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De-Siloing the psychology of religion and psychedelic science: introduction to the special issue on psychedelics and mystical-type experiences

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EDITORIAL



De-Siloing the Psychology of Religion and Psychedelic Science: Introduction to the Special Issue on Psychedelics and Mystical-type Experiences

The idea for the current special issue at the *International Journal for the Psychology of Religion*, on “*Psychedelics and Mystical-type Experiences: Relevance and implications for the Psychology of Religion and Spirituality*” was borne out of curiosity and concern. In the blossoming field of psychedelic science, we observed that many researchers were struggling with the question of how to conceptualize and measure psychedelic-induced experiences (Taves, 2020). We also observed that there was a lack of theoretically grounded approaches to explain these experiences and their impact on people’s lives. The psychology of religion has a long-standing tradition in conducting research on mystical and other related experiences. The aim of this special issue was to de-silo these seemingly disparate research fields of psychedelic science and the psychology of religion, and to help ensure that the reemergent field of psychedelic science can learn from the concepts, findings, and mistakes of the psychology of religion.

Historically, interest in the study of mystical experiences dates back to the seminal work of William James and its subsequent impact on scholars like Walter Stace (Stace, 1960) and Steven Katz (Katz, 1978). An important discussion focused on the question of whether there was a common core underlying the variability of experiences reported in different religious traditions, or whether these experiences were inherently different and shaped through cultural learning. At that time, this topic was approached from an interdisciplinary perspective, involving religious scholars, philosophers, anthropologists, and psychologists. During the first wave of psychedelic research in the 1950s and 60s, the novel class of psychedelic substances, such as LSD and psilocybin, offered a fertile testing bed for testing whether mystical experiences could also be pharmacologically induced. Walter Pahnke’s Good Friday experiment has become a textbook classic and he was the first to experimentally assess whether the mind-altering substance of psilocybin could occasion authentic mystical experiences, with long-lasting impact (Doblin, 1991).

The last decade has witnessed a revival in psychedelic research. Psychedelic substances are increasingly used in a therapeutic context and seem to offer potential for the treatment of psychopathological disorders, such as depression, addiction and end-of-life anxiety (Carhart-Harris & Goodwin, 2017; van Elk & Yaden, 2022). There is also a substantial body of research showing that psychedelic substances, when used in a safe and supportive setting, can reliably occasion mystical-type experiences in a majority of participants in study samples that are of great personal significance (Griffiths et al., 2011a, 2016b). However, in contrast to the 1960s, these developments have remained largely outside the scope of the psychology of religion and spirituality (for notable exception, see: Winkelman, 2015; Yaden & Newberg, 2022) and there seems to be a somewhat single-sided emphasis on the medical-therapeutic use of psychedelics.

This is unfortunate, because the psychology of religion has much to offer in terms of well-developed theories (e.g., on attachment, experience, and conversion) and well-validated scales and instruments (e.g., to measure religious coping or spiritual struggles) that could be of value for psychedelic research. At the same time, psychedelic science can also provide a new impetus to the psychology of religion. The controlled administration of psychedelic substances in a safe setting can offer a highly reliable method to occasion mystical experiences (Griffiths et al., 2006, 2011a, 2011b, 2016a, 2018) and to study the downstream effects of these experiences on cognition, behavior and wellbeing. Several studies have also shown that during a psychedelic experience, people can have encounters with

supernatural entities (Davis et al., 2020) and that following a psychedelic experience people reliably show an increase in nonphysical beliefs, such as pan-psychism and belief in a soul (Nayak et al., 2023; Timmermann et al., 2021).

Excited by these new developments, for this special issue, we invited scholars from different research fields to contribute theoretical, review and empirical papers to fill the gap between psychedelic science and the psychology of religion. By doing so, our hope was that the psychology of religion community would take notice of these exciting new developments, and that psychedelic researchers would find inspiration from the rich history and resources offered by the psychology of religion.

We have received excellent contributions from experts working in different fields on a variety of different topics, but all related to psychedelic science and its implications. We received both (1) theoretical contributions, (2) empirical papers and (3) tutorials and we highlight the specific contributions in more detail below.

Theoretical contributions

Aaron Cherniak and colleagues provide an intriguing integration between the REBUS-model (Carhart-Harris et al., 2019), which offers a mechanistic understanding of the brain mechanisms underlying psychedelics, and (religious) attachment theory. They suggest that psychedelics may primarily alter maladaptive and insecure internal working models, which in turn can foster more healthy relationships with others and supernatural agents such as God. Their theoretical model makes concrete predictions that can be tested in future studies and provides an excellent example of how concepts in two different research fields can be synergistically related.

Hans van Eyghen also builds on the REBUS model and proposes the idea that psychedelics likely yield therapeutic effects because they can facilitate the alignment of one's beliefs with the current context. This expanded framework helps us to understand how specific psychedelic-induced experiences (e.g., such as supernatural entity encounters) may be adaptive in one context (e.g., a spiritual context), while they may be maladaptive in another context (e.g., in a highly secular environment).

Finally, LeRon Shults highlights the potential for theoretical integration between the Cognitive and Evolutionary Science of Religion (CESR) and psychedelic science. Building on evolutionary and cognitive theories, Shults points out candidate mechanisms that could underlie the emergence of supernatural beliefs, including anthropomorphism, agency detection and the adaptive social function of belief in moral gods. Next to concrete suggestions for more (cross-cultural) research, he also highlights the potential of using artificial agent-based modeling approaches for putting some of these evolutionary hypotheses to the test.

Empirical studies

Arne Bohn and colleagues conducted a field study on the subjective effects of the ceremonial use of San Pedro—a cactus containing mescaline as the psychoactive ingredient. They found that for the majority of participants, the ceremony induced a full mystical experience, but that the experience also differed in important ways from mystical experiences induced through other psychedelic compounds. By using a new network approach, they were moreover able to show that valence is an important dimension underlying the clustering of different altered states—an aspect that should be given full consideration in future studies.

Robson Savoldi and colleagues also describe the results from an original field study, in which they directly compared the effects of an ayahuasca compared to the less-well-known Jurema ceremony. Somewhat surprisingly, overall they did not observe differences between these ceremonies in terms of ego-dissolution or mystical experiences. This finding might be related to the fact that the psychoactive compounds in both substances are molecularly quite similar. They found preliminary evidence for differences between men and women in their experiences of each ritual, which, given the small sample size, calls for further investigation in future studies.

Julie Exline and colleagues conducted a preregistered online study to investigate how people attribute a message or insight they have received during a psychedelic experience. They found that the majority of participants were inclined to view psychedelics as a doorway to their own psychology and mind. Relatively few participants were inclined to attribute messages to supernatural entities—specifically younger participants, people who identified as spiritual-but-not-religious, and participants with a higher lifetime use of psychedelics were inclined to make supernatural attributions. The attribution that people gave to their experience in turn, was associated with differential outcomes, which calls for replication in experimental research and attention to the importance of the attributional aspects of psychedelic experiences in a therapeutic context (Timmermann et al., 2022).

In line with the findings by Exline, Petter Johnstad found in an online study that higher levels of endorsement of spirituality is a predisposing factor that increases the likelihood of having a mystical experience and to feel in contact with another reality. Johnstad's study also points out that psychedelic use is often spiritually motivated and that there is a large overlap between psychedelic users and people with prior meditation experience. This study therefore highlights the importance that the religious and spiritual use of psychedelics holds for many people. In fact, despite the dominant focus on the medical-therapeutic and recreational use of psychedelics in contemporary research, there is room for the psychology of religion and spirituality to better understand psychedelic use for religious and spiritual reasons.

Building on the tradition of Daoism, Zhuo Job Chen conducted interviews with 19 Daoist Monks and Nuns to assess whether key elements of mystical experiences occurred during their Daoist practices. They used the distinction between enstatic (i.e., quietistic practices of the mind) and ecstatic (i.e., ecstatic excursions of the mind to other realms) to classify the experiences. Whereas some elements appear to map well with a common core approach to mystical experiences, they also identified other elements (i.e., bodily sensations and spiritual egress) that call for an extended model and in some cases relate to cultural factors.

Tutorial

Amy Bartlett and colleagues, in their paper “Expanding Consciousness in the Ivory Tower: Building an Interdisciplinary Psychedelic Studies Graduate Program,” describe the experiences and the challenges they encountered with setting up an educational program in psychedelics and consciousness in a university context. They reflect on practical lessons learned, the policy-making involved and recommendations for interdisciplinary research, which can be implemented in teaching and research, and which may enhance effective science communication.

Concluding remarks

Despite the variety of topics, tools and approaches, all papers converge on the conclusion that psychedelic science should measure and further investigate individual differences (e.g., spiritual beliefs, personality), contextual factors (e.g., setting, cultural context), and should explore the burgeoning spiritual and religious use of psychedelics. The papers also lead to concrete ideas and initial findings that could be tested more directly in future studies. We hope that this special issue will provide the starting point for the cross-fertilization and de-siloing of these two apparently separate research fields, which is much needed given their shared historical origins and the fast pace of research and clinical applications of psychedelics.

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