# Current Approaches in the Cognitive Science of Religion

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# 8 The Cognitive Representation of Religious Ritual Form: A Theory of Participants' Competence with Religious Ritual Systems

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## Introduction

Theorizing about religious ritual systems from a cognitive viewpoint involves (1) modelling cognitive processes and their products and (2) demonstrating their influence on religious behaviour. Particularly important for such an approach to the study of religious ritual is the modelling 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 commitments.

The theory's first commitment is that the cognitive apparatus for the representation of action in general is the same system deployed for the representation of religious ritual form. 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 behaviour as actions at all turns critically on recognizing agents.

The theory's second crucial commitment (Lawson and McCauley 1990: 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. In our view religious ritual systems typically involve presumptions about CPS-agents. This theoretical commitment is orthogonal to the pervasive assumption throughout the study of religion that only meanings matter. By contrast, we hold that other things matter too (specifically, cognitive representations of religious ritual form).

Large conflicts lurk behind the previous sentences, but we cannot adequately address them here. For now we will only identify two of the most fundamental and comment on them briefly.

First, amazingly (by our lights anyway), our claim that (conceptual) commitments to the existence of CPS-agents is the most important recurrent feature of religion across cultures is quite controversial. With everything from Buddhism to Marxism to football in mind, various scholars in theology, religious studies, the humanities, and even the social sciences maintain that religious phenomena do not turn decisively on presumptions about CPS-agents. 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 count as 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 *in their view* what we are advancing is *not* a theory of religious ritual.

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. (See also Pyysiäinen, this volume.)

The second conflict is more complicated. The assumption that only meaning matters conflicts with our theory's insistence that participants' representations of CPS-agents' roles in religious rituals are crucial for explaining many of their features. They conflict because the theory achieves these goals largely *independently* of the meanings either ritual participants or scholars assign to rituals.

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 neighbours, and a third thing to the ethnographer who questions 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 the details of rituals 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 use of the bread and the wine, 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 also actions. (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 many features of the forms of their religious rituals.

From a cognitive standpoint, then, postulating special cognitive 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 and clinical psychology indicates that human beings normally have specific cognitive machinery for representing agents and their actions (as opposed to that deployed for the representation of other entities and events). Although this cognitive machinery is apparently task-specific, it seems – with only a few exceptions – to be virtually ubiquitous among human beings. (Baron-Cohen 1995.) This assortment of resources is what we have collectively referred to as the human 'action representation system'. (Lawson and McCauley 1990: 87–95.) This action representation system must account for humans' command of the distinctions between agents and other entities and between actions and other events. To summarize, then, we hold that the representation of religious rituals requires no special cognitive apparatus beyond the garden-variety cognitive machinery all normal human beings possess for the representation of agents and their actions.

Cognitive scientists, especially psychologists working on cognitive development, have thought a good deal about how human beings represent and distinguish *agents* (see, for example, Leslie 1995.) Agents and their agency are clearly the pivotal concepts for the representation of action, but they are not the whole story. A basic representational framework for characterizing this special sort of event must also capture familiar presumptions about the internal structures and external relations of actions. We should note here that while cognitive scientists have proposed interesting accounts of our understanding of agency, they have had much less to say about our understanding of *actions*. We hold that whether a religious ritual action involves waving a wand to ward off witches, building a pyramid to facilitate the departure of a pharaoh to the realm of the gods, or lighting a fire to ensure the presence of a spirit, representing such actions will depend upon utilizing a dedicated cognitive system for action representation. Our theory of religious ritual offers some quite general, preliminary proposals about that system.

In *Rethinking Religion* we provided a formal system for the purpose of increasing the clarity and precision of our theory's claims about the action representation system, and therefore about the forms of the religious rituals whose representations it assembles. (A caution, however, is in order. This formal system should not be mistaken for the theory; *it is only a means for elucidating the theory's claims*.) The precision of formal systems is a valuable tool that aids in the detection of significant relationships and connections among the phenomena being modelled. Critics could complain that the formal system we introduced in *Rethinking Religion* is a very complex machine for the production of some very simple products. But, as a matter of fact, the formal system we employed and the diagrams it generates introduced a precision to our descriptions that enabled *us* to see more clearly *how* rituals' general action structures and the roles attributed to CPS-agents in particular suggest (non-obvious, unfamiliar) principles for predicting a number of those rituals' features. Assuming these principles describe, albeit quite abstractly, capacities that are psychologically real, they also constitute a first pass at an empirically testable hypothesis about the cognitive mechanisms behind participants' abilities to produce judgements about those features.

The formal system employs a set of categories and generative rules for representing action, and thereby participants' conceptions of religious ritual form. The categories signify the basic components involved in the representation of any action. They include participants, acts and the appropriate qualities, properties and conditions sufficient to distinguish them. (See for example Lawson and McCauley 1990: 120.) The rules describe basic action structures, familiar to any normal human being. They generate *structural descriptions* of people's representations of actions, including rituals. (The diagrams we mentioned in the previous paragraph, which also populate many of the pages in *Rethinking Religion*, depict such structural descriptions.) Rituals' structural descriptions portray basic action structures, which

1. include the roles (agents, acts, instruments and patients)[1] that distinguish actions (and rituals) from other events and happenings;
2. take – as ritual elements – the various entities and acts, as well as their properties, qualities and conditions, that can fulfil these formal roles in religious rituals;
3. presume that at least two of these roles must always be filled (viz.,

that every action has an *agent* and that the agent must *do* something);
4. reflect the constraint that although any item filling the role of the agent may also serve as a patient, not all items that serve as patients may also fill the agent role;
5. reveal points of variability in the form of actions such as whether they involve the use of special instruments as a condition of the act; and
6. accommodate the enabling relationships between actions, such as whether the performance of one act presupposes the performance of another.

Most talk, then, about the 'cognitive representations of ritual form' does not involve anything very complicated or unusual.

Actions typically come in one of two sorts. They either involve agents doing something or they involve agents doing something to something. In other words, some actions do not have patients and some do. In religious contexts only the second sort of action need concern us. On our theory, since all religious rituals involve agents acting upon patients and since a representation of ritual form (like any of the products of the action representation system) will reflect an asymmetry between the agent and patient roles, the structural description of a religious ritual will include three ordered slots for representing a religious ritual's three fundamental roles, viz., its *agent*, the *act* involved, and its *patient*. All of a ritual's details fall within the purviews of one or the other of these three roles. From a formal standpoint, then, accommodating all of the rest of the ritual's details involves nothing more than elaborations on the entries for these three slots.

Our claim that all religious rituals (as opposed to religious action more broadly construed) are actions in which an agent does something to a patient departs from popular assumptions about rituals. Typically, priests sacrifice goats, ritual participants burn offerings, and pilgrims circle shrines. But in religious contexts people also pray, sing, chant, stand, kneel and sit. Even though such activities may be part of religious ceremonies, such activities do not qualify as religious rituals in our theory's technical sense. All religious rituals – *in our technical sense* – are inevitably connected sooner or later with actions in which CPS-agents play a role. As noted, it follows on this account that many religious activities are not typically religious rituals in our technical sense, even though they may be present in ritual practices and qualify as religious acts. It also follows that even many actions that religious persons repeat

in religious ceremonies (such as everyone standing at certain points in a religious service) will not count as rituals either.

We defend these decisions on two principal grounds. The first is what we take to be the telling coincidence of three relevant but quite different considerations bearing on distinctions among religious actions. An account of each follows.

First, invariably, religious rituals, unlike mere religious acts, bring about changes in the religious world (temporary in some cases, permanent in others) by virtue of the fact that they involve *transactions* with CPS-agents. Those interactions affect to what or whom *anyone* can subsequently apply the religious category associated with the act in question. Moreover, the performance of a religious ritual – in the sense our theory specifies – entitles anyone to apply the religious category associated with that ritual exclusively on the basis of the intersubjectively available information, as construed within the framework of the pertinent religious system. If the priest baptizes Fred, then henceforth the term 'baptized' may be used to describe Fred, regardless of Fred or the priest's states of mind when the ritual occurred. (What will matter is only that the priest qualifies as an appropriate ritual agent – which itself turns on the priest's own ritual history.) By contrast, this is not true about religious actions that are not rituals in our technical sense. If Fred prays publicly, all we can say is that Fred has appeared to pray publicly. Fred might have been feigning prayer. Only Fred knows for sure, whereas when a priest baptizes Fred (under the appropriate publicly observable conditions), anyone privy to this event and the relevant parts of the accompanying religious conceptual scheme can know that Fred has been baptized.

The second consideration differentiating religious rituals (in our technical sense) from other religious activities is what we shall call the 'insider–outsider criterion'. Although mere religious actions are typically open to outsiders, religious rituals typically are not. (Of course, who counts as an 'outsider' may change over time.) A non-Catholic is welcome to pray with Catholics but not to take Holy Communion with them. Although anyone can practice yoga, only boys of the *Brahmanic* caste can be invested with the sacred thread (Penner 1975). Anyone can chant Zulu war songs; only Zulus can be buried in the *umuzi* (village). With the exception of what we might call 'entry level' rituals (for example, for juniors or new converts), those who are not participants in the religious system are not eligible to participate in that system's rituals. The distinction between *participants in the religious system and participants in a religious ritual* is vital. Except, perhaps, for

entry level rituals, the latter category's extension constitutes a subset of the former category's extension. This distinction, in effect, helps to explicate the notion of 'eligibility' for a ritual.

A third basis for differentiating religious rituals from other religious actions is closely related to the second. Rituals are invariably connected with other rituals. While participating in rituals turns unwaveringly on having performed other rituals, participating in these other religious actions that less obviously involve interactions with the gods does not. Below we shall develop this idea further in the discussion of *ritual embedding*.

The second ground for employing our technical sense of the term 'religious ritual' simply looks to the success of the resulting research programme the theory inspires. The theory successfully explains a wide range of those actions' features that it specifies as religious rituals. The argument, in effect, says that if the overall theory is successful on many fronts, then that fact is relevant to the defence of any of that theory's details. The introduction of technical, theoretically inspired notions that run counter to widespread assumptions is not unusual in science. Copernicus' theory did not conform to the prevailing list of the planets at the time (or to common-sense knowledge about the motionlessness of the earth). His theory *redefined* what should count as a planet. The very point of formulating systematic, testable theories in any domain is to get beyond the hodge-podge of suppositions that characterize pretheoretic common sense.

Human participants in religious rituals, even though agents *ontologically*, can function in the role of the patients of ritual actions – as that to which something is done. This does not mean that the agent ceases being an agent but that he or she is being acted upon rather than engaging in action. So, for example, when priests baptize participants, even though the participants are agents ontologically, as participants undergoing baptism they serve as the patients in these ritual acts. In religious rituals agents with appropriate qualities and properties can do things to other agents who function as the patients of those rituals. We turn, therefore, to these qualities and properties, because a theory that only provides for a general structural description of the relationships among agents, acts, and patients will prove insufficient to explicate interesting facts about ritual structure.

A structural description of a religious ritual action must include information about the *qualities* and *properties* of the participants and the actions involved. It is often not sufficient, for example, merely to represent the fact that an agent is engaged in an action upon a patient.

We should be able to represent some ritually salient qualities and properties of the agents, actions, and patients. This requires that we specify, when necessary, what makes the agent eligible to perform the action, what properties a particular act must possess, as well as the qualities of the patients that make them eligible to serve in that role.

The conceptual schemes of particular religious systems will, of course, designate which qualities and properties matter. For example, in one religious tradition it might be necessary for ritual officials to be males, in another that the patient be an unmarried woman who has fasted for fourteen days, and in another that the action be performed at night. Our account of the action representation system can accommodate such cultural variations.

The cognitive representation of religious rituals will include the formal features that determine participants' judgements about the ritual's status, efficacy and relationships to other ritual acts. The efficacy of the act of baptism, for example, will have derived from the agent's legitimacy, the appropriate ritual history of the water and the eligibility of the patient. The baptism itself and the previous act of consecrating the baptismal water are qualified by the fact that the priest is eligible to carry out such ritual acts. If he is an impostor, ritual failure looms. Of course, such failures may not necessarily pose insurmountable barriers, because some religious conceptual schemes may provide ways of working around them. But they certainly are regarded as problems, because they contravene basic assumptions about the relations between various ritual actions and about those rituals' connections with CPS-agents.

Just as participants possess qualities and properties that may require specification, sometimes conditions on ritual actions do too. Particular ritual acts sometimes require special conditions for their execution; for example, carrying out some task may require particular instruments. Ritual agents often need special tools in order to do their jobs properly. These tools can be anything the tradition permits – antelope bones for divining, sharp stones for circumcising male children, red ochre for colouring corpses or long sticks for whipping initiates.

Instruments, however, should not be confused with agents. For example, a priest uses incense to sanctify a house or uses rocks of a particular shape to establish a temple site. While these instruments are not the agents, they often specify necessary conditions for the success of the agents' ritual actions. The priest may sanctify the house by means of burning incense. What we called the 'action condition' in *Rethinking Religion* can specify an element in a ritual, viz., the instru-

ment employed by the agent (the incense) as well as qualities of the instrument the conceptual scheme defines as relevant (in this case, that the incense is burning). The complete representation is of an agent with the requisite qualities acting upon an object with the requisite qualities by using an instrument with the requisite qualities.

Sometimes such instruments contribute *fundamentally* to the outcome of the ritual. (The holy water may be fundamental to the blessing of the parishioner.) If so, it is only by virtue of their ritual connections to superhuman agency that they derive their efficacy. Water that has not been consecrated is just plain old water.

In these cases the requisite qualities of instruments are their own connections with CPS-agents through the performance of earlier rituals. Making sense of a religious ritual typically involves reference to a larger network of ritual actions. The performance of earlier rituals 'enables' the performance of the later ones. Because the priest has blessed the water in the font, participants can use it to bless themselves when they enter the vestibule of a church. These earlier rituals that fulfil necessary conditions for the performance of subsequent rituals are what we call 'enabling rituals' (or, more generally, 'enabling actions'). So, for example, a participant can partake of a first communion, because she was previously baptized. Her baptism, which establishes a more immediate connection between her and the CPS-agents than existed before, *enables* her to participate in the communion. The validity of the communion presupposes this divinely sanctioned ritual of the participant's baptism.

If there is no direct reference to a CPS-agent in a ritual's immediate structural description, then at least one of its elements must involve presumptions about *its* connections with one or more (earlier) ritual actions that eventually involves a CPS-agent in one of their immediate structural descriptions. For example, the action of initiating someone into a cohort of a certain kind requires prior actions performed on the agents involved in the initiation. No uninitiated person can initiate the 'newcomer'. The ritual practitioner performing the initiation will have to have been initiated herself. Ultimately, of course, the gods are responsible for the initiating *through* these connections with the immediate ritual agents.

Although it may not always be immediately obvious, ritual actions are systematically connected with one another. The acts involved must be performed in a certain order. Some ritual actions presuppose the performance of others. In everyday life, actions of any kind frequently presuppose the successful completion of previous actions, since those

earlier actions fulfil necessary requirements for the performance of the action at hand. For example, operating a car presupposes that the driver has a valid driving licence. Carrying out a particular religious ritual action typically presupposes the prior performance of another ritual action that enables the current one to be performed.

The classic rites of passage in many religious systems offer the best illustrations. The integration of children into a community precedes their rising to adult status, which, in turn, precedes their marriages. In each case the associated rituals presuppose the successful completion of their predecessors. An example is the sequence of initiation rites among the Zulu. In order for a Zulu male to be eligible for marriage, he has to go through a number of rites of passage, starting with the naming ritual and proceeding through the ear-piercing ritual, the puberty ritual, then the 'grouping up ritual'. (See Lawson and McCauley 1990: 113–21.)

Technically, we can talk about the representation of such a connected set of rituals as *embedded* within the current ritual's structural description. Embedding is a formal notion for representing in their structural descriptions the external relations among rituals that we have described in terms of *enabling* actions. A diagram of the relationships among these successively performed rituals would start with the current ritual (the one under study), which would be depicted at the top of a tree diagram, with all of the logically (and temporally) prior rituals below, connected to it through its ritual elements. Thus the 'full' structural description of a ritual would include all of these embedded rituals.

A ritual's full structural description contrasts with an 'immediate' structural description of its surface features. A full structural description includes that immediate structural description plus the structural descriptions of all of the enabling ritual actions the current ritual presumes as well as accounts of their connections with ritual elements in that current ritual. Recall that in the case of religious ritual, enabling actions are simply (earlier) rituals whose successful completion is necessary for the successful completion of the current ritual. Thus for example, a wedding is not valid, typically, if the priest performing it has not been properly certified ritually by prior ordination. The priest's ordination enables him to perform weddings. The successful performance of the wedding presumes the ordination's success. That ordination is, therefore, an enabling ritual whose structural description must be incorporated (as a property of the priest) into this wedding's *full* structural description.

In the everyday world the exploration of such presuppositions can go on indefinitely either by tracing causal chains ('this is the cat that ate the rat that ate the cheese, etc.') or by concatenating reasons (John flipped the switch, since he wanted to see the room's contents, since he wanted to ascertain whether he could load them into the truck in the next ten minutes, since, if at all possible, he wanted to complete that job before the police arrived, since he wanted to avoid arrest, etc.). Religious rituals, while engaging the same representational resources, possess a distinctive feature which marks them off not only from action in the everyday world but also from the other sorts of religious actions, even the ritualized religious actions we mentioned above, such as standing at certain moments in a religious service. The distinctive feature of the cognitive representation of religious ritual action concerns an end point to such causal or rational explorations. In ritual representations things come to an end. Causal chains terminate; reasons find a final ground. In short, the buck stops with the gods. The introduction of actions involving CPS-agents (or agents with special, counter-intuitive qualities) into the conception of an action introduces considerations that need neither further causal explanation nor further rational justification.

Religious rituals enjoy representational closure by terminating in the deeds of CPS-agents. The actions of the gods ground religious rituals. It is from those deeds that their normative force arises. Although other human actions pretend to similar normative prestige – from law to baseball – none have access to the superhuman considerations that serve as the guarantor of cosmic (as opposed to conventional) authority in religious systems. Despite talk in the humanities and social sciences about civil religion, the religion of art or the theology of communism, such systems rarely engender such immediate authoritativeness. Our suggestion is that this is because they rarely involve such direct appeals to the specific actions of *CPS*-specific agents.

The normative force in question amounts to the assumption that we need discover no further causes, we need give no additional reasons. It should of course come as no surprise that, finally, it is what the gods do that matters in religious ritual. Our theory provides descriptions for religious ritual actions which are, in one respect, exhaustive. For the participants there is no more significant cause to locate, no more crucial reason to propose. The actions of the gods guarantee the comprehensiveness of description, because their actions are causally, rationally and motivationally *sufficient* for the ritual actions they inspire. (We rest from our labours on the sabbath, because God rested from his labours.)

These actions of the gods are the actions our theory defines as *hypothetical* religious rituals. Participants typically appeal to them as actions enabling their own religious ritual practices.

On our theory, then, explaining various fundamental features of religious rituals turns on the roles that CPS-agents play in them. In order to understand why this is the case we need to analyse what is involved in the representation of a religious ritual action.

Since all rituals are actions and only agents act, our command of the category of agency (and the inferences that accompany it) is the single most important piece of ordinary cognitive equipment deployed in the representation of religious rituals. The notion of an 'agent' is fundamental in any theory of religious ritual, because it drives our most basic expectations about the form of any action. The identification of action turns critically on the identification of agents and attributing appropriate states of mind to them. The difference between doing and happening rests in the balance. Doing something to someone differs from something happening to them. The first involves an agent acting upon a patient. The bride kissing the bridegroom differs in fundamental ways from the air-conditioner happening to go on the blink while they do so. We even distinguish between types of movements agents make. Cutting a log and tripping over a log differ in the way they are represented.

The category of agency constitutes the foundation of social intercourse and of our conceptions of responsibility, personhood and morality. Making sense even of some of the most ordinary events of human life usually requires elaborate intentional ascriptions to human beings. All of this is of course standard fare in philosophical discussion, but it has also captured the imagination of developmental psychologists, who have designed marvellously clever experiments to identify the key role that the concept of agency plays even in the mental life of very young children. (Gopnik et al. 1999.) These developmental studies show that long before infants acquire and use language they already possess the cognitive resources required for representing such basic ontological distinctions as that between agents and non-agents. These studies indicate that from early infancy human beings represent agents and the actions they perform very differently from the ways they represent other entities and events. Developmental psychologists have discovered that infants know (and therefore are capable of representing) the difference between the agent and patient of an action, as well as whether the patient is just an inanimate object or also an agent capable of acting as well. This is to say that they distinguish the vital action roles from one another as well as the sorts of entities capable of filling each.

Initially surprising, such claims have the ring of plausibility because distinguishing the nurturing mother from the unresponsive bedpost is vital for the infant's well-being. Very young children recognize that agents have goals and desires and that they are generally capable of initiating self-motion (fulfilling those desires to achieve those goals). By roughly the age of four a child grasps the notion that human agents (at least) also have minds and that their understanding of their world depends upon how their minds represent it. (Wimmer and Perner 1983; Perner et al. 1987.) Children recognize agents' intentionality. The notable point is that the same presumptions hold for the representation of CPS-agents who figure in religious rituals. Participants' intuitive assumptions about the psychology of agents purchase them vast amounts of knowledge about CPS-agents for free. (Boyer 1996.)

In terms of their basic action structures, then, nothing about the representation of religious ritual action is the least bit different from the representation of any other action. Stressing that religious rituals typically invoke ordinary cognitive resources, however, does not mean that they are not unusual. After all, we readily distinguish them from other actions. Ritual washing differs from standard bathing activities. Nevertheless, our ordinary cognitive resources – already in place in infancy – supply the framework for the representation of religious rituals. Most importantly for our purposes, the peculiarities of religious rituals do not mitigate either their basic action structures or the pivotal role of agency in their representation.

The 'specialness' of religious rituals does not turn on anomalies in their basic action structures, but overwhelmingly on the unusual agents that populate religious conceptual schemes. On most fronts CPS-agents are similar to human agents; that is why we can so readily draw inferences about their actions, their goals, their desires and their other states of mind. On a few fronts, though, they differ from human agents by virtue of their various counter-intuitive properties; that is why their implication in actions has such striking consequences.

On our theory, then, three things distinguish religious rituals from other sorts of actions. First, the specific acts carried out in religious rituals (such as sacrifices, baptisms, consecrations, and so on) are often unique to religious conceptual schemes. Second, as we noted above, what we might loosely call enquiry about the causal or rational foundations of religious rituals will always come to an end when they invoke the enabling actions of CPS-agents. At that point, such enquiry stops. There is no need or means for proceeding further, let alone the possibility of carrying on such enquiries indefinitely as is the case with

any other sort of action. The third distinctive feature concerns what makes these appeals to the actions of CPS-agents so conclusive. Only with religious rituals do populations of participants carry out actions that routinely presume enabling actions by agents with these special counter-intuitive properties. (In *Rethinking Religion* we employed the marker 's' in the tree diagrams of religious rituals' structural descriptions to designate any of these special properties.)

On our theory it is the *roles* that such agents play in rituals' representations that are the critical variables that define a religious ritual's type, and therefore determine many of its important properties. In addition to its characterization of participants' cognitive representations of their religious actions, our theory also identifies two principles for organizing this information about the impact of CPS-agents' roles on participants' implicit knowledge of their rituals' forms. Those two principles clarify the significance of CPS-agency for religious ritual systems. They jointly yield a typology of religious ritual forms that systematically organizes the rituals of *any* religious system and predicts a variety of their properties. It is to these two principles that we now turn.

## A cognitive account of various properties of religious rituals

With the major features of the action representation system in hand, we are now ready to discuss the principles of Superhuman Agency and Superhuman Immediacy. These principles jointly explicate the pivotal role that the concept of CPS-agency plays in religious ritual systems. By organizing the representations of particular religious rituals into a typology of ritual forms on the basis of how participants represent the contributions of CPS-agents to their religious rituals, these two principles provide a means for explaining and predicting a wide array of those rituals' properties. Both participants' intuitive judgements about those properties and their actual ritual practices corroborate this account.

The principles of Superhuman Agency and Superhuman Immediacy categorize the structural descriptions of rituals generated by participants' action representation systems. At a first level of approximation, the *Principle of Superhuman Agency* (PSA) states that whether a CPS-agent either is the agent or is most directly connected (via enabling actions) with the agent of a religious ritual – as opposed to serving in or being most directly connected with one of the other roles – is critical for distinguishing between the two salient kinds of religious rituals.

The first kind consists of religious rituals in which the most direct connection with the gods is through the role of the ritual's agent. We shall call these 'special agent rituals'. (We are grateful to Pascal Boyer for suggesting this term.) With special agent rituals the initial entry for a CPS-agent will be ritually connected with the role of the agent in the current ritual. What this amounts to is that one or more previous rituals connects the 'buck-stopper', i.e. the initial CPS-agent in the current ritual, to the current ritual's agent.

The second kind concerns those rituals in which the most direct connection with the gods is through either of the other two roles, i.e. through the patient or through the act itself (by way of a special instrument). In these a CPS-agent will be most directly connected by way of the second or third slots in the current ritual's structural description. Most of the rituals in this second group are what we shall call 'special patient rituals', though 'special instrument rituals' also exist. (Many rituals of divination are examples of the latter sort.)

The PSA concerns the representation of a superhuman agent's involvement in a ritual (as indicated by the location of its entry in a ritual's structural description). In assessing religious rituals' forms, the PSA focuses attention on the action role(s) of the current ritual with which CPS-agents' actions are connected. Participants represent a CPS-agent somewhere in their rituals' full structural descriptions. On our theory the crucial question is *where*. Whether the *initial* entry for a CPS-agent in the full structural description is connected with the current ritual's agent role or with one of its other roles determines both participants' judgements about a wide range of ritual properties, including ritual repeatability and reversibility as well as the potential for ritual substitutions. It also predicts these features of their corresponding ritual practices.

Especially since more than one entry for CPS-agents may arise in a religious ritual's full structural description, these descriptions of the PSA demand clarification of which appearance of a CPS-agent in a structural description qualifies as the *initial* one. Determining which connection with CPS-agents in the representation of a religious ritual constitutes the initial entry, i.e. the entry with the 'most direct connection' to the ritual at hand, is not too complicated. This is where the Principle of Superhuman Immediacy comes in. The *Principle of Superhuman Immediacy* (PSI) states that the number of enabling actions required to connect some element in the current ritual with an entry for a CPS-agent determines that entry's proximity to the current ritual. Specifically, the initial appearance of a CPS-agent in a ritual's full

structural description is the entry whose connection with some element in the current ritual involves the fewest enabling actions.

These two principles identify the two most important aspects of religious ritual form. They are concerned with

1. what role(s) in the current ritual enabling rituals are connected; and
2. how many enabling rituals are required to establish that connection between an element in the current ritual and a CPS-agent.

The PSI and PSA work in tandem to delineate a typology of religious ritual actions. That typology readily clarifies a host of fundamental distinctions between the various (and indefinitely large number of types of religious ritual actions.

Accordingly, the principal sources of complexity in rituals' full structural descriptions concern the *number* and *locations* of embedded rituals. Recall that embedding is a formal means for representing the enabling rituals the current ritual's performance presupposes. No formal considerations set any principled limits on the possible complexity of the full structural descriptions of rituals that the action representation system can generate, though it seems a safe assumption that such things as memory limitations probably set some practical limitations.

The PSA addresses the *locations* of embedded rituals in the current ritual's full structural description. This is to say that it addresses the action roles (agent, act or patient) of the current ritual that are connected with CPS-agents' actions via enabling actions. By contrast, the PSI is concerned with the *number* of embedded rituals, i.e. with the number of enabling actions, necessary to connect some element of the current ritual with the actions of CPS-agents.

In *Rethinking Religion* we examined only the first five types of religious ritual forms (Lawson and McCauley 1990: 128–30, fig. 17) but that already introduces quite enough complexity to illustrate some important theoretical morals concerning the connections between three things, discussed below.

### 1. The action representation system and the well-formedness and effectiveness of religious rituals

The first of those morals concerns general considerations of action representation. Our characterizations of the action representation system and the structural descriptions it generates provide a means for

precisely specifying the unique features of representations of religious rituals (among action representations generally). Our contention, of course, is that these unique features result from the distinctive items religious conceptual schemes introduce as possible entries in these representations. On one decisive front religious participants represent their rituals differently from the way they represent all of their other actions. All representations of religious rituals somewhere involve connections with the actions of CPS-agents. This is critical to participants' assessments of both their rituals' well-formedness and their efficacy. At least one such connection between some element or other of the current ritual and the action of a CPS-agent is a necessary condition for a ritual's well-formedness. Without presumptions about such a connection, participants will not judge the ritual in question to be well-formed and, if the ritual is not judged as well-formed, they will judge it as ineffective. Unless eligible agents perform correct actions on eligible patients with the right tools, participants will not judge the ritual effective. Crucially, the eligibility of at least one of the ritual participants or the rightness of a ritual instrument will depend upon enabling actions that establish connections between them and the actions of a CPS-agent.

Considerations of the well-formedness and effectiveness of religious rituals quickly demonstrate the importance of distinguishing between special agent rituals and special patient rituals. Well-formedness is only a necessary but not a sufficient condition for the effectiveness of a special patient ritual. So, for example, while the well-formedness of ritual offerings to the ancestors is necessary for these gifts' acceptability, there is no guarantee that the ancestors will accept them. (Whitehouse 1995.) Similarly, at least a casual survey suggests that the well-formedness of special agent rituals is considerably more constrained than special patient or instrument rituals, since the former exhibit much less flexibility concerning ritual substitutions (see below). (See Barrett, this volume.)

## 2. *The PSA distinction between special agent rituals as opposed to special patient and special instrument rituals and three ritual properties*

The distinction that the PSA introduces between special agent rituals as opposed to special patient and special instrument rituals (i.e. between rituals of odd as opposed to even-numbered types in Figure 17 in Lawson and McCauley 1990: 128–30) has many important

consequences. These distinctions among ritual types predict numerous properties of rituals *in any religious system*. We shall briefly discuss three.

### *Repeatability*

Individual participants need serve as the patients of special agent rituals only once, whereas participants can and typically do perform special instrument and special patient rituals repeatedly. Consider the difference between once-in-a-lifetime initiations and the many sacrifices that ritual participants will perform as part of their religious obligations.

Our theory explains why some rituals do not require repetition in the lifetime of a ritual participant. CPS-agents act, at least indirectly through their ritually entitled middlemen, in special agent rituals. When the gods do things, they are done once and for all. By contrast, in special patient and special instrument rituals, the gods' closest connections are with the patients or the instruments of the ritual. Whatever ritually mediated connection the agent in such a ritual may enjoy with CPS-agents is comparatively less intimate. Consequently, in these rituals the agents' actions carry no such finality. They are typically done again and again. Initiation into adulthood only happens once per participant, whereas participants will make offerings to the gods over and over and over. That these rituals are repeatable hints that nothing religiously indispensable turns on any *one* of their performances.

### *Reversibility*

Human acts have causal effects and logical and practical consequences. The effect of running a race involves crossing the finishing line. The consequence of winning a race means receiving a prize. This crucial distinction is particularly important in the case of ritual. Getting married in a wedding ritual, for example, has causal effects: Bride and groom feel that they have experienced one of the most memorable days in their lives. But wedding rituals also have logical consequences in the framework of the religious system in which they occur. In a particular religious system a wedding might be a ritual which can only be performed on a pair of religious participants once in their lifetime. The gods have acted and the consequences of the ritual act are 'superpermanent'. Nevertheless, sometimes the consequences of such a non-repeated ritual need to be reversed. In everyday life couples get divorced, participants become excommunicated, ritual practitioners are

defrocked. In such cases it would seem that if the consequence of a special agent ritual were once and for all (i.e. 'superpermanent'), then it would take an act of the gods to undo what they have initially done. It would seem to require performing another special agent ritual to undo the consequences of the first.

In principle, religious rituals that reverse the consequences of other special agent rituals are possible. However, such special agent rituals do not seem to exist or at least are so rare that their very absence is noteworthy. Even where they might exist they are performed very infrequently. Nevertheless people who are divorced remarry, participants wo were driven from the fold are readmitted into the community, sometimes joyously (after they ahve met certain conditions), ritual practitioners are sometimes reinstated after being expelled. Such situations clearly require the performance of a special agent ritual. So, sometimes, what the gods do only once they need to do again! Obviously the gods can do whatever they want to! But one point shines through these puzzles: if the consequences of rituals are reversed juridically and/or ritually only then can a ritual participant serve in the role of patient in a performance of a special agent ritual again. Only the gods can bring about such a novel situation.

### *Substitutability*

Our theory also explains whether a ritual will permit substitution or not. Because nothing religiously indispensable turns on any of their particular performances, ritual substitutions can arise in the even-numbered rites, i.e. the special patient and special instrument rituals. These rituals' temporary effects explain not only why these rituals are repeatable, but also why they often display greater latitude about their instruments, their patients and even their procedures. For example, ritualized washing in the desert, where water is a particularly scarce and valuable resource, can be done with sand. These rituals may also permit substitutions for patients. Some special patient rituals even substitute for CPS-agents – but *only* when they serve as the *patient* of the current ritual, not as its agent. Participants' consumption of bread and wine for the body and blood of Christ is surely the most familiar, but examples abound in the ethnographic literature.

That such substitutions for the initial appearances of CPS-agents do not arise in special agent rituals is of a piece with this. The point is that in special agent rituals the CPS-agents themselves are – so to speak – *in* on the action. Since it is the patients of these religious rituals in

whom the resulting superpermanent religious changes are wrought, it stands to reason that substitutions for the patients of special agent rituals are also unlikely to occur.

### 3. The PSI account of the initial entry for a CPS-agent and (comparative) ritual centrality

The PSI clarifies which among (potentially) multiple entries for CPS-agents *within* a ritual's full structural description is the initial one. The different depths of these initial entries will determine what we have referred to as rituals' comparative 'centrality' to the overall religious system. On the basis of differences in the number of enabling rituals that separate the initial entry for a CPS-agent from current rituals, the PSI permits comparisons *between* rituals as to their relative centrality to the religious system. In short, the fewer enabling actions required to connect the current ritual with the action of a CPS-agent, the more central that ritual is to the religious system.

The important theoretical point is that multiple independent empirical measures correlate with a religious ritual's centrality. The most straightforward *cognitive* gauge would simply be to elicit participants' judgements about such matters. This is *not* to say that participants have explicit knowledge about this abstract property of religious rituals. They do, however, possess a reservoir of tacit knowledge pertaining to these matters. Specifically, participants can offer judgements about the *comparative* centrality of various rituals. Still, that might prove a fairly coarse measure in light of the variety of extraneous variables (e.g. performance frequency) that could influence participants' judgements. Consequently, it would be especially valuable to design experiments that tap this intuitive knowledge by means of indirect behavioural measures while controlling for these potentially confounding factors. These might range from such thinly veiled tasks as asking informants to rank their rituals' comparative dispensableness to less direct measures testing such things as participants' diverse sensitivities to variations, their default assumptions in reasoning, or their differential recollections of details.

Cognition, however, is not the only source of evidence here. Aspects of ritual practice should also provide evidence about rituals' comparative centrality. For example, participants' knowledge about ritual prerequisites generally reflects genuine constraints on ritual practice. A Zulu male really cannot use specially prepared love potions unless he has gone through a series of other rituals beforehand. (See Lawson and

McCauley 1990: 113–21.) An Orthodox Jew's bar mitzvah really is a necessary condition for his becoming a rabbi. These points about ritual practice are so familiar that it is easy to lose sight of their theoretical significance. Because some of these rituals are prerequisites for others, they have less structural depth and, consequently, will prove more central to these various religious systems.

In some religious systems actual ritual practice may provide additional evidence about rituals' relative centrality. According to the insider–outsider criterion, religious rituals in our theory's technical sense are those religious activities that are only open to participants in the religious system. Further restrictions on participation in and observation of religious rituals also tend to correlate with a ritual's centrality. Participants' tolerance for variation in religious rituals is another measure. Presumably, that tolerance decreases with rituals' increasing centrality. Hence, ritual practices during periods of religious fragmentation may also supply clues about rituals' centrality. The perceived degree of upheaval within a religious system and the probability that diverging religious communities will refuse to identify with one another any longer will (if any ritual changes occur) surely correlate better with the addition, alteration or deletion of a comparatively central ritual than with one that is less central.

## Conclusion

Many scholars have previously noted one or another of these patterns among ritual properties. Ours is the only theory, however, that explains and predicts all of them systematically (regardless of the religious system involved). It can do so because, finally, all of these properties turn on features of participants' representations of the forms of their religious ritual actions. We end with three important observations.

First, although we are making predictions about the types of intuitive judgements that informants are likely to make in situations, we are not claiming that such judgements require the participants' conscious reflection. In fact, evidence suggests that such judgements are usually not based on conscious knowledge, acquired by instruction and honed by reflection. As Boyer (1994) has suggested, such intuitive knowledge seems to 'come naturally'.

Second, it is worth re-emphasizing that none of this knowledge about religious rituals depends upon assigning *meanings* either to the acts participants perform or to the acts performed on them or to the qualities or properties of such acts or to the relationships among the

acts. In other words, a great deal of ritual participants' (intuitive) knowledge of their religious ritual system does not depend upon their ability to provide *interpretations* or meanings for the rituals in which they participate or even for the prior rituals they presume. The dimensions of ritual knowledge that concern us can operate without reference to meaning and often do. (Baranowski 1998.) A particular ritual participant may not for example have a clue about the meaning of apostolic succession or ordination, and still know that it takes a priest to get married; another may not have the faintest idea why it is necessary to swallow a bitter herb before going courting but would not dream of approaching his prospective mate unless he had done so. (Lawson 1985.)

Sometimes all the ethnographer gets is 'we do it because our ancestors did it'. Sometimes informants appeal to specialists who possess the requisite knowledge, and sometimes informants *are* willing to engage in extended semantic commentary. It all depends. The attribution of meaning (let alone *particular* meanings) either to the ritual as a whole or to any of its parts is not a constant either between or within cultures. In any event, we expect considerable variation about the attribution of meanings. So, we are not saying that the attribution of meanings never occurs; we are only saying that *for many features of religious ritual knowledge and practice meanings simply do not matter.* In some religious systems interpretations may flourish and become resources for sophisticated theological speculation among the intellectual elite. In other religious systems the attribution of meanings remains forever beside the point. (Barth 1975.)

Finally, comparing our theory's predictions with findings uncovered in the field permits us to narrow a gap between models of participants' competences with symbolic-cultural systems and participants' actual performance with these systems. This is a gap about which many critics of competence theories (e.g. Clark 1993) have complained. But our theory does not depend exclusively on surveying participants' intuitive judgements about features of their rituals for its empirical assessment. The theory also makes predictions about ritual practices. In light of its many empirical predictions, we hope our theory will provoke ethnographers into asking new kinds of questions about religious rituals in order to see if the theory will stand up to further tests.

## Note

1. We shall use the terms 'instruments' and 'patients' to refer to what in *Rethinking Religion* we referred to (less efficiently) as the ritual's 'action conditions' and 'logical object' respectively. Technically these terms identify action roles. Following ordinary linguistic conventions, though, we will sometimes use them to refer to the items that serve in these roles as well.

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