this negative conclusion *much* stronger, but, second, the inference is fallacious. Third and more important, in cases like this, the best way to ascertain whether this conclusion is true is to press ahead *theoretically* and, therefore, *empirically*—at least in any inquiry that aims to be counted among the empirical sciences. To repeat, it is usually a theory's explanatory and predictive success that is the principal variable determining the fate of the concepts (and their "definitions") that it presumes (see footnote 6 above).

Rather than advance this stronger conclusion directly, though, most of its advocates highlight one of its consequences. If we will forever remain unable to establish any necessary conditions for religion, then it follows that trafficking in counter-intuitive representations, in particular, cannot be a necessary condition for something to count as religious.¹⁰ Religions, on this view, need not be about the gods (or ancestors or angels or saints or miraculous events, etc.). This is a conclusion that various sociologists, anthropologists, and scholars of religion have pressed over the past few decades, and they will be inclined, no doubt, to take solace from the general drift of the cognitive analyses I have sketched above.

Parallels between the study of language and the study of religion that Lawson and I have highlighted before (e.g., 1990, chapters 3,

⁹ I am not the only one to tack. Pyysiäinen, 2002 proposes, as will I, that the possession and use of counter-intuitive representations is a plausible necessary condition for productive theorizing about the religious. As Pyysiäinen and I (below) acknowledge, it is Boyer (1994 and 2001) who proposed the 'counter-intuitive' as the central analytical category and who has worked through the principal difficulties that its explication requires.

¹⁰ See, for example, Levine 1998, but by all means be sure to consult McCauley and Lawson 1998 as well!

4, and 6) may only reinforce that inclination. We have underscored how, since the nineteenth century, progress in the study of language has inspired new approaches in the study of other facets of culture and in the study of religion in particular. Our earliest conception of our own project was precisely that we were updating the study of religion in the light of new developments in language study to which scholars of religion had yet to attend.¹¹ However controversial his views otherwise, Noam Chomsky was the first major proponent of construing linguistics as a sub-discipline of cognitive psychology. Yet the cognitive turn in language study, at least in Chomsky's hands, led to a similar sort of dissatisfaction with the notions of language and languages that many scholars of religion have expressed about their putative object(s) of study.

Further scrutiny of Chomsky's views here, though, will disclose how limited are the consolations of cognitivism for the semantic pessimism of interpreters of religion(s) and of many of their post-modern critics. Chomsky (1986: 20) attacks what he calls "externalized language," i.e., a notion of language as "a collection (or system) of actions and behaviors." He denies that penetrating explanatory theories in this domain will have much, if anything, to do with either externalized language or a commonsense conception of language, and he correctly insists that this failure of our best theories to square with commonsense is not unusual in science (1980: 90 and 1986: 15).

"So far," semantic pessimists might comment to themselves, "so good." But only "so far," for here is the rub. Chomsky certainly does *not* propose to abandon the concept "language" altogether. He (1986: 27) argues, instead, for what he calls "internalized language," which is "a structure in the mind." He advocates this conception of language (basically what he has generally referred to before as a speaker's "linguistic competence"), because of the role it plays in what aims to be successful scientific theorizing about this area of human mentality and action. He defends a notion of internalized language because of how it functions in a larger linguistic theory that has fruitful explanatory and predictive consequences. The gen-

eral point Chomsky is making here that I want to emphasize is that a penetrating account of the cognitive mechanisms and processes (whatever their character) that are responsible for shaping and generating our linguistic output would constitute a solid foundation for beginning to make sense of concepts like 'language' and 'languages.'

Clearly, the *principal* worries of cognitive theorists (about whether the everyday use of the term "religion" will square with their accounts of the psychological underpinnings of the relevant patterns of thought and action) differ from the worries with that term (and the concept for which it stands) that trouble interpreters of religion, their post-modern critics, and religious devotees. However, the differences do *not* stop there. This is not a matter of people of different orientations coming to the same conclusion on grounds that only partially overlap, because *the conclusions on which they settle are not, in fact, the same*. Whether cognitive theorists are thoroughgoing semantic and explanatory reductionists, as Boyer (2001b) appears to be, or semantic holists and explanatory pluralists, like Lawson and myself (1990: 1–2 and chapter 6 and McCauley 1996), not only are they not out to discard the notion of religion altogether, they are also united on at least two additional fronts. First, they all insist that the success of explanatory theories in science should guide our semantic commitments, but, second and more important for my immediate purpose, their preoccupation with rendering their proposals testable requires that they elucidate as clearly as possible the *recurrent patterns* of individual and collective behavior their theories are out to address (Boyer 1994). As Pyysiäinen claims, "... it is possible to study the various recurrent similarities that go under the general name of 'religion,' without committing oneself to any a priori assumptions about the cohesiveness of the category of religion" (2001: 5). That we may be currently agnostic about the usefulness of 'religion' as a socio-cultural category does not preclude advancing suggestions about features that the socio-cultural patterns to be explained share.

It is, then, from healthy preoccupations with their theories' testability that cognitivists' interests in specifying necessary properties of those recurrent patterns spring. For reasons I outlined in the introductory section, attempts at characterizing these patterns, i.e., what—in the scholarly shorthand—we call "defining" them, are always tentative. Those definitions' improvement (or replacement) results from a never-ending negotiation between theoretical reflection and empirical research. Diligence at this process insures ongoing concern with these theories' testability, which, in turn, warrants further

¹¹ We cannot claim much success on this front, if a major invited address at the most recent meeting of the International Association for the History of Religions in Durban, South Africa (2000) that focused on comparisons between the contemporary study of religion and the work of Ferdinand de Saussure (who, after all, died in 1913) is any indication of the current state of the field's engagement with theorizing and research on language!

diligence. The two enterprises, viz., testing hypotheses empirically and improving our accounts of the semantics of the theoretically central terms, are mutually reinforcing. Neglect of these matters renders theories immune to an increasing range of potential empirical objections. Raising empirical objections in science presupposes theories that use terms precisely enough that we can ascertain those theories' empirical consequences. Concluding that we cannot even specify necessary conditions for religion and, therefore, abandoning any attempt to do so has not convinced anyone, including the semantically pessimistic interpreters of religion who have adopted this line of argument, to abstain from using the term "religion" and its cognates. Semantic pessimists may get to have and eat their cake, but it comes at what cognitivists regard as an unacceptable cost, viz., our ability to formulate empirically testable theories in this domain.

The antecedents of current cognitive proposals are not too difficult to sketch. At the turn of the last century, scholars were content to talk about *gods* as an earmark of religion. Ethnographers' findings about the diverse kinds of counter-intuitive agents to be found in the world's cultures and modern theologians' growing wariness about gods as persons encouraged scholars to employ less specific proposals about the necessary conditions for religion in terms of notions like the *holy*, the *sacred*, and the *supernatural*. Neither the vagueness of these notions nor the transparent theological agendas that motivated them recommended them to scientifically minded theorists. In part as a remedy for these liabilities, Melford Spiro (1966) proposed that all religions deal with *culturally postulated superhuman beings*. As we began to explore the cognitive foundations of ritual and the central role of agents in the representation of action, Lawson and I proposed amending Spiro's formulation, speaking, instead, about culturally postulated superhuman *agents*. Looking at how two different cognitive mechanisms, viz., an action representation system and a conceptual scheme containing religious representations, interacted to produce specific forms of ritual knowledge that religious participants typically possess was the principal inspiration for this modification (1990: 103).

All of these were improvements and at least the last two were directly motivated by a concern with developing empirically responsible theories, but Boyer provided what was, by far, the most important breakthrough. (After all, short of some metaphysical sleight of hand, cultures are not the sorts of things that are capable of postulating anything, as Lawson and I should have recognized.) Boyer

advanced (e.g., 1994) the notion of the *counter-intuitiveness* of representations for characterizing what all religious ontologies have in common. And although the most arresting features of religion circulate around peculiar agents, their states of mind, and their actions, counter-intuitiveness constitutes a much more well designed analytical tool than these earlier formulations, since not only can it handle such agents, it can also account for the other oddities at the fringes of many religious ontologies that may not involve agency (such as plants that live forever).

Boyer has argued that religious ontologies are populated by entities that involve minimal variations on robust intuitive knowledge about ontological matters in a specific triple of domains (viz., physics, biology, and psychology) (Boyer 2001b and Boyer and Walker 2000). Religious representations remain only modestly counter-intuitive, because that enables them to approximate a cognitive optimum. Since they are *counter-intuitive* they grab our attention and are easy to recall. Since they are only *modestly* so, they leave the overwhelming majority of our intuitive knowledge about the relevant ontological categories intact, from which we are entitled to draw a vast array of inferences for free.¹² Consequently, we know how the ancestors think, because we know how agents think generally.

Of course, as I noted earlier, not all modestly counter-intuitive representations are religious representations. (Recall the Big Bad Wolf and Mighty Mouse's contrails.) But since the current semantic task is less ambitious, the fact that the notion of modest counter-intuitiveness can make sense of more than just religious representations is not a problem here. The goal is simply to supply some feature that all of the relevant patterns exhibit. The emerging operative hypothesis is that some involvement of modestly counter-intuitive representations is a necessary feature of religious phenomena. The crucial point is that this is not mere semantic legislation. Not only does it capture all of the paradigmatic cases, it captures them on the basis of systematic theory:

- that explains and predicts a wide array of their salient features,
- that seeks and possesses a good deal of consilience with the closely related sciences (as opposed to insulating itself from criticism via

¹² This is just what the far more radically counter-intuitive representations that science usually generates do not permit (McCauley 2000).

claims for disciplinary autonomy or for a subject matter that is *sui generis*), and

- that, thereby, promises to generate new insights about the phenomena in question, which constitute bases for formulating new empirical and experimental tests.

The excellence of counter-intuitiveness as an analytical tool, then, resides in its scientific motivation and, more specifically, in its impeccable cognitive credentials. Boyer has neatly articulated an account of the underlying mechanisms of the human mind that are reliably implicated in the patterns of thought and action that constitute the targeted recurring phenomena, whatever the fate of religion and religions as socio-cultural phenomena (see Pyysiäinen 2001: ix). As a result of these mechanisms, all of the patterns cognitive theories are out to address inevitably involve counter-intuitive representations. That those theories provide a strategically unified set of explanations for these patterns, that the phenomena which these patterns encompass constitute virtually all uncontroversial cases of religious phenomena, and that those uncontroversial cases stretch across both cultures and times redounds not only to their benefit but to the benefit of the characterization they offer of religion.

The final premise of this last argument points to another pivotal advantage of this account. If all normal human beings do, in fact, find themselves equipped early on with the mental dispositions on which cognitive theories focus, then both the testimony of ethnographers and historians about the pervasiveness of religion and what we know about the ease with which these mechanisms can be exploited suggest that all humans will inevitably generate counter-intuitive representations. This enables us to gain a glimpse, at least, of the *possibility* of formulating a (psychologically motivated) concept of religion that is *comparatively* uncontaminated by either ethnocentrism or anachronism.

Are Rube Goldberg Mechanisms Really Mechanisms?

Merely glimpsed or fully formulated, does such a psychologically motivated concept of religion entitle us to reintroduce talk into *social* science (as opposed to psychological science) about religion and religions as socio-cultural realities? Boyer and Pyysiäinen seem to think not. For example, Pyysiäinen (2001: 2) argues: "A general theory of

religion would require that there exists a separate class of religious phenomena that can be explained by a set of distinct laws. This is not the case if religious representations are actually produced by cognitive mechanisms that also produce non-religious representations." He draws his negative conclusion from two premises. The first is that to establish the credentials of 'religion' and 'religions' within social science requires developing a theory that is useful and testable and that employs these concepts essentially. However, the second is that we should not expect the development of such a theory. He argues for that premise on the ground that the assumption cognitive theories share, viz., that religion, from a cognitive standpoint, is a collection of beliefs and behaviors that arise from a hodgepodge of psychological dispositions responsible for many other kinds of counter-intuitive representations, suggests that such a theory is unlikely.

These observations may suggest it, but it does not guarantee it. Three considerations come to mind. First, thoroughgoing explanatory and semantic reductionism offers a misleading picture of science. The viability of inquiries at higher levels of analysis in science does not depend upon their theories mapping neatly on to those that dominate research at lower levels. Consilience is one of the most important of the scientific virtues. But it, nonetheless, constitutes but one constraint in what is certainly a *multiple* constraint satisfaction problem, viz., finding the best configuration among a host of virtues (and vices) for the purpose of deciding among available, competing theories. If social scientists can formulate theories by virtue of which we are able to identify, explain, and predict systematic patterns among socio-cultural phenomena, then nothing about the disunity of their underlying psychological infrastructures is likely to dislodge them. Theories about the behaviors of markets and mobs probably qualify. The power of our pre-theoretic intuitions to the contrary notwithstanding, current social scientific proposals about languages and religions, admittedly, do present much closer calls.

Second, this story about cross-scientific relations also has a straightforwardly positive side. Instead of imposing rigid constraints on upper level theories, research at lower levels of analysis (e.g., the psychological) provides opportunities and resources for inquiries at higher levels (e.g., the socio-cultural) (McCauley and Bechtel 2001). As I outlined in the previous section, cognitive theories have already made good headway in supporting the counter-intuitiveness of representations as a necessary condition for religious phenomena. This provides social scientists interested in theorizing about religion direction

about which patterns probably deserve the greatest attention. Prima facie, events centered around groups of individuals' willingness to call themselves "Free Methodists" or "Roman Catholics" or "Kivung" probably do, whereas these social scientists should probably devote less attention to Fourth of July celebrations, Republican conventions, Teamsters' strikes, and Steeler games.

Finally, I have, in effect, argued that testing scientific theories empirically is critical to the process of ascertaining plausible necessary conditions for the phenomena the theories are out to explain. By itself, though, the counter-intuitiveness of representations is an extremely weak condition on the "religious," since so many other sorts of representations—from those in cartoons to those in science—also fit the bill. But noting *that* fact need not stymie subsequent theorizing. Rather it is a provocation to formulate proposals about additional necessary conditions for something to count as religious,¹³ which, in turn, will stimulate further empirical research. To repeat, these moments in scientific inquiry are mutually reinforcing.¹⁴

For nearly three decades, no one has done more than Tom Lawson to foster this process within the study of religion. Nor has anyone had a clearer view of its pivotal importance for making progress in that field.¹⁵

¹³ By the end of his book, Pyysiäinen has, admirably, done just that, conjecturing that religious representations can be distinguished from other counter-intuitive representations by virtue of the fact that they also are simultaneously organized around agent-representations in particular, taken to be literally true (the cavils of theologians, notwithstanding), and employed similarly across populations in issues of "life management" (Pyysiäinen 2001: 71, 227–28, and 235–36).

¹⁴ Contrast Pyysiäinen's comment at the opening of *How Religion Works*: "There is no scientific theory of religion as a whole . . . 'religion' is not a scientific, explanatory category, but merely a heuristic device, used by scholars to lump together phenomena that seem to have some kind of family-resemblance" (2001: 1). I think that trying to draw any strong distinction between "scientific, explanatory" categories and heuristic devices (in this sense) is forlorn. I strongly prefer the philosophy of science Pyysiäinen lays out in the final pages of his book (see especially, 233–34) and in his subsequent paper (Pyysiäinen, 2002: 112) to that with which he opens *How Religion Works*.

¹⁵ For this, and so much else, we are all indebted to Tom. Of course, the list of my debts to him stretch much further. In short, I am profoundly grateful to him as my teacher, as my collaborator, but, most of all, as my friend.

3. WHY DO WE NEED COGNITIVE THEORIES OF RELIGION?

HARVEY WHITEHOUSE

Scores of different schools of thought have claimed to explain religion. And thousands of scholars have contributed to the ensuing debates using evidence from such diverse sources as history, archaeology, theology, sociology, ethnography, philosophy, and even astronomy and mathematics. E. Thomas Lawson, whom this volume honors, is widely and justly credited with being among the first to recognize the importance of developing a cognitive approach to the understanding of religion. But what reasons do we have for supposing that yet another set of theories will really help?

The short answer is that a great many existing theories of religion are ontologically flawed or untestable (and, in some cases, both). During the second half of the twentieth century, a drift toward hermeneutic and phenomenological approaches to the study of culture has led to declining interest in explaining religion at all. In overcoming many of these problems, the cognitive sciences offer a radically new way forward. I will argue that social/cultural anthropology, and a branch of these new sciences, is uniquely positioned to supply crucial sources of data for the development of explanatory theories of religion and could make crucial contributions to cross-disciplinary collaboration. But first, certain problems need to be overcome.

The Problem of Faulty Ontology

Thoughts and feelings consist of processes occurring in people's nervous systems, whether or not these are influenced by events in their immediate environments. Attention, perception, language, memory, dreaming, introspection, inference, empathy—in fact, every aspect of human experience and mentation is reducible in principle to organized processes and the developmental histories that shape them. The extraordinarily complex neural computations through which these effects are generated did not appear mysteriously overnight. They came