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Article

Psychedelic Drugs and Atheism: Debunking the Myths

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Abstract: Two recent surveys of people who took psychedelic drugs and reported “God experience encounters”, along with successful clinical trials using psychedelic therapy for depression, have given rise to public misconceptions about psychedelics and atheism. Specifically, three inferences have been drawn: (1) that the psychedelic experience tends to dissolve atheist convictions; (2) that atheist convictions, once dissolved, are replaced with traditional monotheist beliefs; and (3) that atheism and depression somehow correlate as afflictions for which psychedelic drugs offer relief. This paper argues, based on analysis of the studies and trials along with relevant supplemental evidence, that each of these popular inferences is substantially misleading. Survey data do not indicate that most psychedelic atheists have cleanly cut ties with their former convictions, and there is strong evidence that they have not traded atheism for traditional monotheism. Both personal testimony and the effectiveness of microdose clinical trials serve to complicate any notion that a psychedelic drug alleviates symptoms of depression by “curing” atheism. The paper then extends its focus to argue that the broader field of neurotheology includes elements that contribute to these popular misconceptions.

Keywords: psychedelic drugs; atheism; monotheism; pantheism; depression; neurotheology



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Researchers at Johns Hopkins produced two recent studies related to psychedelic drugs and their effects on philosophical perspective and religious identification (Griffiths et al. 2019; Davis et al. 2020). Although the authors have academic appointments in Psychiatry, Psychology, and Cognitive Neurosciences, their work has strong affiliations with Religious Studies. The 2019 study was funded by the Council for Spiritual Practices, an organization that has included prominent Religious Studies scholars among its advisors, including Huston Smith and Ralph W. Hood. The study cites Smith's influential essay in which he argued, against R. C. Zaehner, for the validity of drug-occasioned mystical experiences (Smith 1964; Zaehner 1961). Both the 2019 and the 2020 studies acknowledge their indebtedness to Hood's scale for measuring mystical experiences. Hood himself has engaged in similar studies of psychedelic drugs and mystical experiences, collaborating with Andrew Newberg—a principal expositor of the branch of Religious Studies commonly known as Neurotheology (Yaden et al. 2016). Newberg, who has held positions in both Psychology and Religious Studies at the University of Pennsylvania, considers Neurotheology inherently multidisciplinary, with Religious Studies and Cognitive Neurosciences bonding at its core (Newberg 2010). An earlier study of psilocybin and mystical experiences led by Roland R. Griffiths, lead author of the 2019 study, has had significant influence on neurotheological work (Griffiths et al. 2006). The two Johns Hopkins studies clearly belong within this hybrid area of inquiry.

Given the limitations of working with Schedule I drugs, they based their work on surveys of people who self-reported “God experience encounters” (in the first study) or “entity encounters” (in the second study) occasioned by the use of a psychedelic. The first study, which also compared a non-drug group with the much larger psychedelic group, gathered information from participants who had taken either psilocybin, LSD, ayahuasca, or DMT (Griffiths et al. 2019). The second study surveyed a group of people who reported having experienced such encounters under the influence of DMT (Davis et al. 2020). For both

studies, researchers harvested a significant number of participants: 3476 in the psychedelic group for the first, and 2561 DMT users for the second.

These studies, along with clinical trials at Johns Hopkins and elsewhere that use psychedelics to treat depression, have given rise to public misconceptions about psychedelic drugs and atheism. Specifically, three inferences have been drawn: (1) that the psychedelic experience tends to dissolve atheist convictions; (2) that atheist convictions, once dissolved, are replaced by traditional monotheist beliefs; and (3) that atheism and depression somehow correlate as afflictions for which psychedelic drugs offer relief. Each of these inferences, though based to some degree on evidence from psychedelic studies, is significantly misleading. These misconceptions have reinforced oversimplifications about atheism and its alternatives and thereby impoverished popular debate about the subject.

It is particularly important to correct public misconceptions about such matters at this cultural moment: the field of psychedelic therapy is growing rapidly despite substantial legal obstacles. The field is growing not only with clinical trials in universities, but with research conducted by an increasing number of entrepreneurs. Psychedelic research necessarily brings with it political entanglements. In Canada, a team of six appointed experts, including Religious Studies scholar Anne Vallely, recently submitted a report to the government detailing recommendations for the safe implementation of psychedelic use (Rochester et al. 2021). In the United States, political prospects for psychedelic drugs seem more doubtful, at least in the short term. Already, ethical questions have been raised about whether medical professionals ought to prescribe pharmaceuticals that alter patients' political and religious beliefs (Jacobs 2020). Misinterpretation of the recent surveys of psychedelic users could warp debate and undermine regulatory renovation.

Two headlines capture the spirit of popular response to the Johns Hopkins studies. After the first study: "Is God Real? 62% of Atheist LSD Users Think So After a Mystical Trip" (Potnis 2019). After the second study: "It's Official: DMT Makes You Believe in God" (Farah 2020). The headlines and the stories that accompany them convey both the first and second misconceptions surrounding these studies—namely, that a psychedelic trip is likely to persuade someone to abandon atheism and adopt traditional monotheism. Apparent justification for the headlines came from one data point in each study. In the first, "identification as atheist decreased significantly from before to after the experience": 21% of the psychedelic group identified as atheist before the experience, but only 8% after (Griffiths et al. 2019). The numbers were similar in the DMT study, with 28% identifying as atheist before, and 10% after (Davis et al. 2020).

The first and most obvious weakness in popular inferences about psychedelics and theistic belief has to do with the selective criterion for participation in the studies. The first study surveyed only individuals who self-reported something that felt like a God experience encounter. The DMT study asked for those who had experienced an entity encounter, which might seem a more neutral term—but the authors elicited descriptions of the entity with categories very similar to those used in the first study. Given that the people surveyed constituted a special subset of psychedelic users—those who experienced something that felt like an encounter with a godlike entity—it is notable and somewhat surprising that as many as 534 of them continued to identify as atheist afterwards.

One of the co-authors of the 2019 study made this very point about the specially selected survey group, in order to fend off a bioethicist's complaint. The bioethicist had cited the 2019 data about atheists and worried that the medical profession, ideally "neutral and agnostic" on religious matters, might violate that neutrality if psychedelic therapy should become a mainstream option (Jacobs 2020). Co-author Matthew Johnson countered that "belief change of a religious type", such as the reduction in the percentage of atheists reported in his study, "would be massively inflated in this sample" (Johnson 2020).

However, there are other weaknesses besides the obvious problem of a selective survey population. Even with analysis of just this special subset of psychedelic users, popular inferences do not stand up to scrutiny. Survey data clearly do not support the second of the inferences, the supposed conversion of atheists to traditional monotheism. Among

the total psychedelic participants in the multi-drug study, “Identification as monotheist significantly decreased and identification as Other significantly increased from before to after the experience” (Griffiths et al. 2019). “Other” for the survey signified neither monotheist nor atheist. In this survey, in fact, the vast majority—85%—chose “Other” as their religious affiliation after a psychedelic drug occasioned a God experience encounter. If the psychedelic experience was tempting people away from the atheist label, it certainly did not move them into the camp of traditional monotheism.

It is reasonable to assume, then, that all or nearly all of those who identified as atheist before their psychedelic encounters either continued to identify as atheist or chose to identify neither as atheist nor monotheist. Contrary to the popular misconception, their psychedelic experience did not convert them from atheism to belief in a traditional God. There remains the question of what the shift from atheist to Other signifies. Does it mean that the psychedelic experience, at least within this selective group, dissolved atheist convictions?

Careful analysis of the two surveys suggests a more complex result. In the first study, a key question asked participants to choose the “best descriptor of that which was encountered”: “God (the God of your understanding)”, “Ultimate Reality”, “Higher Power”, or “An Aspect or emissary of God (e. g., an angel)” (Griffiths et al. 2019). Data for the psychedelic group—the full group, not just those who had identified as atheist—indicated that a majority, 55%, chose “Ultimate Reality” as the best descriptor. Despite the fact that the survey was framed with the term “God experience encounter”, the descriptor “God” finished in third place, the choice of only 18%. Given that only 18% of the entire psychedelic group chose God, it is likely that the atheist subset, only one-fifth of the group, chose God in very small numbers, if at all.

In the DMT survey, where the before and after numbers for atheism were similar, the study was framed with the more neutral term “entity encounter experience”. This study also offered a question about God and Ultimate Reality, but in a form that made it unhelpful for comparison with the first study. The DMT group was asked whether they “identified as believing in Ultimate Reality, Higher Power, God, or Universal Divinity” (Davis et al. 2020). The authors made note of a significant increase in these numbers: 36% answered yes before the experience, 58% afterwards. Because the four entity descriptors were merged into a single category, there can be no differentiating analysis of their separate implications. Interestingly, however, the authors—all of whom worked on the 2019 study—borrowed the first three descriptors from the earlier survey, but changed the order of listing. This time, they arranged them in order of popularity from those earlier results, with Ultimate Reality listed first, and God now third.

The descriptor Ultimate Reality took clear priority over God in the first study, and although ambiguous survey construction clouded results in the second, Ultimate Reality led the cluster of available descriptors. The number of atheists dropped from 21% to 8% in the first study and from 28% to 10% in the second. If we posit that nearly all of those who swerved away from atheism chose to identify as Other, and most of them encountered an entity best described as Ultimate Reality, is a religious position so defined fundamentally incompatible with atheism? This is the crucial question for evaluating the first popular inference, about psychedelic experience dissolving atheist conviction.

The only data-driven help comes from the first survey. This study surveyed a non-drug group, whose encounters came without the use of psychedelics. Members of this group were much more likely than the psychedelic group to choose God as the best descriptor of the entity (41% compared to 18%). For the non-drug group, God was the descriptor most often chosen, in contrast with the psychedelic group, which favored Ultimate Reality. A few statistically significant differences between the non-drug group and the psychedelic group suggest how their choices of descriptor align with traditional notions of monotheism. These all come from questions eliciting qualities of the entity encountered. Asked if the entity had agency in this reality, the non-drug group agreed significantly more than the psychedelic group. In a related question, as to whether the entity was petitionable, again the non-drug

group agreed significantly more. The non-drug group also significantly differed from the psychedelic group in the percentage characterizing the entity as benevolent (although a majority of both groups thought it benevolent), and while only 1% of the non-drug group checked “malicious”, 9% of the psychedelic group did. Taken together, the psychedelic group, which favored Ultimate Reality as a descriptor, gave descriptive indicators much less in agreement with traditional ideas of monotheism.

The survey is more helpful in providing hints about what Ultimate Reality is not than about what it is. The phrase has the unfortunate distinction of being the vaguest of the four descriptors. Survey participants who moved away from atheist to Other indicated that a psychedelic experience had altered their views about the meaning of life, but did not make them believe in God. The phrase Ultimate Reality perhaps offered a signifying compromise. If “Ultimate” suggested some behind-the-curtain cosmic scheme they had briefly glimpsed during their trip, “Reality” kept them in contact with the material world of their former atheist convictions. Even though they chose to identify as Other rather than atheist, their affiliation with Ultimate Reality did not amount to an irrevocable divorce from their former worldview.

It would be helpful at this point to supplement data from the surveys with a more informal online resource inspired by reports of the studies. A journalist found a handful of subjects willing to talk: “Speaking to People Who Found God after Taking Psychedelics” (Dawson 2020). All of these people profess some new version of faith, but their accounts reveal complications. One subject evidently had read Strassman’s *DMT: The Spirit Molecule*, because his trip report and new beliefs come straight from that book, with details of pineal gland and third eye (Strassman 2000). His new credo may be set aside as the derivative result of a suggestible mind. Another psychedelic convert, an artist who took LSD, came by insights on his own, but his new theistic beliefs sound more like a version of pantheism than traditional monotheism: “Now I feel like god is my mother, God is earth, God is the universe, God is multidimensional”. The artist continues with reflections that were common among LSD users in the psychedelic golden age of the 1960s, a kind of animist enthusiasm: “LSD made it easier to notice magic in the most mundane parts of life. You start to see nature breathing and dancing in this unique way” (Dawson 2020). Pantheism carries “theism” in its root, but especially in its Spinozist form—Spinoza named “God or Nature” as the foundation of being (Spinoza 2005, p. 98)—it is easy enough to make pantheism compatible with atheism.

Another person included in this story found a new version of God because, like the artist, she was finally “really seeing the world”. Her experience with DMT, she says, “made me appreciate life more” (Dawson 2020). This person is of particular relevance because she suffered from depression before her DMT epiphany, and credited the psychedelic experience with relieving those symptoms. Her story does not line up perfectly as a test case for the third popular inference—that atheism and depression somehow correlate as afflictions for which psychedelic drugs offer relief. This woman was not an atheist before her psychedelic experience; she was Roman Catholic. Her psychedelic “conversion”, in other words, moved her from a traditional monotheist belief to an alternative theism, something that sounds more like the artist’s pantheism than another version of monotheism.

The robust test case for the correlation between atheism and depression comes from Rachael Petersen. Petersen, a science writer and Visiting Fellow at the Harvard Divinity School, participated in a Johns Hopkins clinical trial testing psilocybin as treatment for severe depression. She wrote about her experience in a complex essay with a simple title: “Taking Mushrooms for Depression Cured Me of My Atheism” (Petersen 2019). The headline promises a story to validate the popular inference that psychedelics offer relief for the correlated afflictions of atheism and depression.

Petersen explains that she became an atheist at age 12. As an adult, finding herself unable to find relief for her symptoms by conventional therapies, she volunteered for the psilocybin trial not knowing much: she had “chosen not to influence [her] trips by reading literature on how psilocybin works”. Her experience caused her to move away from identi-

fication as atheist, and her title seems to imply that the psychedelic drug simultaneously led her to God and healed her depression. Petersen's essay, however, suggests affiliations more in line with the atheist "converts" of Griffiths' 2019 study: religious identification as Other, and description of the entity encountered as Ultimate Reality. Like the former atheists of the survey, her new beliefs are not necessarily incompatible with atheism.

Petersen, in fact, uses the phrase "Ultimate Reality" twice as she describes the entity she encountered during her trip. She says she felt "most comfortable" with that term. (It seems likely that the Johns Hopkins interviewers in follow-up sessions worked with prompts from a list similar to the one in the 2019 survey.) She names "God" only in a hedging way: she encountered "what a religiously inclined person might label 'God.'" Even after her depressive symptoms returned, it was not God, but something Other, an Ultimate Reality that she relied on for comfort— "the sense of being held by a great, ineffable Beyond". Following her psychedelic sessions, Petersen says, "I dedicated myself to reading Buddhist texts, seeking some tradition to scaffold my changed world". Tellingly, she chose the one non-theistic tradition among major contemporary world religions.

Near the end of her essay, Petersen quotes the poet Wallace Stevens: "'God and imagination are one.' I don't care if my encounters were 'authentic' or merely products of an imagination turbo-charged by chemical compounds. They felt real . . . and are doing interesting and real things in my life". Here, her perspective aligns well enough with even a devout atheist such as Richard Dawkins. Dawkins has not tried a psychedelic drug, but he once said during a public forum that he "would actually like to do it" ([Richard Dawkins on Psychedelics 2012](#)). He added that, should he do so, he would likely "interpret it as a manifestation of what a wonderful thing the brain is, and how the brain can see and experience even more things, under the right kinds of chemical stimulation". Dawkins would not summon the term "God" to make the point, but he would join with Wallace Stevens and Petersen on an essential insight about the human imagination. If she no longer identifies with the label "atheist", because its implications do not match up well with her psychedelic experience, she has not simply traded atheism for theism.

For people who have found relief from depression after taking large doses of psychedelic drugs (often supplemented with psychotherapeutic sessions), the essence of the therapy has to do with a radical change in perspective. As Petersen put it, "Why couldn't they just treat my illness without screwing with my worldview? But exploding one's worldview is the whole point of these treatments" ([Petersen 2019](#)).

It is the whole point of some of these treatments, but by no means all of them. An increasing number of psychedelic clinical trials for depression and other mental disorders use microdoses—doses too small to produce the classic mind-bending effects. These are psychedelic treatments without the psychedelic experience, and therefore without the "exploding worldview" effect that Petersen considered essential to her therapy. Both models of psychedelic therapy have shown considerable promise in clinical trials, but only the first model, deploying full dosage, invites suggestions about psychedelic drugs as antagonists to atheism. In the second model, a very low dose of a psychedelic drug works therapeutically at the micro-level of neurons, neurotransmitters, and synapses. Research is still in the early stages, but scientists working with ketamine have theorized that the drug alleviates depression by stimulating the growth of spines on dendrites, which helps to generate synapses and increase brain plasticity ([Makin 2019](#); [Black 2021](#)).

To conclude: each of these three inferences about psychedelic drugs and atheism that has emerged in popular media is substantially misleading. Even the special subset of psychedelic users who swerved away from identification as atheist after a God experience encounter most often did so without definitive theistic convictions. Their new affiliations with Other and Ultimate Reality, imprecise as they were, did not seem fundamentally incompatible with atheism. For those who have found relief from depression through the use of psychedelic drugs, in some cases, the drug also catalyzed a new religious perspective. However, if evidence from the surveys of God experience encounters is reliably transferable, very few of these new perspectives amount to conversions from atheism to traditional

forms of monotheistic belief. Furthermore, psychedelic therapy for depression appears to be just as effective at the microdose level, where religious worldviews—including atheism—remain unaltered.

There remain two related questions to pursue. Did the study of God experience encounters present its results in any way that might have encouraged the distorted public interpretations of its atheist participants? More broadly, does the field of neurotheology contain hints of an inhospitable attitude toward atheism?

One detail from the authors' discussion of the 2019 results stands out. After they report the percentage of participants who no longer identified as atheist after the experience, they characterized these events as "sudden conversion experiences": "This outcome is consistent with sudden religious conversion experiences that are well described in the psychology of religion, with Paul's experience of encountering Jesus on the road to Damascus as the prototype" (Griffiths et al. 2019, p. 22). By naming Paul's experience as the prototype, they reinforce the mistaken impression that the study's atheists have converted to monotheism. The comparison between Paul and the "convert" atheists of the 2019 study seems strained, almost incongruous within the otherwise careful scientific prose. Paul's conversion, not a close match with survey results, subtly steers the discussion toward a Christian perspective. A more neutral account comes in the abstract, which summarizes that the encounters generally brought "moderate to strong persisting changes in life satisfaction, purpose and meaning" (Griffiths et al. 2019, p. 1). Coming as it does immediately after the sentence reporting the percentage of atheists who no longer identified as such, the abstract tempts readers to infer some version of the third popular misconception: i. e., that atheists become "happier" when they shed atheism.

Within the broader field of neurotheology, while no one has made a definitive claim on experimental grounds, there have been relevant suggestions worthy of note. Hamer theorized that a religiously-inflected optimism correlates with a genetic predisposition involving certain brain functions, including the release of certain neurotransmitters (Hamer 2004). Drawing on Hamer as well as the work of other researchers who found connections between religious activities and brain functions, notably frontal lobe activity and the release of dopamine (Gianatti et al. 2001; Inzlicht et al. 2009; Schultz 2015), Newberg offered the following speculative, "simplistic" model: "Perhaps if you have high dopamine levels but low frontal lobe activity, you are more likely to be spiritual but not religious. And perhaps if you have low activity in both, you are more likely to be an atheist" (Newberg 2018, p. 236).

This thread of content—that some form of religious belief, affiliation, or activity is likely to correlate with a happier life—has a strong presence within neurotheological research. Kept within strict scientific boundaries, of course, it stands or falls on its merits. Newberg's speculation about atheism and low dopamine and frontal lobe activity seems incautious, however, as if betraying a tacit bias against atheism. Elsewhere, Newberg asserts that "an ardent atheist ... would most likely not be considered a neurotheologian" (Newberg 2010, p. 45).

The inhospitable attitude toward atheists is even more prominent in the flagship essay from the recent special issue on neurotheology in *Religions*. W. R. Klemm reviews the development of the field over the last few decades and offers thoughts about its future. He recognizes that neurotheology has suffered growing pains because of its hybrid nature: "Many scholars in both partnering areas are hostile to their partnering discipline" (Klemm 2019, p. 4). For Klemm, the key to unifying neurotheology lies in what he calls a "triune worldview", which integrates "neuroscience, mental health, and religion": "Neuroscience can and should help us all lead more fulfilling and happy lives that are compatible with sound spiritual values". In his view, then, happiness is linked with something that has theistic (even Christian) associations. The field's proper goal is a therapeutic one, with atheists a target for cure: "Neuroscience and mental health might help the agnostic and atheist to recognize the narrowness and shallowness of their understanding".

To be clear: neurotheology makes no claim to offer proof or disproof regarding the existence of God. As the authors of the 2019 study wrote, “It should be noted that neither descriptive studies of such experiences, no matter how detailed, nor the emerging science of neurotheology, no matter how strong the associations demonstrated between brain processes and religious experience, can definitively address ontological claims about the existence of God” (Griffiths et al. 2019, p. 22). However, neurotheologians must guard against implicit theistic bias, and be wary of oversimplified models of atheism and atheists that linger as templates within their structural schemes of analysis—especially when they study something as complex as the psychedelic experience.

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