

Moving Past Mysticism in Psychedelic Science

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ABSTRACT: The mysticism framework is used to describe psychedelic experiences and explain the effects of psychedelic therapies. We discuss risks and difficulties stemming from the scientific use of a framework associated with supernatural or nonempirical belief systems and encourage researchers to mitigate these risks with a demystified model of the psychedelic state.



A strange tension lurks behind the scientific investigation of psychedelic substances: a clash of concepts between empirically based science and the many arcane aspects of psychedelic culture. Psychedelic researchers have warned against the infiltration of supernatural or otherwise nonempirical belief systems into research and clinical practice.¹ Such belief systems may be adopted by psychedelic users to reconcile the “ontological shock” of a psychedelic experience, meaning that the radical departure from everyday perception that psychedelic drugs can induce has inspired their association with the supernatural, fantastical, and divine.² But are we, as scientific researchers, doing enough to avoid a conflation between science and the supernatural in our theories and the translation of our findings? As we see it, there is an elephant in the room of modern psychedelic science: in scientific journals and throughout the halls of any psychedelic conference, researchers and therapists teach the importance of *mystical experiences* for the efficacy of psychedelic therapies. They speak plainly of concepts like “pure awareness” and “ineffable” experiences of “ultimate reality”, and we note that these statements are too seldom accompanied by a deeper discussion on what a term like mystical means within the context of psychedelic science, and what consequences might come with the scientific use of the mysticism framework.

The root of mysticism in psychedelic science lies in the work of philosopher W. T. Stace, who in 1960 theorized a distinct type of “mystical consciousness” achieved through a variety of cultural practices. His theory was informed by theological, historical, and anecdotal accounts, and the defining criteria for the state include a sense of unity, timelessness and spacelessness, objectivity and reality, sacredness, blessedness and peace, paradoxicality, and ineffability.³ Early psychedelic researchers adopted the concept and took these criteria as relevant operational categories for the study of psychedelic

experiences.⁴ The associated psychometric tools (the Mystical Experience Questionnaire,⁴ Hood’s Mysticism Scale,⁵ and specific dimensions of the Altered States of Consciousness Questionnaire⁶) persist in use, having shown good internal and predictive validity. However, in light of the encroachment of supernatural and nonempirical beliefs on psychedelic science, we identify shortcomings of this link between mysticism and psychedelic research, and we contend that the mysticism framework, along with its associated theories and terminology, should be actively superseded. Here we discuss the risks stemming from the relation between mysticism and supernatural or otherwise nonempirical belief systems, and why current researchers should be optimistic at their prospects of creating valid frameworks that are supported by, and accessible to, empirical methods. Also, we imagine the ways in which new frameworks may bring greater benefit for science and society alike.

■ A RISKY BLEND OF MYSTICISM AND SCIENCE

Within psychedelic science, we are concerned that use of the mysticism framework creates a “black box” mentality in which researchers are content to treat certain aspects of the psychedelic state as beyond the scope of scientific inquiry. This is in line with the concept of “psychedelic exceptionalism”: when psychedelic experiences are taken to be “so sacred or important that the normal rules do not apply”.¹ As scientists,

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we should not be satisfied to label psychedelic experiences as “ineffable”, “paradoxical”, or “void”, and should realize that the term mystical does little in terms of explaining psychobiological phenomena. Although the subjective aspect of psychedelic experiences may be difficult for the individual to fathom and describe, the terminology and conceptualization scientists use in their research should not imply that a psychedelic experience holds a special status of inaccessibility beyond other kinds of experience. To assume this special status a priori is unscientifically pessimistic. A related issue is that, by using the mystical experience construct, we are providing participants with a particular terminology and framework with which to understand their psychedelic experiences. When we administer a mystical experience questionnaire, we *invite* participants to interpret their experience through the framework of mysticism. Thus, we risk creating biased data and may fail to learn from participants’ own articulation and interpretation.

In addition, we are concerned that the use of mystical terminology courts misinterpretation of psychedelic research findings. According to the American Psychological Association, mysticism is defined by its association with divine and supernatural sources of knowledge and truth,⁷ just like it is commonly defined. We recognize that most scientists studying psychedelics do not include supernatural elements in their definition of mysticism, but the translation from lab to clinical practice and layperson must be considered. We are concerned that if science states that psychedelics induce mystical experiences that are key to their therapeutic action, this is too easily misinterpreted as research advocating a role for the supernatural or divine. The problem is exacerbated when mystical experience phenomena are conflated with mystical beliefs about what psychedelic experiences mean. We see evidence of this in the current psychedelic cultural milieu: psychedelic retreat services and popular web resources for psychedelic know-how are using scientific research to educate first-time psychedelic users on the therapeutic power of mystical experiences.^{8,9} In each case, we observe a broader and stronger use of mystical language and concepts than is warranted by the science cited. We argue that the integration of mysticism into research and clinical practice risks creating unrealistic and potentially problematic expectations and associations when presented to laypeople, including vulnerable groups pursuing psychedelics as interventions for serious health issues. As scientists, we must consider more carefully our choice of frameworks and more actively distance psychedelic research and clinical practice from the supernatural, fantastical, and divine—all of which fall under the umbrella of mysticism.

■ DEMYSTIFYING OUR CONCEPTS

A superficial change in terminology will not address the depth of mysticism’s influence in psychedelic science—rather, new theories rooted in the modern empirical study of conscious states are needed. Alternative terms such as “peak experience” and “oceanic boundlessness” exist in the literature, but in each case the theory and measurement of the construct remain closely linked to Stace’s mystical consciousness. Stace’s choices in research methods and sources reflect an assumption that the states he studied are infrequent, transient, and difficult to observe. Contemporary researchers should not feel as limited: psychedelics can be administered in experimental settings, and participant experiences can be probed with methods that do

not assume a mystical framework of explanation from the outset. Neuroimaging can help elucidate biopsychological mechanisms and contextualize qualitative results. Research need not be limited to states induced by psychedelics, as hypnotherapy techniques, and even expectancy effects alone, have been used in the lab to induce states that are currently labeled as mystical.¹⁰

Perhaps we state the obvious by listing these avenues of research, but we contend that psychedelic science has not made a concerted effort to supersede Stace’s mystical consciousness concept with an alternative rooted in empirical data and an unambiguously secular framework. A possible reason for this is that the relevant measures, such as the Mystical Experience Questionnaire, have been shown to produce reliable results in factor analyses and predict treatment outcomes. However, we question whether this kind of psychometric validation can be taken as strong support for the use of the mystical consciousness concept by psychedelic researchers and therapists. The science of mysticism struggles to differentiate the causal roles of beliefs and acute experiences in questionnaire responses.¹⁰ If the validity of a measure can be defined by its relationship to a real-world referent that causes variation in test scores, then the theoretical link between psychobiological phenomena and this variation should be clear before scientists are satisfied.¹¹ In the absence of this, questionnaires like the Mystical Experience Questionnaire might be regarded as tools for prediction but not for measurement. Moreover, other, more mundane concepts are suspected by researchers to drive therapeutic outcomes,¹² and other self-report measures may predict therapeutic outcomes with fewer conceptual complications. This is why it is concerning whenever mysticism is taken for granted in psychedelic science circles: our choice of frameworks and measures serves to reify concepts such as mystical consciousness without sufficient justification, which opens the door for the unscientific assumptions and associations described above. By demystifying scientific understanding of the psychedelic state, scientists can do more than just close this door. They can increase the scientific credibility of the frameworks used in their research and fill gaps in our understanding of latent psychological phenomena that could previously only be filled in mystical ways.

■ A VISION FOR THE FUTURE

Demystified psychedelic research has the potential to enlighten subjective experiences of the psychedelic state. Cognitive neuroscience concepts have been adopted by laypeople to explain, interpret, and predict experiences and behaviors in new ways. Using the example of addiction, researchers have highlighted the potential benefits of neuroscience influencing common understanding: knowing the role of neurophysiology in their experience of substance abuse disorder, addicts can gain informative and lucid new ways to characterize and contextualize their feelings and behaviors, gaining a more realistic concept of personal agency regarding their treatment.¹³ We assert that cognitive neuroscience can do the same for the psychedelic state, and its aspects currently labeled as mystical. The purported “sacredness”, “ineffability”, and “noetic quality” of these states may take on characteristics congruent with scientific understanding if an accessible scientific explanation exists, and if questionnaires reflecting this explanation are administered.

In fact, there are new understandings in development that have the potential to perform this function. Informed by diverse modern methodologies, researchers have used the computational framework of predictive processing to argue that the negative or limiting beliefs about the self that typify certain mental disorders are relaxed and reconfigured during psychedelic treatment.² They theorize that the “connected” and “unitive” feelings that are associated with the acute effects of psychedelics are the result of a psychopharmacological disruption to high-level beliefs about one’s own sense of separation from the environment and other beings. Validation of this model is needed, and critical assessment must be applied to this framework as with any other, but nonetheless it illustrates how psychological phenomena previously explained as mystical might come to be understood in terms that are not encumbered by theological, supernatural, or fantastical baggage.

This leads us to an optimistic note: with a clear and accessible model of *why* psychedelic therapies are showing such promising results we can use psychedelic research to its greatest benefit. Perhaps by understanding the psychological needs that therapeutic psychedelic experiences seem to fill, we can increase the translational potential of our research. It might help us fine-tune psychedelic therapies to maximize therapeutic outcomes or help us to develop diverse therapeutic modalities that work by addressing the same psychological needs. Perhaps, even a demystified model of psychedelic therapies could help science elucidate causal factors involved in major depression and other psychiatric disorders. Then, the benefits of psychedelic science might extend from providing therapies for those already afflicted to developing preventative measures that need not even require the use of psychedelic drugs.

■ CONCLUSION

The current blend of mysticism and science in psychedelic research risks damaging the credibility and potential of psychedelic science. A theoretical shift is needed to clarify the division between psychedelic science and supernatural or nonempirical belief systems. Prospective frameworks should be unambiguously secular, and alternative questionnaires need to be explored or developed so as to not only predict outcomes, but indeed measure the experience of interest. Accordingly, theories must describe in clear terms the relationship between the data we collect and the psychobiological concepts we employ. These states of consciousness need no longer be treated as an elusive black box. We must utilize the tools and opportunities available to reconceptualize this aspect of the psychedelic state, so that science and society alike can benefit from new ways to understand and experience what was once considered unfathomable.

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Notes

The authors declare no competing financial interest.

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