



## Ritual and Christian Beginnings

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# Ritual, Culture, and the Human Mind

## A Socio-cognitive Approach

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### Abstract and Keywords

This chapter introduces the reader to the Cognitive Science of Religion (CSR), especially to those aspects of this new field that are relevant for a deeper understanding of the cognitive theories used in this book. CSR is a research programme which draws on a growing body of knowledge from the cognitive and evolutionary sciences to explain human religiosity. It is a pluralistic movement, comprising different schools and currents; what they have in common is the effort to achieve explanatory and testable theories, as well as a multilevel analysis of religious phenomena. The survey of the schools and currents in CSR provides a basis for suggesting a 'socio-cognitive approach' to early Christian rituals, relying on cognitive theories of ritual that operate at both a social and a cognitive level. Three perspectives on ritual emerge from the discussion, described by the keywords 'action', 'cooperation', and 'religious knowledge'.

*Keywords:* Cognitive Science of Religion, evolutionary theory, cultural evolution, explanation, theoretical pluralism, middle-range theory, socio-cognitive approach

In the previous chapter, several references were made to cognitive theories of ritual and to the Cognitive Science of Religion in general. I now need to contextualize these references in the larger framework of the cognitive study of religion.

As defined above, the Cognitive Science of Religion (CSR) is an interdisciplinary research programme that draws on a growing body of knowledge from the cognitive and evolutionary sciences to explain religious thinking and behaviour. The cognitive programme spans numerous academic disciplines and subdisciplines, but as a current in Religious Studies it is nowadays commonly referred to as ‘the Cognitive Science of Religion’. This title is used, for example, in the name of an international professional association founded to promote cognitive approaches to religion, and in the official journal of the same association.<sup>1</sup> Ritual has played a central role in the pioneering work of CSR, as well as in more recent theoretical and empirical studies emerging out of this programme. While a great deal of important work on ritual is taking place outside the sphere of the cognitive programme (Sax et al. 2010; Stephenson 2010; D. J. Davies 2011; Hüsken and Neubert 2012; Grimes 2014, to mention just a few examples), cognitive and evolutionary theories of ritual nevertheless represent a significant new development in both Religious Studies and Ritual Studies, reflecting broader integrative tendencies between the **(p.42)** natural sciences and the humanities (Slingerland 2008). Historians of religions and biblical scholars have begun to apply and develop cognitive approaches in their work (Whitehouse and Martin 2004; Luomanen et al. 2007b; L. H. Martin and Sørensen 2011; Czachesz and Uro 2013). It is a natural—if not inevitable—step to consider cognitive theories and perspectives in the context of the role of ritual in Christian beginnings.

In this chapter, I want to introduce those aspects of CSR that are relevant for understanding the socio-cognitive approach applied in the book. What were the key ideas of the pioneering work that gave rise to the cognitive movement? How are cognitive theories of ritual different from other approaches to the theorizing of ritual? It is now a quarter of a century since the publication of the book often seen as a landmark in the rise of the cognitive programme, Lawson and McCauley’s *Rethinking Religion: Connecting Cognition and Culture* (1990); how to describe the field today? As we will see, the present state of CSR is characterized by multi- and cross-disciplinary approaches, methodological pluralism, and a variety of schools; it is not easy to define what is shared in common between the variegated studies and undertakings which have been carried out under the general rubric of CSR. However, some leading ideas important for the present work can be recognized, which in turn will help us to specify the approach adopted in the subsequent chapters.

### 2.1 The Cognitive Turn in the Study of Religion

In the 1990s, four studies appeared that played an important role in the development that led to the emergence of the Cognitive Science of Religion as a collaborative effort, approaching religion from cognitive and science-driven perspectives (J. L. Barrett 2011: 230). Lawson and McCauley’s *Rethinking Religion* introduced a new cognitive framework for the study of religion, in particular a theory of how religious rituals are mentally represented in the

minds of participants: the Theory of Religious Ritual Competence; in the later literature, this was also referred to as the Theory of Ritual Form. The title of the book echoes Dan Sperber's *Rethinking Symbolism* (1974), whose critique of (p. 43) symbolic anthropology can be seen as a significant harbinger of the cognitive programme. In his *Faces in the Clouds*, Stewart Guthrie advanced a theory of religion as 'a systematic anthropomorphism' (Guthrie 1993: 3), relying in part on cognitive science (in an earlier essay, he had given the epithet 'cognitive' to his theory, Guthrie 1980). Pascal Boyer's *The Naturalness of Religious Ideas* (1994a) introduced some of the central ideas of the cognitive programme, arguing that all religious representations are constrained by universal properties of the human mind, and that the regularities of religious ideas across different cultures can be explained by paying heed to the cognitive processes that generate these ideas in the first place. The last of the four works, *Inside the Cult* by Harvey Whitehouse (1995), presents a vivid ethnography of a millenarian cult (Pomio Kivung) in Papua New Guinea; here he anticipates the ideas that he later developed into a Theory of the Modes of Religiosity (Whitehouse 2000, 2004a).

While these four pioneering studies differ in many regards, they share the roughly common conviction that the striking regularities of religious ideas and behaviours across time and space can be explained by the human mental architecture, which 'canalizes' the spread of religious traditions (Pyysiäinen 2012b: 6). Importantly, they also agree that scholars of religion should focus on these pan-cultural features; this would allow them to theorize religious phenomena cross-culturally. These studies thus represent a significant shift away from the constructionist and culturalist views that had prevailed in Religious Studies and related fields for several decades—and to some degree still do.<sup>2</sup> Against the backdrop of psychological science, CSR can be seen as an aftershock of the so-called Cognitive Revolution, which in the 1950s and 1960s had begun to refashion behaviourism, the dominant paradigm of scientific psychology in the first half of the twentieth century (J. L. Barrett 2004a: 401). Since Cognitive Science (an outcome of the Cognitive Revolution movement) is a highly inter- and multidisciplinary field, the pioneers of the cognitive study of religion drew on a great variety of fields and theoretical resources, including generative linguistics (Lawson and McCauley), (p.44) developmental and evolutionary psychology (Boyer), perception studies (Guthrie), and memory studies (Whitehouse). Later new fields and areas of study were accommodated, such as experimental psychology (here Justin L. Barrett has been a leading scholar), neuroscience (Aarhus MindLab section on 'Culture and Cognition'), archaeology (Mithen 1996), and various evolutionary sciences. What made possible the cumulative progress in the emerging field of CSR was this interdisciplinary collaboration between anthropologists, religion scholars, psychologists, philosophers, historians, and so on, leading eventually to the establishment of the IACSR.<sup>3</sup>

A central and probably the most provocative part of the cognitive programme has been its focus on the unconscious and intuitive cognitive mechanisms, or 'mental tools' (Barrett), that constrain religious thought and behaviour as well as the transmission of religious traditions. Much of our religious thinking and the motivation for religious behaviour is hidden from conscious inspection (Boyer 2002: 108). Many of the pioneering theories both build on and are intended to demonstrate this fundamental assumption: for example, the *Ritual Competence Theory* (Ritual Form Theory), discussed in detail in this book (Lawson and McCauley 1990; McCauley and Lawson 2002); the *Theory of Minimal Counterintuitiveness*, which predicts that minimally counterintuitive concepts have a selective advantage in transmission as compared to intuitive or massively counterintuitive ideas (Boyer 1994b; J. L. Barrett and Nyhof 2001; Boyer and Ramble 2001); the concept of *theological incorrectness*, which demonstrates that adults' religious views can function in markedly divergent ways depending on contextual demands (it has been shown, for instance, that abstract theological concepts are replaced by anthropomorphic ones in fast 'online' thinking; J. L. Barrett and Keil 1996; J. L. Barrett 1999; (p.45) Slone 2004); and the hypothesis of the *hypersensitive agent detective device* (HADD), according to which the human mind has a strong bias towards interpreting ambiguous environmental stimuli as being caused by or being an agent (J. L. Barrett 2004b).<sup>4</sup>

Although the centrality of intuitive knowledge has been at the heart of the cognitive programme, this tenet has also been qualified or even challenged by cognitive scholars. For example, the idea of intuitive religious knowledge has been conceptualized and qualified by means of the dual-process approach in social psychology, neuropsychology, and cognitive science (Pyysiäinen 2004a, 2009: 6–8; 189–92, 2012b: 8; Tremblin 2005; see also Uro forthcoming). Alternative models have been presented as well (see below section 2.2).

During and since the first decade of the new millennium, CSR has become increasingly multidisciplinary, has taken new directions, and has become allied with other groups interested in 'sciencing up' (J. L. Barrett 2011: 230) the study of religion. The most influential trend in CSR has been the integration of various evolutionary and biological approaches, making the broadly defined field of CSR even more pluralistic. Early pioneers of cognitive approaches to religion did not unanimously rely on evolutionary approaches. Boyer, for example, has been keen on using evolutionary psychology in his work (Boyer 1994a: 291–4, 2002), whereas Lawson and McCauley's *Rethinking Religion* does not refer to biological or evolutionary factors in its account of panhuman ritual competence. The trend toward a greater integration of evolutionary science into CSR is reflected in two review articles by Justin Barrett, published in 2007 and 2011 respectively. In the former, Barrett regards evolutionary psychology and anthropology as a 'secondary project' rather than as 'intrinsic' or 'necessary to the field' (J. L. Barrett 2007: 768, 779). In the latter, however, he writes that the 'most natural

growth area for CSR is to forge an even stronger alliance with evolutionary approaches' (J. L. Barrett 2011: 233). Today the evolutionary perspective is by and large seen as an important part of CSR, sometimes referred to more specifically as the 'Evolutionary Cognitive Science of Religion', ECSR (L. Turner 2014).

**(p.46)** 2.2 Schools and Currents in CSR

The pluralism and complexity that define the present state of CSR can be illustrated by describing the different schools and currents in the field. These reflect the diverse disciplinary backgrounds of their proponents, as well as different strands in cognitive science at large.

One way of clarifying the complexity characterizing the cognitive programme is to refer to some of the central ideas and principles advanced by the pioneers in the 1990s and the early 2000s as the 'standard model in CSR' (J. S. Jensen 2009; Pyysiäinen 2012a: 242–6; L. Turner 2014: 3–4; cf. Boyer 2005).<sup>5</sup> Among the key notions of the 'standard model' (sometimes also called 'cognitivist') is the assumption that religious representations arise out of the normal operations of innate cognitive systems, in response to certain challenges faced universally by human beings (L. Turner 2014: 2). The idea that religion emerges from quite natural cognition has provided an important critical response to the phenomenological tradition in the study of religion, that is, to the idea that religion or the religious experience somehow constitute an autonomous sphere in human life (Pals 1996: 161–2). But the thesis about the 'naturalness' of religious ideas has also led to a debate *inside* the growing field of CSR, between those who regard religion as a by-product (mostly identifying themselves with the 'standard' model) and those who emphasize the adaptive nature of religious behaviour (Sosis 2009; see Pyysiäinen 2012b: 246–52, 2014: 23–5). The adaptionist vs. by-product debate is quite complicated, not least because 'religion' itself is a multi-faceted category. While I agree as to the critique of the phenomenological approach, and the claim that religious phenomena can be explained—bearing in mind that all explanations are partial—in terms of ordinary cognitive processes, for the purposes of this study it is not necessary to **(p.47)** align oneself definitely with either party to the debate. My contention is that the theories and insights emerging from *both* the 'standard' model *and* other schools in CSR are helpful in the study of early Christian rituals.<sup>6</sup>

As already mentioned, some of the pioneers of CSR were subsequently influenced by a new approach, dubbed evolutionary psychology (see Boyer 2002; Atran 2002, in particular). As a specific research programme within the larger field of evolutionary approaches to human behaviour, evolutionary psychology argues that much of human behaviour can be explained by focusing on psychological adaptations that evolved to solve recurrent problems in the environment of our early human ancestors (Barkow et al. 1992; Buss 1999; Confer et al. 2010). For example, our inclination to interpret all kinds of cues in

our environment as being caused by or being agents (the Hypersensitive Agent Detection Device, HADD, mentioned in section 2.1) can be supported by evolutionary reasoning: in Pleistocene conditions, it was much more advantageous to over-detect agency than to under-detect it (Boyer 2002: 165).

The 'standard' cognitive science of religion approach is closely associated with a particular understanding of the human cognitive architecture, usually referred to as the modularity hypothesis. The modularity of the mind is a hotly debated issue among cognitive scientists, and several different versions of it can be found in the literature (see H. C. Barrett and Kurzban 2006, for a review of the debate). The basic idea is that the human mind consists of modules, also called inference systems (Boyer) or mental tools (Barrett), that are relatively independent from each other and have specialized cognitive functions (Visala 2011: 34). I will have more to say about modularity in Chapter Six (6.2). At this point, suffice it to note that the reliance on the modularity hypothesis, particularly on a strong version of it, explains why Boyer and some other proponents of the standard model assume that much of our religious thinking is not 'accessible to conscious inspection' (Boyer 2005: 6; cf. also Atran 2002: 57-9; McCauley 2011: 59). The strong version of modularity, usually called 'massive modularity', suggests that modularity extends **(p.48)** to the central cognitive processes, that the modules are mostly automatic (thus unconscious), and that they come in great variety and numbers (Visala 2011: 38). The evolutionary psychologists have been keen advocates of the massive modularity hypothesis; they argue that the mental modules dominating human psychology each evolved in response to some specific challenge to our ancestors' survival (Tooby and Cosmides 1992; Pinker 2002; Carruthers 2006). A common analogy among advocates of the massive modularity is to compare the human mind to the Swiss Army Knife.

While evolutionary psychology has been important for the many proponents of the 'standard' model, it should be noted that evolutionary theory has been applied in recent CSR approaches in a number of different ways. One distinctive approach is represented by a group of religion scholars who have turned to co-evolutionary (dual inheritance) theory to develop models of religious and cultural transmission. Cultural co-evolution theory, often shortened to 'cultural evolution theory', argues that human behaviour is best explained as the product of two interacting forces: genetic selection and cultural selection. Theorists of cultural evolution typically draw on population genetics and use rather sophisticated mathematical models and quantitative methods (Boyd and Richerson 1985; see also Mesoudi 2011), but the approach was popularized for a larger public in *Not By Genes Alone*, by Peter Richerson and Robert Boyd (2005).<sup>7</sup>

Cultural evolution theorists of religion argue that the transmission of religious concepts is dependent on *both* intuitive cognitive biases *and* those of cultural learning. The approach is illustrated by a programmatic article by a group of researchers at the University of British Columbia (Gervais et al. 2011). The UBC writers contend that that the intuitive cognitive predispositions established in the cognitive ‘standard’ approach offer necessary but not sufficient explanations for the distribution of religious concepts among human populations. They argue that the cognitive approach has to be supplemented with models that explain how cultural learners acquire information from those around them. A full cognitive theory of religion should explain why some counterintuitive representations motivate commitment and faith, while others are treated merely as entertaining figures or stories (the so-called ‘Mickey Mouse problem’; Atran 2002: 13; see **(p.49)** also Gervais and Henrich 2010). According to the cultural evolution theorists, the answer to the question of why people come to believe in certain counterintuitive representations as religious truths and accept them as objects of devotion should be sought in both content and context biases, not merely in panhuman cognitive constraints. They distinguish three predilections which guide people’s beliefs and behaviour in cultural learning (see also Richerson and Boyd 2005): (1) a conformist learning bias (people often adopt the views and behaviours of the majority); (2) a prestige-based learning bias (people often imitate those who are successful and exemplary); and (3) a deception avoidance bias (such as CREDs, credibility enhancing displays, discussed in more detail in Chapter Three).

Population thinking, or the ‘selectionist’ perspective, is central in the ‘standard’ model of CSR as well, but there are important differences. While theorists like Boyer emphasize that some characteristics of representations, such as minimal counterintuitiveness, give representations a relative probability of surviving in cultural transmission (Sperber 1996), the cultural evolution theorists focus on ‘learning biases’, which include both content biases (for example the memorability of a tradition) and context biases. In practice, they focus mainly on the context biases elaborated in the three cultural learning biases.<sup>8</sup>

Evolutionary psychology and the co-evolutionary (dual inheritance) approach represent two different ways to analyse human behaviour from the perspective of evolutionary theory. There is also a third approach, associated with the field known as ‘behavioural ecology’. Behavioural ecology applies ‘the theory of natural selection to the study of behavioural adaptation and design in an ecological setting’ (Sosis and Bulbulia 2011: 343). The three approaches to the evolutionary analysis of human behaviour are best identified by their different research foci and explananda (objects of explanation) (E. A. Smith 2000). For evolutionary psychologists, the primary interest, as we have seen, is in the panhuman set of genetically evolved psychological predispositions (modules), which are argued to provide a link between evolution and behaviour. In co-evolutionary theory, the main interest is in culturally and genetically inherited

information, **(p.50)** and in the ways in which this information is transmitted. Human behavioural ecology, for its part, focuses on 'observable patterns of behaviour, with the goal of linking these patterns to environmental conditions... and to fitness-correlated payoffs' (E. A. Smith 2000: 34). In short, evolutionary psychologists are interested in panhuman cognitive predilections, co-evolutionary theorists in gene-culture interaction and transmission, and behavioural ecologists in adaptive behaviour in ecological contexts.

Behavioural ecologists have only recently begun to focus their research on religion (Sosis and Bulbulia 2011: 346). The most prominent theory of religion coming from this field is Commitment Signalling Theory, according to which religious behaviour evolved at least in part to support cooperation (Bulbulia and Sosis 2011: 363; see above, section 1.6). Since behavioural ecologists' major interest is in behavioural aspects of religion, Commitment Signalling has important implications for the study of religious rituals. Signalling theorists argue that rituals are often costly, that is, they require material, physiological, or psychological resources, and that the adaptive benefit of costly religious behaviours is their ability to function as honest signals and as an efficient mechanism for minimizing the presence of free-riders (Irons 2001; Bulbulia 2004; Sosis and Alcorta 2003; Sosis 2003, 2004, 2006). This version of the theory was originally called Costly Signalling. The signalling approach has generated considerable empirical testing and has inspired further research questions and hypotheses, such as Charismatic Signalling; I will have more to say about these in Chapters Three (3.8) and Five (5.2).

Cultural-learning and signalling theorists readily see each other's approaches as complementary, and some integration has indeed taken place between the two approaches (Bulbulia and Sosis 2011: 370). The gap is somewhat wider between behavioural ecology and evolutionary psychology, and hence between the forms they take in the study of religion, the 'standard' model of CSR and Signalling Theory. As Sosis and Bulbulia note, behavioural ecologists are largely agnostic with regard to the underlying cognitive mechanisms that produce adaptive responses in particular ecological contexts (Sosis and Bulbulia 2011: 344). Behavioural ecology takes a calculated 'black-box approach' to evolved cognitive mechanisms (E. A. Smith 2000: 30), and clearly differs thus from the 'standard' model's emphasis on panhuman cognitive capacities, which are used to explain cross-cultural regularities in religious thinking and behaviour (but compare Bulbulia 2013).

**(p.51)** Among the schools and currents in CSR, we should finally note Armin Geertz' biocultural theory of religion (Geertz 2010). Geertz' theory is built on an expanded (embodied) view of cognition, in particular on Merlin Donald's theory of culture as 'a gigantic cognitive web' (Donald 2001: xiv). Merlin Donald is a psychologist and neuroscientist, known for his position that a decisive role in the development of homo sapiens cognition was played by the social environment,



the 'community of brains'; the human mind evolved into a 'hybrid' mind, one whose uniqueness lies in its dependence on cultural storage systems.<sup>9</sup> Donald's view of the origin of human cognition can be seen as one version of the co-evolutionary approaches discussed above, but it also strongly resonates with a branch of cognitive science called 'embodied' (also 'extended' and 'situated') cognition. In accordance with the embodied cognition stance (Robbins and Aydede 2009b; Glenberg et al. 2013; see also sections 6.3 and 6.6), Geertz argues that cognition is both embrained and embodied, deeply dependent on culture, and distributed beyond the boundaries of individual brains. Cognition does not simply produce culture; in a reciprocal process, culture also 're-engineers' human cognition by means of 'cognitive tools' such as numbers, maps, writing and literacy, musical notation, etc. (M. Wilson 2010).

Geertz' biocultural theory extends the cognitive study of religion considerably beyond the original vision, to produce relatively narrow and testable theories about the cognitive constraints of religious concepts and behaviours. The perceived advantage of the biocultural approach is that it is able to deal with more complex relations between cognitive and cultural phenomena; the challenge, however, is to translate this general theory into further theories, hypotheses, and tests, as also noted by Geertz himself (2010: 305). Chapter Six takes steps towards drawing on insights from embodied cognition research to tackle the question of how ritual in fact conveys religious knowledge.<sup>10</sup>

### **(p.52)** 2.3 Key Properties of the Cognitive Approach

Even this brief summary of the different schools and currents in CSR demonstrates the complex and manifold nature of the cognitive movement. The original vision, that of searching for the mental mechanisms underpinning religious concepts and behaviours, has grown into a diverse set of research programmes, applying various cognitive and evolutionary theories as well as experimental research. Yet a few unifying ideas and principles can be recognized. In what follows, I elaborate three key properties of CSR which contribute to the approach applied in this study. Cognitive research is (1) explanation-driven; (2) relies on testable theories; and (3) promotes a multilevel analysis of religious phenomena.

#### 2.3.1 Explanation

There is no doubt that CSR champions an explanatory approach to religious phenomena, that is, it focuses on causal relationships. It is also obvious that various schools and trends in CSR are united in their commitment to seeking natural explanations for religious phenomena. This of course entails that they do not endorse transcendent or supernatural explanations; but there is more than that to naturalism, as we shall see in the following discussion. Both explanation and naturalism—often revolving around the issue of 'reduction'—are hotly debated issues in the philosophy of science, and a wide variety of approaches to them has been offered (Horst 2007; Pyysiäinen 2011a; Visala 2011). It is beyond

the limits of this chapter to summarize this discussion in any detail. The two points I want to make here are that an explanatory approach can enrich a historical analysis, and that explanation should not be understood as being exclusive of interpretation, the traditional approach to culture in the humanities.

**(p.53)** This last point was emphasized already in the pioneering work by Lawson and McCauley, where they advocate an interactionist approach to the relationship between explanation and interpretation (1990: 14–31). Their position ‘acknowledges the differences between interpretation and explanation and champions the positive values of each’ (1990: 22). The scholar of religion applying explanatory approaches cannot dispense with interpretation, since ‘explanation is riddled with interpretation’ (1990: 23). This view can be contrasted with the approach that argues that scientific explanation and humanist interpretation are quite distinctive modes of research, which may at best live in ‘peaceful coexistence’ (Laidlaw 2007: 231), but it also differs from the position that calls for a radical unification of sciences (labelled ‘explanatory fundamentalism’ by Visala 2011: 102–11). The latter position is closely related to the issue of multilevel analysis discussed below in section 2.3.3.

The interactionism promoted by Lawson and McCauley is particularly applicable to Biblical Studies, in which much of scholarly activity centres on the interpretation of ancient texts and other historical artefacts. Here cognitive theories cannot be employed without the careful analysis and interpretation of texts (or archaeological evidence), providing the data for cognitive explanations. This does not mean that explanation is flawed by interpretative analysis. In contrast, a case can be made for the view that the study of biblical and related texts is considerably enriched by the introduction of cognitive explanatory approaches (Nikolsky et al. forthcoming).

Interpretation is indispensable, but explanatory approaches can enrich Biblical Studies and the study of ancient religions in a number of ways. They can generate interesting and novel research questions, which cannot be addressed with mere interpretative or descriptive analyses. A descriptive historical approach, for example, an analysis of the diverse forms of early Christian beliefs and doctrines (Räsänen 2010), cannot provide answers to explanation-seeking questions: why certain early Christian beliefs spread as effectively as they did, what role rituals played in the emergence of Christian beliefs, and so on. Moreover, the focus on explanation is a helpful tool in explicating the scope of the research. What is the explanandum (the thing to be explained) of the current task? What is the explanans (the thing that explains)? What is the ‘explanatory mechanism’ which links explanans and explanandum? Such questions, not often addressed in the humanities, can be helpful in finding new ways to analyse the **(p.54)** available data. Lastly, a mechanism-based account (see the next subsection) can help scholars to identify the limits of explanation. Explanations are always about particular aspects of a phenomenon and are inspired by

particular questions. As McCauley puts it, 'all explanations are partial explanations; all explanations are from some perspective, and all explanations are motivated by and respond to specific problems' (McCauley 2007: 150).

### 2.3.2 Testable Theories

From the outset, the aim of formulating testable, systematic, and clearly formulated theories has been central to the cognitive programme. Testability means that the theory makes falsifiable predictions, which can be empirically validated. To be sure, there has been some criticism among cognitive scholars themselves as to the dominance of theory over empirical testing in CSR. Barrett, for example, complains in an article published in 2007 that '[a]lthough one of the attractive promises of the Cognitive Science of Religion is to inject the study of religion with empirically testable theories, theoretical projects have outpaced empirical ones' (J. L. Barrett 2008b: 296). On the other hand, experimental research has been increasing during the second decade of the twenty-first century, experiment-oriented researchers not always showing much interest in the big theoretical issues that characterized the pioneering studies in CSR.<sup>11</sup>

In order to be empirically testable, a theory cannot be all-inclusive or overly general. The concept of the *middle-range theory* can help to illustrate the point. It was originally advanced by Robert Merton after the Second World War, and has been used in criticism of 'grand theorizing' in sociology, such as functionalism or conflict theory (Merton 1949, 1967; Boudon 1991). Advocates of the 'analytical (mechanistic) sociology' movement have placed considerable emphasis on middle-range theory (Hedström and Swedberg 1998b, **(p.55)** 1998a; Hedström and Ylikoski 2010). Peter Hedström and Richard Swedberg contend that 'what often goes under the rubric of social theory, should more properly be viewed as conceptual or sensitizing schemes, not as explanatory theory proper' (Hedström and Swedberg 1998a: 1). The remedy they offer is middle-range sociology, which differs from taking on 'broad-sweeping and vague topics' or (unrealistic) attempts to establish universal social laws, but instead aims at 'explanations specifically tailored to a limited range of phenomena' (1998a: 24). Among the key elements of middle-range theory are its focus on 'social mechanisms' (referring roughly to a constellation of explanatory factors that is predicted to bring about a particular type of outcome) and 'the general reductionist strategy in science of opening black boxes' (1998a: 25). The mechanistic approach extends beyond sociology, and the discussion of explanatory mechanisms in neuroscience and the philosophy of mind is quite active and complex (see, for example, Craver 2007). It would probably not make sense to argue that a good theory in the study of religion always includes an explanatory mechanism; we have in fact seen that this is not always the case in the theories discussed in this chapter. Nevertheless, it is important to note that the tendency toward middle-range theory—with or without an emphasis on mechanisms—resonates with the common sentiment among ritual theorists that 'the age of "grand theories"...is over' (Kreinath et al. 2008a: xxiii; see also

Grimes 2014: 336). Narrowing the focus of investigation by means of middle-range theory also generates a need for theoretical pluralism (more on this in the next section, 2.3.3).

A special challenge is to test cognitive theories against the historical evidence, such as early Christian sources. The issue is not so much whether theory-testing within the context of historical studies is possible in principle; the problem arises with the scarcity and haphazard nature of sources for New Testament/Early Christian scholars and with the relatively short historical time frames they usually deal with. Early Christian scholars cannot control or design the conditions of their research, in the way, for example, experimental psychologists can; nor are they used to collecting the kind of 'big data' needed to test cultural evolutionary theories (Mesoudi 2011). Much, however, depends on the particular task at hand. The opportunities and challenges of testing cognitive theories against the historical evidence are discussed in connection with each particular application of the theory in the coming chapters.

**(p.56)** 2.3.3 Multilevel Analysis

Cognitive approaches operate across the traditional hierarchies of disciplines or 'levels' of knowledge by using cognitive or biological science to explain religious phenomena. These are traditionally understood as taking place most conspicuously at a social level, and thus best analysed by means of social or cultural theories. Does the cognitive programme, then, assume that all religious institutions, movements, and collective behaviours can ultimately be reduced to the cognitive architecture of the human mind? Some theorists think that this indeed is the case, at least in the 'standard' model (Van Slyke 2011).

A typical objection to the integration of social and cognitive levels of analysis is that it involves a naturalistic approach; in other words, it presupposes the naturalization or re-conceptualization of the domain of social-cultural phenomena in terms of natural science. A religious experience, for example, is approached as an empirically measurable activity in the human brain.<sup>12</sup> Although cognitive scholars of religion sometimes express leanings toward a more or less straightforward naturalism (see examples in Visala 2011: 88–90), the cognitive movement as a whole is hardly committed to such an epistemological position. Much of the work done in CSR is in accord with what Visala describes as *broad naturalism*.

Contrary to the strict naturalist view, we should not expect neat reductions of theories and explanations from higher levels to lower levels. Instead, disciplines on different levels should be considered as autonomous to the extent that their theories actually work and answer questions that the discipline is asking. Although seeking inter-level links is a useful research strategy, the lack of reduction does not lead to elimination. It follows from

this that a unified and integrated natural, behavioural and socio-cultural science will be highly unlikely. (Visala 2011: 117)

Visala connects broad naturalism with *explanatory pluralism*, which holds that inter-level cooperation between the sciences is a goal **(p.57)** worth striving for, but that it should not be understood as a form of reduction or elimination (the latter term refers to a version of reductionism in which reduced entities are eliminated in favour of reducing entities). McCauley, one of the founding fathers of CSR, is also a leading developer of explanatory pluralism in the philosophy of mind (McCauley 1996, 2013; McCauley and Bechtel 2001). Pyysiäinen too has elaborated upon explanatory pluralism in a number of publications (Pyysiäinen 2009: 201–4, 2011a,b). While the discussion embraces many philosophical and theoretical subtleties, the core issue is that explanatory pluralism regards biological and cognitive/psychological knowledge as *relevant* to an understanding of cultural or social processes (including religion), but does not claim that cultural or social phenomena are reducible to individual psychology or biological processes (Pyysiäinen 2011a: 28).

To sum up the key properties of CSR: we can conclude that the cognitive programme is best characterized by its work toward explanatory and testable theories, and by a multilevel analysis which seeks to bridge the gap between on the one hand the social and cultural level, the traditional domain of Religious Studies, and on the other the natural sciences. In these respects, the cognitive programme is essentially about ‘sciencing up’ the study of religion, as Barrett puts it. This may be a hard lesson for the scholar used to operating with approaches more typical of the humanities. On the other hand, our analysis shows that there are several ‘softening’ elements in the approaches applied by cognitive scholars of religion. Explanation and interpretation are not viewed as exclusive; rather, they complement one another (Lawson and McCauley 1990: 15). Cognitive scholars are well aware of the fact that all explanations are partial, and they prefer a piecemeal approach instead of promoting grand theories of religion (J. L. Barrett 2007). Their work should not generally be seen as representing a strict naturalist position; ‘explanatory pluralism’, as developed by McCauley and Pyysiäinen, may be a more appropriate label. It should also be noted that many cognitive scholars of religion come from different fields of social, historical, and theological studies, bringing with them a range of traditional methods and approaches which can supplement and enrich the cognitive methodology. From this perspective, CSR also contributes something from the humanities to the natural sciences (see also Slingerland and Collard 2012).

#### **(p.58)** 2.4 (Socio-)Cognitive Theories of Ritual

The pluralism that characterizes the cognitive approach as a whole is also conspicuous in the area of cognitive theories of ritual. Ritual theories, and theories relevant to analysis of ritual, derive from different schools and currents

of the cognitive movement, and should therefore be viewed against the background of the particular cognitive or evolutionary theory each school draws upon. In the following, I discuss some of the central cognitive theories of ritual, already introduced in Chapter One, in the light of the above survey of the versions and properties of CSR.

Ritual Competence Theory was advanced by Lawson and McCauley in the earliest of the pioneering work that gave rise to CSR. Lawson and McCauley's fundamental proposition, that humans have a universal competence for making judgements about various properties of religious rituals, seems to be in full accord with the 'standard' model of CSR, which focuses on the innate cognitive mechanisms that constrain and canalize religious beliefs and behaviours. It should not, however, go unnoticed that Lawson and McCauley's interactionist position gives a rather different cast to their approach as compared to the 'standard' CSR—represented, for example, by the work of Boyer and Atran. This difference has rarely been emphasized in the literature (but see Engler and Gardiner 2009). Although Lawson and McCauley's approach was inspired by Chomsky's idea of a 'universal grammar' (an innate language module or capacity that explains the rapidity with which children learn a language), for them 'it is much less obvious that the commonalities that are characteristic of religious ritual systems require such a biological explanation' (Lawson and McCauley 1990: 181). Instead of the modularity theory or any other biology-based constraints, they look to *connections between cognition and culture* as explanatory factors for the universal ritual competence they suggest. Lawson and McCauley call their approach 'integrative' (1990: 180): they assert that 'ritual systems have both cultural *and cognitive* dimensions' (1990: 68, italics in the original), and maintain that 'analyses of these two domains will reflect and mutually inform one another' (1990: 42). The question of the precise nature of the mechanism that connects cognition and culture to produce the ritual competence in the participants does not find a full answer in *Rethinking Religion*; in their later book, (McCauley and Lawson 2002), they develop the theory by integrating it with Whitehouse's modes theory and memory studies.

**(p.59)** The bottom line in their argument is that the cognitive approach is 'just a place to start' since it is 'only through our representations of...[cultural] systems that we have the sort of access to them which renders them at all tractable empirically. Symbolic-cultural *systems* have no way of being directly observed' (Lawson and McCauley 1990: 182-3, my italics).

In spite of their integrative approach, Lawson and McCauley present their Ritual Competence Theory as an explanatory and testable theory. The theory puts forward predictions—more systematically presented in McCauley and Lawson 2002—which, in principle at least, make it falsifiable. Lawson and McCauley's ritual theory has indeed been tested against historical, ethnographic and experimental evidence in a number of studies (Abbink 1995; Vial 1999; J. L. Barrett and Lawson 2001; Malley and Barrett 2003; Ketola 2007; Biró 2013). As

is often the case, the theory is not simply proven false or true. For example, a study by Malley and Barrett, based on interviews with participants in the Hindu, Jewish, and Islamic traditions, found support for some of the major predictions of Lawson and McCauley's theory, but also raised questions as to the causal mechanism they propose. Biró examines the theory against mainstream rabbinic Judaism, and makes several critical observations as to its applicability to that religious tradition. But he also argues that Lawson and McCauley's theory is not falsified by rabbinic Judaism, and that it should be developed further 'by looking at additional problematic case studies' (Biró 2013: 142). Chapter Three in this volume offers another such case study, an analysis of John the Baptist's water ritual from the perspective of ritual innovation.

Whitehouse's Modes of Religiosity Theory is also among the pioneering theories in CSR, but its scope and scale are quite different (Whitehouse 2000, 2004a). While Ritual Competence Theory can be described as a middle-range theory, consisting of relatively few parameters and leaving out of consideration a great deal of what has usually been of interest to ritual scholars, the modes theory is in many regards the opposite. It starts with the 'big' question of why the world's religious traditions tend to coalesce around one of two contrasting types of religiosity. Scholars of religion have often suggested similar grand-scale dichotomies: distinguishing, for example, between 'charismatic' and 'routinized' forms (Weber), '*communitas*' and 'structure' (Turner) or literate and non-literate religions (Goody). In Whitehouse's model, the world's religious traditions are divided into **(p.60)** the 'doctrinal' mode, accommodated by large-scale organizations sustaining orthodoxy and dry ritual routine, and the 'imagistic' mode, characterized by small-scale communities practising emotionally arousing rituals. The modes, or 'attractor positions', are described in terms of twelve psychological and socio-political variables, which can have either an imagistic or a doctrinal content (Whitehouse 2004a: 64–75; see also Table 1.1 in section 1.6). What makes the theory cognitive is its reference to two memory systems: episodic memory, which is central to the codification of imagistic traditions, and semantic memory, which dominates in the transmission of doctrinal traditions.

How testable is Whitehouse's modes theory? The theory is clearly meant to be tested against ethnographic and historical evidence (Whitehouse 2004a: 157–70), and it has attracted considerable attention from scholars across many fields (Whitehouse and Laidlaw 2004; Whitehouse and Martin 2004; Whitehouse and McCauley 2005). The testability of the theory, at least in its original form, is nevertheless weakened by its attempt to create a causative link between a host of different socio-political and psychological variables (explananda) and one single set of cognitive mechanisms, that is, the use of two retrieval systems in cognitive memory (for the use of memory studies in relation to ritual, see Czachesz 2010). This does not mean that Whitehouse's ethnography and theoretical reflections are of no relevance for the kind of analysis carried out in this book. Some parts of his theory, such as the idea of 'spontaneous

exegetis' (spontaneous reflection of matters of ritual meaning), will be helpful in the subsequent analyses. Moreover, Whitehouse and his collaborators have over the years been developing the theory into more testable form, adding elements from other cognitive theories and using computational modelling to simulate its predictions (for example, Q. Atkinson and Whitehouse 2011; Whitehouse et al. 2012; see also Xygalatas 2013).

Although Modes of Religiosity Theory has often been compared to and associated with Ritual Competence Theory (most conspicuously in McCauley and Lawson 2002), among the schools of CSR Whitehouse's approach can also be linked to the cultural evolution approach. Modes of Religiosity focuses on the role of ritual in the transmission of religious traditions, and hence resonates with those CSR approaches that focus on the mechanisms of cultural learning. Since Ritual Competence Theory, in its original form, is a theory of tacit ritual competence, it does not have much to say about *explicit* (p.61) religious knowledge transmitted via ritual practices.<sup>13</sup> Whitehouse's theory may be seen as an important groundwork for the study of ritual transmission, which earlier ritual theorists mainly analysed within the framework of symbolic anthropology.

As we have seen above (section 2.2), the approaches of both behavioural ecology (Commitment Signalling) and cultural evolution differ significantly from the 'standard' model of CSR, but the theories advanced in these currents meet the general properties of CSR already described. The advocates of these approaches develop explanatory theories, which are designed for empirical testing, and are in fact often subjected to data analysis. By combining biological and cultural evolution, these approaches also employ multilevel analysis and work across traditional disciplinary hierarchies. How exactly the direction of causation between the social/cultural level and the cognitive/biological one(s) is envisioned as going varies in each theory. In the social sciences, it is often assumed that the direction of causation is from the society to individual psychology: social structures exert influence over the minds of individuals (Sun 2012: 18). The 'standard' model of CSR provided a significant counter-balance to this one-sided view. More recent work in the field of CSR has emphasized the importance of two-way interaction between society and cognition, or between external and internal forms of religion (Bulbulia 2009a; Pyysiäinen 2012a); but interaction had been emphasized already in the pioneering writings, most explicitly in *Rethinking Religion*.

In the terminology of the present study, theories of ritual operating at both the social/cultural and the cognitive/biological level are referred to as *socio-cognitive*. All cognitive theories do this to some extent, but there are differences in the degree to which the explananda or predictions of a particular theory focus on the socio-cultural realm (Uro 2011c). The approach applied in this study is interactionist; it assumes that causation between the social and the cognitive occurs in both directions. It should also be noted that each theory employs



‘explanatory pluralism’, that is, non-reductive cross-fertilization between different levels of analysis, in its own particular way. As a **(p.62)** general rule, the analyses put forward in the following chapters move from an emphasis on upward causation (from the cognitive to the social) in Chapters Three and Four (ritual intuitions) to more interactionist explanation in Chapters Five and Six (cooperation, embodied cognition).

## 2.5 Theoretical Pluralism

In the present work, I adopt an approach of theoretical pluralism, subscribing to the view that ‘[i]n modern scholarly practice of the study of ritual, one will... need to refer to more than one theory’ (Kreinath et al. 2008a: xxiii). In *scientific* practice, theoretical pluralism is not so obvious. Science typically fosters competition between different theories and explanations. For an analysis of early Christian rituals as well, it would be quite possible to select a single theory or theoretical perspective. An approach based on theoretical pluralism, however, affords a number of advantages in the kind of multilevel analysis carried out in this study.

First, as we have seen above, CSR does not provide a uniform or coherent methodology for the study of early Christian rituals. CSR is a complex and pluralistic movement, consisting of different schools and currents which draw on a host of different fields and theoretical backgrounds. Taking sides between the schools would set limits to the scope of the investigation. By applying several different cognitive theories of ritual, however, the biblical scholar is in a position to overcome the limitations of any one such theory, and to assess the extent to which the theories used in the analysis are compatible.

Second, the preference for ‘middle-range’ theories over all-embracing grand theories is suggestive of a pluralistic strategy. It is better to use a set of target-specific theories, in which explanatory mechanisms are defined or at least purposefully left undefined, rather than to employ a theoretical perspective which either focuses on broad-sweeping topics and themes (without a clear mechanistic or analytical structure) or is too complex to be tested against empirical evidence.

Third, the specific subject of the study is defined by the concept of ‘ritual’, which, as is often observed, is a ‘fuzzy set’ or ‘family-resemblance’ concept (Snoek 2008; Sax 2010; Stephenson 2015: 70–3). Theories of ritual, on the other hand, generally come with **(p.63)** definitions of the phenomenon they intend to explain, or at least with a focus on a particular aspect of the rather sweeping category of ritual. Thus McCauley and Lawson, for example, give a relatively narrow definition of ‘religious ritual’ in their 2002 book. They posit ‘a technical sense’, according to which all religious rituals involve ‘agents acting upon patients’ and are ultimately connected with ‘actions in which CPS-agents [culturally postulated superhuman agents] play a role and which bring about

some change in the religious world' (McCauley and Lawson 2002: 13). Although the precision of this definition pays dividends in the explanatory framework of cognitive science, one can object that it leaves out many activities that are usually deemed 'rituals' (for example, singing together in worship or performing secular rituals). This concern is relevant in the context of the integrative approach adopted in this study. As suggested in Chapter One, Ritual Studies, as a field focusing on a wide spectrum of actions and behaviours that scholars working from different theoretical perspectives identify as 'rituals', has the potential to shed significant new light on the study of Christian beginnings. In a work which aims at creating connections between Ritual Studies, CSR, and Biblical Studies, restricting the analysis to a single theory or definition of ritual may not be the best strategy. Theoretical pluralism, in contrast, allows more space for seeking cross-fertilization and links between the given fields in producing knowledge concerning the behavioural aspect of early Christian history. To overly narrow down the theoretical focus would also reduce the data relevant to the analysis (and data are scarce for the study of early Christianity in any case) and consequently the knowledge gained from the analysis.

On the other hand, theoretical pluralism should not be taken to extremes, to a kind of 'hyper-pluralistic' position (della Porta and Keating 2008: 33), or a post-modern epistemology which consistently resists definitions and champions a multiplicity of perspectives to the point of full relativism. In Ritual Studies, the resistance to defining ritual, and hence to developing formal theories of ritual, has most prominently been advocated by Bell, who criticizes the hegemony of theory and sees both the study of ritual and ritual practice as strategic means of exercising power (Bell 1992; see also section 1.5 above). Bell's approach can be contrasted with the strategy, adopted by many ritual theorists in the past, which attempts to define 'ritual' as a 'thing out there' and to work consistently within the boundaries of the given definition or theoretical framework. The pluralism applied in this **(p.64)** study seeks a middle ground between these two poles—on the one hand a paradigmatic approach, starting with one clearly formulated theory or definition, on the other a hyper-pluralistic stance, which tends to be relativistic or pessimistic as to the possibility of gaining reliable knowledge about the world.

In terms of the classic philosophical debate between the nominalists (for whom scientific categories exist because we arbitrarily create them) and the realists (for whom the categories are out there to be discovered), the position taken in this study can be described as *theory-dependent realism*. According to this view, the category of ritual is helpful in achieving knowledge about human behaviour and social life, but this knowledge comes by various paths, that is, selected theories and perspectives. It remains for the analyst to decide how much of the different 'chunks' of information, arrived at via diverse pathways, are commensurable with one another and with other, independent and reliable

information. The physicists Stephen Hawking and Leonard Mlodinow write about 'model-dependent realism' in a similar manner:

It could be that the physicist's traditional expectation of a single theory of nature is untenable, and there exists no single formulation. It might be that to describe the universe, we have to employ different theories in different situations. Each theory may have its own version of reality, but according to model-dependent realism, that is acceptable so long as the theories agree in their predictions whenever they overlap, that is, whenever both can be applied. (Hawking and Mlodinow 2010: 116-17)

We can use the approach suggested by the world's leading scientists as an analogy for the way different models and theories work in the present study. 'Ritual' as such is too fuzzy or too inclusive to be applied as an analytical category. Theoretical pluralism, as tamed by theory-dependent realism, provides a potential way to grasp some aspects of the 'ritual universe', as can be observed in the emergence of early Christian religion.

## 2.6 Three Perspectives on Ritual

The foregoing review of the diverse schools and theories of ritual in CSR provide a basis for distinguishing three perspectives on ritual (**p.65**) that will be used in the subsequent chapters. I should stress that 'perspective' should not be understood as referring to an aspect of a clearly identified entity, since 'ritual' obviously is not such a category. Each perspective on ritual opens up a realm of its own, in which 'ritual' may be understood narrowly or broadly—or it may remain undefined. Note also that the perspectives are theoretical viewpoints under which a number of middle-range theories can be organized. Although they emerge from the work done in CSR, the perspectives as such are not cognitive; they also represent classic issues in anthropology and the Study of Religion.

In the following, I discuss in more detail the three perspectives applied in this study: (1) ritual as action, (2) ritual and cooperation, and (3) ritual and religious knowledge.

### 2.6.1 Ritual as Action

This is the perspective that embraces McCauley and Lawson's definition of religious ritual. In their account, rituals are understood as actions in which agents act upon patients, which involve CPS-agents, and which 'bring about some change in the religious world' (McCauley and Lawson 2002: 13-14). But this perspective also involves other theoretical stances privileging the action dimension over the communicative or expressive aspects of ritual activities. As Laidlaw and Humphrey note, the elaboration of the latter aspects has been much more common in ritual theory than an approach focusing on ritual as action (Laidlaw and Humphrey 2008: 265). Their own theory of ritual, focusing on the non-intentional and archetypal nature of ritual actions (Humphrey and Laidlaw 1994), differs from that of Lawson and McCauley in many respects, but shares

what can be called an ‘action paradigm’ in the study of ritual. Laidlaw and Humphrey write:

Our own work on ritual, like that of Staal and Lawson & McCauley, departs from the widespread assumption that ritual is fundamentally a system of communication in which participants receive pre-existing meanings and messages. Instead, we argue that the attribution of meanings is a *response* to ritual, which is called for and developed to different degrees in different cultural settings and religious traditions at different times. Thus a meaning is at best a derivative feature of ritual—highly variable and indeed sometimes effectively absent. (Laidlaw and Humphrey 2008: 274; italics original)

**(p.66)** The difference between, on the one hand, Lawson and McCauley, and, on the other, Humphrey and Laidlaw has to do with their different theoretical backgrounds, the former promoting a cognitive account of *religious* rituals (how such actions are represented in the minds of the participants), whereas the latter’s theory is fundamentally about *ritualization*, that is, what distinguishes ordinary actions from ritualized actions.

Lawson and McCauley’s theory also lays stress on the question of ritual efficacy: rituals are actions which ‘bring about some change in the religious world’. Particularly suggestive of ritual efficacy are ‘special agent rituals’, which are qualified ultimately by the agency of a CPS-agent, and which therefore generate a ‘superpermanent change in each ritual patient’ (McCauley and Lawson 2002: 191). Ritual efficacy is intrinsically related to the question of *magic*, which has a long and complex history in the study of religion (Czachesz 2011, 2013a). One important vein in this history has been Durkheim’s account of ritual as the mirror and source of the social, and as ‘the direct antithesis of the utilitarian understanding of action’ (Laidlaw and Humphrey 2008: 265). For Durkheim, genuine rituals give rise to and consolidate social groups, whereas the focus on the efficacy transfers rituals into the sphere of magic (cf. Durkheim 2001: 45). The question of efficacy should not, however, be detached from the analysis with such a ritual-magic dichotomy, but should be taken as an essential part of ritual theory (Sax et al. 2010).

The action perspective on ritual recognizes a number of practices that played a central role in the earliest phases of the early Christian movement. The examples analysed in this study are the ritual immersion performed by John the Baptist, Jesus’ healing practices, and ritual healing in Early Christianity (Chapters Three and Four). In all these practices there are agents acting upon patients, CPS-agents are involved, and the actions are expected to bring about some change in the religious world.

### 2.6.2 Ritual and Cooperation

The action perspective shifts away from the Durkheimian tradition in its embrace of ritual efficacy and its rejection of the view which sees ritual first and foremost as a paradigm of the social. The question of how ritual facilitates social life has nevertheless not ceased to engage **(p.67)** the attention of ritual theorists. This is also true of cognitive theorists, especially those who suggest that religion emerged in the course of evolution to support cooperation and to overcome the challenge of collective action. As we have seen, this is the starting point of behavioural ecologists, who promote the signalling approach to religion. This approach is in line with Durkheim's central tenet, that religious rituals communicate about the social and create a basis for all communal life; it diverges from the action perspective, which does not accommodate communicative aspects of ritual activities.

In the pluralistic approach applied in this study, the action and communication/cooperation perspectives are not mutually exclusive. Some ritual activities are amenable to more than one analytical perspective. For example, John's water ritual can be examined as an action upon a ritual patient generating some change in the religious world which the participants inhabit, but it can also be seen as a signal of commitment to the group that cultivated the practices and beliefs promoted by John. On the other hand, not all practices which can be reasonably subjected to ritual analysis fit easily into the action model consisting of the agent, patient, and action/instrument slots.

Chapter Five provides a critical discussion of the Durkheimian perspective in the light of recent developments in Ritual Studies and CSR. The middle-range theory applied in that chapter is Commitment (Costly) Signalling Theory, which makes some specific predictions as to the social dynamics and survival of small-scale groups in relation to the 'costliness' of the behaviours demanded of group members. Commitment Signalling does not offer a clearly formulated definition of ritual—it is more a theory of religious practices or behaviours in general—but it nevertheless provides a tool for reconsidering some of the cherished ideas in the study of the social world of early Christianity. The test case for the socio-cognitive approach to ritual and cooperation is the ritual life of the earliest Christian 'house churches', about which some evidence, even if fragmentary, can be found in the letters of Paul.

### 2.6.3 Ritual and Religious Knowledge

In symbolic anthropological theory, ritual was often understood as a kind of language, which could be decoded by means of the analytical and interpretative work done by the anthropologist. This stance was **(p.68)** effectively criticized by Sperber in his *Rethinking Symbolism* (1974), which is often seen as an early precursor of CSR. In Sperber's account, the interpretations of symbolic anthropologists are themselves symbolic; they are acts forming part of an endless process, best understood in cognitive terms (Pyysiäinen 2001: 42–4;

Boyer 2008). This view accords with the approach advocated by Laidlaw and Humphrey (cited in section 2.6.1), according to whom the attribution of meanings is a *response* to ritual (Laidlaw and Humphrey 2008: 274), not an inherent quality of ritual itself. In other words, ritual semantics and the analysis of ritual *actions* should be analytically kept apart (Lawson 2008).

This, however, does not mean that the issue of the relationship between ritual and religious knowledge has been eclipsed by the introduction of the cognitive programme. Whitehouse's Modes of Religiosity Theory centres on religious knowledge, analysing how imagistic and doctrinal rituals facilitate the *transmission* of religious traditions. His theory also connected cognitive memory to ritual theory, an approach that has been elaborated in subsequent studies (Whitehouse and Laidlaw 2004; Czachesz 2010; Uro 2011b).

In the large picture of the schools and currents in CSR, the perspective of ritual and religious knowledge is readily associated with theories of cultural evolution and embodied cognition. As depicted above, cultural evolution theorists have developed models of learning biases, some of which have direct links to ritual transmission (especially Henrich 2009). In this study, particular attention is given to embodied (extended) cognition, which sees cognition, and thus religious knowledge, as being inherently dependent on the body and its interaction with the environment. This would seem an obvious vantage point for a ritual analysis, but in fact very little research has been carried out from this perspective, either in Ritual Studies or in Cognitive Science. In Chapter Six I explore the question of how rituals convey religious knowledge, applying theories and insights from embodied and extended cognition and taking examples from early Christian baptismal practices.

The three perspectives on ritual do not cover all significant cognitive theories of ritual advanced in the history of the cognitive movement. They nevertheless organize a number of theories and approaches under larger themes, which both reflect various theoretical currents in CSR and provide links to classic issues and topics in ritual theory (see Table 2.1). **(p.69)**

**Table 2.1. Research questions, classical issues, cognitive theories, and examples from early Christianity, arranged by the three perspectives on ritual**

Perspectives	Questions	Classical issues	Theories and mechanisms	Examples from early Christianity
<i>Ritual as action</i>	<ul style="list-style-type: none"> <li>- What kind of rituals are understood as powerful?</li> <li>- How do ritual inventions function as catalysts for new movements?</li> </ul>	<ul style="list-style-type: none"> <li>- Discussions on magic, ritual healing and efficacy</li> </ul>	<ul style="list-style-type: none"> <li>- Ritual Competence Theory</li> <li>- Cognitive theories of magic and possession</li> </ul>	<ul style="list-style-type: none"> <li>- John the Baptist</li> <li>- Ritual healing in early Christianity</li> </ul>
<i>Ritual and cooperation</i>	<ul style="list-style-type: none"> <li>- How do rituals foster cooperation in small-scale and large-scale societies?</li> </ul>	<ul style="list-style-type: none"> <li>- Religion and ritual as a basis of social life</li> </ul>	<ul style="list-style-type: none"> <li>- Commitment Signalling</li> </ul>	<ul style="list-style-type: none"> <li>- Ritual in the Pauline assemblies</li> </ul>
<i>Ritual and religious knowledge</i>	<ul style="list-style-type: none"> <li>- How do rituals generate and accommodate religious knowledge?</li> </ul>	<ul style="list-style-type: none"> <li>- Myth and ritual</li> <li>- Ritual symbolism and semiotics</li> </ul>	<ul style="list-style-type: none"> <li>- Memory studies</li> <li>- Embodied and situated cognition</li> </ul>	<ul style="list-style-type: none"> <li>- Ritual knowledge transmitted in and through baptismal practices</li> </ul>

**(p.70)** 2.7 From Cognitive Theory to the Study of Ancient Rituals

In this chapter, I have described the most important schools and currents in CSR and the different ways in which evolutionary theory has been used by cognitive scholars of religion. Although CSR is a pluralistic and manifold movement, it also shares unifying features, such as the promotion of explanatory and testable theories and a multilevel analysis, often connected to the strategy of explanatory pluralism. The original programme, sometimes referred to as the ‘standard’ model, has developed into a diverse set of research projects, applying various cognitive and evolutionary theories as well as experimental research. In the subsequent chapters, I will consistently refer to CSR as a broad and pluralistic approach comprising the various schools and currents introduced here.

Cognitive theories of ritual were reviewed against the background of the cognitive programme at large. This discussion helped to develop a socio-cognitive approach to ritual which seeks to integrate a social-level analysis with findings from the broadly defined CSR. For the purpose of the study of Christian beginnings, a socio-cognitive analysis of Christian beginnings is best accomplished by drawing on a theoretical pluralism which considers three perspectives on ritual: ritual as action upon a ritual patient, ritual and cooperation, and ritual and religious knowledge. We now turn to ancient texts to see how the theoretical reflections offered in this chapter can be rendered into an analysis of early Christian rituals.

Notes:

(<sup>1</sup>) The International Association for the Cognitive Science of Religion (IACSR) was established in 2006. The first issue of the *Journal for the Cognitive Science of Religion*, published by Equinox, appeared in 2012. See <http://www.iacsr.com/iacsr/Home.html>.

(<sup>2</sup>) For a perceptive analysis and critique of social constructionism, see Hacking 1999. It is possible, however, to see the cognitive approach as complementary to the *original* constructionism advocated by Berger and Luckmann 1967. Cf. J. S. Jensen 2009: 131. For the relation between Berger and Luckmann’s sociology of knowledge and the cognitive study of religion, see Luomanen 2007.

(<sup>3</sup>) An event that launched this future collaboration was a small conference hosted by the Department of Comparative Religion at Western Michigan University in February 1996, under the title of ‘Cognition, Culture, and Religion’. Along with Thomas Lawson (presiding) the speakers were Justin Barrett (a psychologist), Pascal Boyer (an anthropologist), Brian Malley (a religion scholar), Robert McCauley (a philosopher), and Harvey Whitehouse (an anthropologist). J. L. Barrett 2011: 230. A series of three conferences, held in Cambridge (UK), Burlington (University of Vermont), and Atlanta 2001–03 followed, focusing on the modes theory of Harvey Whitehouse and resulting in three conference volumes (Whitehouse and Laidlaw 2004; Whitehouse and Martin 2004;



Whitehouse and McCauley 2005). The list of foundational conferences also has to include the one held in the Turku Archipelago, Finland, in the summer of 1999, the papers of which were published in Pyysiäinen and Anttonen 2002.

(<sup>4</sup>) Whitehouse's modes theory also relies on intuitive cognition, since we do not have direct access to our memory systems. Note, however, that Whitehouse also emphasizes the role of conscious, 'cognitively costly', religious concepts and practices in transmission; see Whitehouse 2004a: 49–59.

(<sup>5</sup>) To my knowledge, the expression "'standard" model (of religious thought and behaviour)' was first used by Boyer 2005. He lists several theories and approaches that summarize the 'standard' model, including the selectionist view of human culture, memory optimum (cf. minimal counterintuitiveness), religious morality 'being parasitic upon evolved moral intuitions', and religious rituals being constrained by agency assumptions. More generally, he argues that all the propositions of the standard model are *general* (they can be applied to any cultural milieu), *probabilistic* (they predict likelihood), and '*experience distant*' (their explanations do not easily map on to people's own experience). These three points may describe the cognitive approach to religion more generally.

(<sup>6</sup>) I use quotation marks for 'standard' throughout the chapter, to avoid the impression that the model currently represents the authoritative or dominant approach among the schools and currents in CSR (note that Boyer does not refer to *the* standard model in Boyer 2005 and also uses quotation marks).

(<sup>7</sup>) For a different model of gene–culture interaction, see Jablonka and Lamb 2005.

(<sup>8</sup>) The debate between theories of 'cultural learning' and 'content-based attraction' is conveniently summarized in Pyysiäinen 2012b: 248–9. These two approaches need not be seen as contradictory. The mind constrains possible cultural forms just as the environment constrains biological traits (Czachesz, oral communication).

(<sup>9</sup>) Donald strongly criticizes the 'hardliners' (i.e. those cognitive scientists who argue that human thinking is based largely on intuitive, 'hard-wired' mental modules) for their uncompromising belief in the irrelevance of the conscious mind and in the illusory nature of free will (Donald 2001: 28–31). This book takes the view that many of Donald's ideas as well as the embodied cognition stance in general are complementary to the approach that draws on the intuitive mental tools.

(<sup>10</sup>) Note that the 'Religion, Cognition and Culture' Research Unit (RCC) at Aarhus and the MINDLab section 'Cognition and Culture', both directed by Geertz, have been developing specific research hypotheses based on

experimental research and neuroscience. See e.g. Schjødt et al. 2013. This work, however, does not make direct reference to the embodied or extended cognition perspectives elaborated in Geertz 2010.

(<sup>11</sup>) The growing interest in experiments can be seen, for example, in the research carried out in the *MindLab* section 'Cognition and Culture' (University of Aarhus) directed by Armin Geertz (see note 10 above) and at the *LEVYNA: Laboratory for the Experimental Research of Religion*, Masaryk University, Brno. See <http://www.levyna.cz/>.

(<sup>12</sup>) For example Kelly Bulkeley, in a review of *Religion Explained* and *How Religion Works*, writes: 'Beliefs, doctrines, practices, rituals, mystical experiences, moral systems, communal structures—everything about religion can be explained, according to Boyer and Pyysiäinen, by using the latest advances in evolutionary theory and cognitive science' (Bulkeley 2003: 671).

(<sup>13</sup>) Chapter 6 of *Rethinking Religions* does contain a discussion of the semantics of religious rituals, but I have difficulty in seeing how this discussion is related to their Theory of Ritual Competence. Cf. Engler and Gardiner 2009, according to whom Lawson and McCauley's argument for 'reflexive holism' in fact 'cuts the ground out from under their theory', although the 'false start continues to set an exemplary precedent' (2009: 34).