

**Workshop on New Developments in the Cognitive Science of Religion**  
**hosted by the International Association for the Cognitive Science of Religion**  
**(IACSR)**  
**revised program**

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## **Program**

### **Introduction**

The main goal of the workshop is to introduce CSS members to topics that are cutting edge in the cognitive science of religion. The papers draw on a variety of methodologies and disciplines, which is one of the main characteristics of the cognitive science of religion. Even though the focus is on religion, the researchers are involved in broader issues relevant to cognitive science. So the expected audience is cognitive scientists and scientists from other disciplines such as psychology, the study of religion and anthropology, who are interested in cognitive approaches to religion. Since the papers represent on-going projects, the outcomes of these papers are expected to be publications in peer-review journals.

The International Association for the Cognitive Science of Religion (IACSR) seeks to advance the naturalistic study of religion. The IACSR recognizes that the cognitive sciences encompass a wide array of disciplines and methods, including, among others, experimental research in psychology and neuroscience, computational modeling, ethnographic, historical, archaeological, and comparative studies of religious cognition, and the survey techniques of the social sciences. The IACSR also welcomes new cognitive theories of diverse religious phenomena. The IACSR does not promote dialogue between science and religion, attempts to find religion in science and science in religion, or attempts to validate religious or spiritual doctrines through cognitive science. These concerns are better addressed in other forums.

### **Session 1: Invited presentations**

**Deeley, Q.** (King's College, London). *Modelling possession trance with hypnosis and functional MRI*: Possession trance is associated with alterations in the sense of identity and control over behaviour. However, the underlying cognitive and neural mechanisms are unknown. Here we report preliminary findings from a study which employs suggestions in highly hypnotisable subjects and fMRI to create an experimental model of spirit possession, along with neuropsychiatric syndromes associated with alterations in the agency, awareness, and ownership of actions.

**Xygalatas, D.** (Princeton University), **Bulbulia, J.** (Victoria University of Wellington), **Kovanlinka, I.** (Aarhus University), **Schjodt, U.** (Aarhus University), **Jegindo, E.-M.** (Aarhus University). *Cognitive approaches to a study of fire-walking*: Certain high arousal rituals seem to defy cultural evolutionary expectations. They are costly, resist change, and rely on powerful self-deception about utilities. How can we explain the survival of such rituals? This talk presents a study of a Spanish fire-walking ritual. The ritual is performed annually during the festival of San Juan and draws religious and non-religious participants alike. In this study, we use qualitative and quantitative physiological data (heart rate and encephalography) to study the effects of such rituals on a physiological and emotional level. Some of the questions addressed are: Is there a difference between religious and non-religious participants? Does participation in the ritual change the experience of pain? Do the spectators have the same reactions as the participants? Does

participation elicit more pro-social attitudes, leading to increasing group cohesion?

## Session 2: Refereed presentations

**Czachesz, I.** (Helsinki & Heidelberg). *Religious Experience from a Cognitive Perspective: Toward an Integrative Model*: The purpose of this contribution is to review the main trends in the neuroscientific study of religious experience from the perspective of the cognitive science of religion and outline a new synthesis. (1) First, I will survey recent empirical work on religious experience utilizing neuroimaging technology. (2) Second, I will put forward a new model (the lobes theory) that connects neuroscientific findings with various other aspects of religiosity. I propose, in particular that a religious movement gains evidence for its core beliefs from some typical form of religious experience that requires the activation of particular brain areas. This will predict, in turn, the typical operations, group structure, and theological views of the movement. I will conclude this section with a brief comparison of my model and Harvey Whitehouse's modes theory. (3) In the final part of my contribution, I will return to the problem of the sui generis nature of religious experience, breaking down the problem into three different questions, which I will answer using the results of neuroscientific and cognitive research.

**Van Slyke, J.A.** (Fuller Theological Seminary), **Reimer, K.S.** (Azusa Pacific University). *Working models of divine and human attachments in a computational semantic space*: The present study considered correspondence between working model representations of parental attachment and the divine in three monotheistic religions (Judaism, Christianity, and Islam) using latent semantic analysis (LSA). We hypothesized that cognitive representations of attachment operationalized as narrative descriptions of parental relationships are semantically similar to narrative descriptions of the divine in LSA, a computational knowledge model capable of similarity comparison for words and sentences in a high-dimensional semantic space. Contrary to expectations, we found that there was not a significant relationship between parent and divine representations regardless of religious affiliation. Instead, representations of the divine were more closely related to working models of the self and peer attachment figures than parental attachment figures. Possible reasons for this finding will be discussed, along with the utility of LSA as an empirical innovation for study of social schemas and attachment in the cognitive science of religion.

**Taves, A.** (University of California—Santa Barbara). *The role of suggestion in the embodiment of other "selves"*: Beginning in the mid-eighties anthropologists (Kenny 1986), philosophers (Hacking 1998), and psychologists (Spanos 1996) advanced a sociocognitive model of multiple personality disorder as an alternative to the disease model prevalent among psychiatrists. Adopting a comparative approach that included religious and other cultural phenomena (e.g., possession and UFO abduction), they interpreted these phenomena as products of socially generated role

enactments, fantasy-infused autobiographical memories, and hypnotic suggestion (Spanos 1996; Lynn et. al. 2008). Although this research has obvious relevance for understanding religious phenomena, few scholars of religion have attempted to exploit it either to better understand the intersection between the neuro-cognitive and psychosocial aspects of experience or to analyze historical phenomena in ways that might suggest new directions for experimental research. Within this body of research the social and contextual aspects of hypnotic interactions are better understood than the neuro-cognitive ones; specifically, little is known "about the operation of automatic and attentional processes, and how subjects can use effective cognitive strategies, with little or no awareness they are using them, to respond efficiently to suggestion" (Lynn et. al. 2008, 131). Theoretical and experimental research on suggestion can be used to illuminate well-documented historical cases, which in turn can provide longitudinal data with respect to processes of suggestion that result in complex formations of self. This paper compares the role of suggestion in five historical cases.

## Workshop format

This will be a full day workshop divided into two sessions. The morning session consists of invited presentations by scholars who are currently involved in new approaches to the cognitive science of religion. The afternoon session will consist of the presentation of four submitted papers, selected on the basis of blind refereeing by the IACSR Program Committee. In addition to the papers' presentation, each will include a brief formal commentary, brief author reply after which comments and questions will be fielded from the audience. The workshop will conclude with a small reception.