1 Cognitive constraints on religious ritual form: a theory of participants’ competence with religious ritual systems

Paradoxes, puzzles, and explanatory problems

Some rituals captivate the imagination. Others provoke boredom. We are easily moved, often excited, and occasionally even astounded by the sights, sounds, and smells accompanying ritual spectacles. These events stimulate our senses, enliven our emotions, and captivate our minds. The enthronement of popes, the inauguration of presidents, the burial of heroes arrest our attention and embed memories that last a lifetime. Everyone loves sensory pageantry. Some rituals focus the attention, feed the imagination, evoke the remembrance of things past as well as the desires of things to come, and inspire dramatic actions that stand out against their everyday background. Yet the salience of such dramatic spectacles should not obscure the fact that “ritual” often refers to the repetition of small and thoroughly mundane acts. Even though these rituals break with the ordinary world too, they frequently remain thoroughly humdrum. They trigger automatic responses that appear to be completely mindless. If we focus on participants’ psychological responses in ritual situations, we cannot fail to notice the different degrees of emotion involved in these two sorts of cases. Some rituals are so emotionally arousing that their effects seem to last forever. In other rituals emotion seems to play little, if any, role.

Compare, for example, the comparatively lavish preparations for weddings and their impact on the participants’ emotions with the more modest accouterments and emotional responses connected with routine blessings. The weddings quite regularly involve special music, clothes, foods, and more. By contrast, priests often perform blessings almost as an afterthought.

To draw out this contrast particularly sharply, consider the following comparison between two ritual practices of the Church of England. Any regular member of the Church of England participates in worship services that are structured by the Book of Common Prayer. It provides a blueprint for various ritual acts that priests and participants are expected...
to perform. Some acts apply to everyone whether they are commoners or royalty. But there is nothing like a special royal occasion to highlight the differences between rituals that arouse the emotions and are only infrequently performed and other rituals in the same tradition that are regularly performed and carry little emotional intensity. For example, at the coronation of Elizabeth II, the monarch of the United Kingdom, in Westminster Abbey, not only did all of the ritual participants wear special garments and priceless jewelry, but this very special event was marked by sounding trumpets, singing choirs, chanting priests, cheering crowds, and the participants traveling in horse-drawn carriages (in the age of the automobile).

British coronations are both affairs of state and matters of religion, because the Queen is not only the symbolic head of the government but also the symbolic head of the Church. On this particular political and religious occasion the sensory pageantry in the abbey (and outside for that matter) was overwhelming, the emotional reactions it elicited were considerable. Coronations are infrequent affairs, yet in this same abbey, the scene of this unrivaled splendor, participants perform religious rituals in which they sit and then kneel and then sit again, time after time, as they follow once again the order of service for the day. This stark contrast suggests that it is important that students of religious ritual distinguish the comparatively infrequent ritual situations involving striking levels of sensory stimulation, such as weddings and coronations, from the far more frequent situations of ritual work, which are often quite routine. What puzzles us – what is worthy of scholarly attention – is why ritual systems show such a Janus-face.

With religious rituals, novelty and repetition traffic together in intriguing ways, whether they involve queens or commoners. The fact that ritual phenomena include both activities filled with the sensory pageantry that dazzles and practices that are so repetitious and uninspiring that they verge on the mechanical poses something of a paradox. We want to know why it is that the same system generates phenomena that differ so radically in their emotional effects. Such apparently paradoxical traits encourage us to plumb the depths of religious ritual systems in search of an explanation.

In this book we intend to offer what we hope will be compelling explanations of why some rituals are unique, attention-grabbing events whereas others become such a normal part of daily life that they seem quite commonplace. This paradoxical character of rituals, especially other people’s rituals, has provided grist for the mills of some of the greatest minds in Western intellectual history.
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Some researchers focus on the excitement, others on the boredom. Scholars in the tradition of Van Gennep (1960) have noted that some rituals mark and celebrate unique events that are absolutely pivotal in the lives of the participants. Rites of passage stand out from the mundane ritual background and by their very uniqueness tell both the participants and the observers: “this is special; this happens only once in your life; pay attention.” Other researchers have highlighted the habitual and mundane aspects of ritual. Their point is to show how ritual is thoroughly integrated into the affairs of daily life. These scholars focus upon the fact that frequently rituals are so common and ordinary that, because everyone is doing them, no one notices them. They merge with the background. People will count their prayer beads as they engage in commerce and make frequent signs of the cross as they enter and leave buildings (or score touchdowns).

Other puzzles about ritual

Although this contrast will receive most of our attention in this book, it is by no means the only puzzle surrounding ritual we shall address. For example, some religious rituals permit substitutions whereas others do not. A rite of purification may require water, but if no water is available, what then? Substitute sand. Or a sacrifice may require the slaughter of an ox, but an ox is a valuable commodity. A cucumber may be a perfectly appropriate substitute. Why is it that some rituals permit such substitutions and others do not?

Let us take another example. It makes no sense to reverse some rituals’ consequences. When faithful Muslims circumambulate the Ka’bah, there is no reversing the blessings they accrue. On the other hand, some rituals can have their consequences reversed. A priest goes through an elaborate ordination ritual. There are pomp and circumstance aplenty. Bishops and sometimes even cardinals participate in the ceremony. Family and friends crowd the aisles of the cathedral. But in contrast to the blessing a Muslim accrues, this ordination can be revoked. Or a person who has been brought into a state of communion by a special ritual of confirmation might be excommunicated. It seems as if sometimes what the gods have done can be undone. Why is this so? And how does it come about?

Rituals generate other contrasts that beg for explanation. For example, some rituals require specially qualified people to bring about their effects, while others do not. Any Yoruba can make an offering at a local shrine but only authorized diviners can carry out divinations. Similarly, anyone can observe some rituals, whereas others remain closed. Consider, for
example, the election of a new pope. Only by observing the color of the smoke from the Vatican do observers have any clue as to what is going on among the cardinals.

**Competence theories and empirical research**

Before proceeding further, we should say a few words about competence theories. Competence theories were first proposed in the study of language. Competence theories in linguistics attribute to the cognitive systems of speaker-listeners of a language a wide array of grammatical principles and processors that generate an even wider array of abstract linguistic structures. The cognitive representations of these general principles and the specific structures they beget underlie speaker-listeners’ linguistic competence, i.e., their abilities both to produce and comprehend linguistic strings and to render an assortment of relatively systematic judgments about the syntactic and semantic character of those strings.

These abilities are manifest when language users confront errors. Not only do they readily detect them, they often have robust intuitions about the differences between the various sorts of errors. So, for example:

1. Inquisitive verdant ruminations snooze fiercely.
2. John singed the song before he departed.
3. Harry ringed the bell when the signal was given.

Most native speakers of English recognize both that item (1) differs from items (2) and (3) concerning the character of their abnormalities and, by contrast, that the problems with items (2) and (3) are similar in origin. Such linguistic competence is a form of tacit or intuitive knowledge. Language users do not have conscious awareness of or control over the principles and representations at stake. Once acquired, our cognitive systems for the processing of language seem to work largely automatically.

In *Rethinking Religion* we proposed a theory of religious ritual competence (despite dire warnings about competence theories’ sole applicability to linguistic materials). We adopted the competence approach to theorizing about religious ritual because of the striking similarities we noted between speaker-listeners’ knowledge of their languages and participants’ knowledge of their religious ritual systems. Both languages and religious ritual systems are examples of what we called “symbolic-cultural systems.” Symbolic-cultural systems involve symbolic phenomena whose forms are relatively restricted in both their use and their transmission. Linguistic and religious ritual forms are usually not explicitly codified, unlike civil law. Usually very little about these systems is directly taught. They are the kinds of system about which explicit instruction is, at least sometimes, completely absent, and about which, therefore, participants
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must have some form of intuitive knowledge. That knowledge is revealed by their acquisition of and successful participation in the systems and by their judgments about real and possible uses of the symbols within the systems (Lawson and McCauley, 1990, pp. 2–3).

In our original presentation of the theory of religious ritual competence we looked primarily to religious ritual participants’ intuitions about religious rituals as evidence for our claims. With little, if any, explicit instruction, religious ritual participants are able to make judgments about various properties concerning both individual rituals and their ritual systems. These include inferences about religious ritual forms and relationships and about the efficacy of ritual actions.

Our discussions of these matters in Rethinking Religion were instructive but informal. Little of the evidence we cited there arose from empirical research about aspects of ritual performance from experimental psychology. In fact, experimental evidence is still hard to come by, though the situation has improved recently. (See Boyer and Ramble, 2001, Barrett, 2000, and Barrett and Lawson, 2001.)

This feature of competence modeling in linguistics (viz., inattention to independent experimental evidence) has attracted substantial criticism over the years, but there is no principled reason why competence theories must remain aloof from a varied range of empirical research. We intend to show how both psychological evidence and detailed ethnographic research can bring performance findings to bear on the shape and fate of competence theories. A competence theory, like any scientific theory, will gain credibility to the extent that it is able to stand up to independent tests with materials it was not originally designed to explain. In addition, competence theories will improve to the extent that they undergo adjustment and revision in the face of recalcitrant findings concerning processing and performance. In fact, it is only when competence theorists prove responsive to research concerning processing and behavior and, when necessary, revise their proposals in its light, that they will be able to use these independent sources of evidence to their advantage. Revisions of competence theories on the basis of performance and processing evidence will not only enhance their empirical accountability but relieve the sense that they are irredeemably idealized as well. We have no doubt that programs of research on competencies with symbolic-cultural systems such as religious ritual systems will benefit from such interaction.

So long as we demand empirical evidence to substantiate our more speculative probings, a theory of religious ritual competence will contribute to our understanding of religious ritual behavior. The critical point is that these sorts of cognitive analyses provide exciting new tools.
Bringing ritual to mind

for illuminating dimensions of religion that have, unfortunately, suffered from neglect. Future inquiry into religion should benefit from the fact that cognitive studies have already made significant discoveries about how minds work. What we intend to show is that the resources of cognitive science can make valuable contributions to the scientific study of religion.

A road map for this book

In order to allay such concerns about our own competence theory we shall explore in this book some of our theory's notable implications for the interactions of psychological processing and religious ritual performance. We shall test how well those implications square with both ethnographic details about religious ritual performance and relevant theories and experimental findings from psychology.

In the next section we shall lay out the basic commitments of our theory of religious ritual competence. One of our central theses in this book is that the cognitive variables our theory isolates provide critical insights into the connections between religious ritual and memory dynamics. Two means of enhancing memory that religious rituals routinely enlist are performance frequency and emotional arousal. Presumably, enhanced memory is a relevant consideration in understanding the process of cultural transmission, especially in non-literate societies. Chapter 2 explores these issues and reviews relevant work in psychology and anthropology, showing, in particular, how recent research in cognitive psychology on enhanced memory bears on these questions.

In chapter 3 we examine two cognitive hypotheses for explaining the connections between ritual and memory dynamics. The first is the frequency hypothesis, which holds, in short, that the amount of sensory stimulation (and resulting emotional excitement) a ritual incorporates is inversely proportional to its performance frequency. Harvey Whitehouse offers the most formidable and best defended version of this hypothesis in various papers and in his books *Inside the Cult* (1995) and *Arguments and Icons* (2000). The second is our own ritual form hypothesis, which holds that aspects of the representations of ritual form our theory delineates explain and predict the comparative levels of sensory pageantry religious rituals incorporate. We show that our theory of religious ritual competence, which inspires the ritual form hypothesis, (1) characterizes the forms of religious rituals precisely, (2) specifies principles for distinguishing among these forms, and, therefore, (3) has the resources for dealing with problems that the frequency hypothesis both occasions and cannot, itself, handle. The ritual form hypothesis makes the correct predictions about the connections between performance frequencies and the comparative levels of sensory excitement in religious rituals.
of sensory pageantry and emotional arousal religious rituals incorporate (the principal topic of chapter 4). It also points to further grounds, viz., motivational ones, beyond considerations of memory, for why rituals of different forms have the levels of sensory pageantry that they do. Chapter 3 opens with an extended summary of Whitehouse’s ethnography because it supplies many of the materials we shall use to assess the two hypotheses’ predictive and explanatory merits.

We devote chapter 4 to a sustained discussion of the comparative predictive and explanatory virtues of the ritual frequency and ritual form hypotheses by examining a wide range of relevant empirical evidence. We are able to compare the two hypotheses so extensively because both are clear (at least compared with most theoretical proposals in the study of religion) and both make straightforward predictions. In many situations the two hypotheses make the same predictions, but in some they do not. It is the latter on which we focus.

In short, both hypotheses do well, but the ritual form hypothesis does considerably better. In Rethinking Religion we showed that the Principles of Superhuman Agency and Superhuman Immediacy generate a typology of ritual forms, which organize and thereby, in part, explain a number of features about religious rituals. In chapter 4 we show how the principles that generate that typology of religious ritual forms account for when religious rituals enlist emotional stimulation and when they do not. We also argue that these principles go some way toward explaining why. Both hypotheses get at critical cognitive variables, but we shall argue at length that religious ritual form proves the more fundamental of the two, since, among other things, it constitutes what is, perhaps, the principal variable determining rituals’ performance frequencies. Therefore, it also constitutes a sounder cognitive foundation for any broader theory of religious modes.

The first half of chapter 5 continues comparing the two hypotheses’ explanatory and predictive strengths. In the course of that comparison we sketch a dynamical systems account of the principal cognitive and psychological constraints on the evolution of religious ritual patterns. That account shows how our theory makes sense of some larger historical patterns in the evolution of ritual systems. Although we focus primarily on the details of Whitehouse’s ethnography, our aim is to show how our theory’s analysis of this case reveals larger patterns in the evolution of religious ritual systems (and of religious systems generally) that cut across cultures and historical epochs.

We examine the eruption of ecstatic movements in religions. Sometimes this phenomenon is linked with religious ritual systems abandoning (or at least minimizing) rituals clustered in certain regions of an abstract space.
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of possible ritual arrangements. By explaining why a religion’s system of ritual practices will inevitably repopulate this region, our theory anticipates not only one of the most basic patterns in the evolution of religious ritual systems but also one of the factors that apparently enhances the fitness of a religious ritual system in any cultural setting. Identifying both stable configurations and characteristic dynamic patterns in the space of possible ritual arrangements enables us to clarify how micro-processes at the psychological level are responsible for sustaining these kinds of religious ritual systems. Our aim is no less than delineating the cognitive architecture of *Homo religiosus* – not merely to understand well-known historic patterns in religious systems better but also to explain them.

A theory of religious ritual competence

Theorizing about religious ritual systems from a cognitive viewpoint involves (1) modeling cognitive processes and their products and (2) demonstrating their influence on religious behavior. Particularly important for such an approach to the study of religious ritual is the modeling of participants’ representations of ritual form. In pursuit of that goal, we presented in *Rethinking Religion* a theory of religious ritual form that involved two crucial commitments.

The theory’s first commitment is that the cognitive apparatus for the representation of religious ritual form is the same system deployed for the representation of action in general. The differences between everyday action and religious ritual action turn out to be fairly minor from the standpoint of their cognitive representation. This system for the representation of action includes representations of agents. Whether we focus on an everyday action such as closing a door or a ritual action such as initiating a person into a religious group, our understanding of these forms of behavior as actions at all turns critically on recognizing agents.

The theory’s second crucial commitment (1990, p. 61) is that the roles of culturally postulated superhuman agents (CPS-agents hereafter) in participants’ representations of religious rituals will prove pivotal in accounting for a wide variety of those rituals’ properties. On our view religious ritual systems typically involve presumptions about CPS-agents. Amazingly (by our lights anyway), our claim that a (conceptual) commitment to the existence of CPS-agents is the most important recurrent feature of religion across cultures is controversial. With everything from Theravada Buddhism to Marxism to football in mind, various scholars in theology, religious studies, the humanities, and even the social sciences maintain that presumptions about CPS-agents are not critically important to religious phenomena. On this view cheering at football games or
marching at May Day is just as much a religious ritual as is sacrificing pigs to the ancestors. Perhaps this is so. In that case what we have, then, may not be a theory of religious ritual. Instead, it is only a theory about actions that individuals and groups perform within organized communities of people who possess conceptual schemes that include presumptions about those actions’ connections with the actions of agents who exhibit various counter-intuitive properties.

If that is not religion (and religious ritual), so be it, but we suspect that this description of our theoretical object covers virtually every case that anyone would be inclined, at least pretheoretically, to include as an instance of religion and very few of the cases they would be inclined to exclude. Overly inclusive views of religion confuse the problematic claim that only meanings matter with the even more problematic claim that all meanings matter. Hence, on these views, virtually anything may count as religion (depending upon the circumstances). Fans of such views should keep in mind, then, that on their view what we are advancing is not a theory of religious ritual. To adherents of these less constrained views of religion, we should repeat that we have only supplied (pardon the redundancy) a theory about actions that individuals and groups perform within organized communities of people who possess conceptual schemes that include presumptions about those actions’ connections with the actions of agents who exhibit various counter-intuitive properties.

We do not desire to engage in debates about definitions. In science explanatory theories ground central analytical concepts. Those concepts earn our allegiance because of the achievements of the theories that inspire them. These include their predictive and problem-solving power, explanatory suggestiveness, generality, and empirical accountability. Whatever explanatory value construing “religion” in such a manner exhibits turns on whether or not the theory we have elaborated provides empirically useful insights about religious ritual.

Rituals often occasion an astonishingly wide range of interpretations not only from observers in the field but even from the participants themselves. Their own testimony reveals that the planting of this bush means one thing to the wedded couple, another thing to their neighbors, and a third thing to the ethnographer who questioned them. Even when authorities intent on maintaining the status quo vigilantly police doctrines, the blooming of interpretive schemes remains a wonder to behold.

While the meanings associated with rituals may vary, such variability typically has no effect on the stability of the ritual actions’ underlying forms. Although they have brought nearly as many interpretations as the times and places from which they hail, pilgrims to Mecca continue to circumambulate the Ka’bah the same way year after year. Whether in
Rwanda, Rio, or Rome only communicants are eligible to participate in the mass and only priests are eligible to perform it. Not only do other things matter besides meanings, for some explanatory purposes meanings hardly matter at all.

We have just rehearsed the respect in which rituals’ details are independent of meanings either participants or scholars assign them. It is important not to confuse these proposed semantic contents of rituals with factual details about their elements. Interested parties may attribute some meaning or other to the fact that an orthodox rabbi must be a male, but that fact is not the same thing as proposals about its significance. Some points of detail may permit considerable variation, such as how high the priest elevates the host, whereas others, like the circumcision of Jewish boys, may not.

We think that religious ritual form and the properties of rituals it explains and predicts are overwhelmingly independent of attributed meanings. There is also a respect in which some very general features of ritual form are independent not only of meanings but even of these specifically cultural details. In other words, these very general features of religious ritual form are independent of both semantic and cultural contents. Clarifying these general features of action is valuable for distinguishing the roles CPS-agents can play in participants’ representations of their religious rituals.

The action representation system

Distinguishing ritual form from both semantic and cultural contents will prove useful for many analytical and explanatory purposes. Our cognitive system for the representation of action imposes fundamental, though commonplace, constraints on ritual form. Attention to these constraints enables us to look beyond the variability of religious rituals’ details to some of their most general underlying properties. The point, in short, is that religious rituals (despite their often bizarre qualities) are actions too. (Ritual drummers ritually beating ritual drums are still drummers beating drums.) Consequently, this general system for the representation of action is also responsible for participants’ representations of their religious rituals’ forms.

From a cognitive standpoint, then, postulating special machinery to account for the representation of religious rituals is unnecessary. The requisite cognitive equipment is already available. A wide range of evidence from developmental psychology indicates that human beings readily distinguish agents and actions from other entities and events at an early age. (See, for example, Rochat et al., 1997.) At as early as nine months of age, they seem capable of not merely recognizing agents but attributing goals