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To cite this article: Logan Neitzke-Spruill & Carol Glasser (2018) A Gratuitous Grace: The Influence of Religious Set and Intent on the Psychedelic Experience, Journal of Psychoactive Drugs, 50:4, 314-321, DOI: [10.1080/02791072.2018.1494869](https://doi.org/10.1080/02791072.2018.1494869)

To link to this article: <https://doi.org/10.1080/02791072.2018.1494869>



Published online: 27 Jul 2018.



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# A Gratuitous Grace: The Influence of Religious Set and Intent on the Psychedelic Experience

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## ABSTRACT

Psychedelic drugs, or entheogens, have been used for religious purposes among various cultures for thousands of years. Recently, these substances have caught the attention of Westerners for many reasons, including their propensity to induce mystical experiences. This study examined the relationship between religion and having mystical experiences. A total of 119 participants were drawn from psychedelic-related websites and asked to complete an anonymous online questionnaire containing items regarding history of psychedelic use, set and setting for psychedelic use, and a measure for mystical experiences. A majority of respondents were White males who displayed at least some level of post-secondary education. The findings indicated that respondents who used psychedelics for specifically religious purposes, as well as those who identified with a religion, were more likely to score higher on the Mysticism Scale than those who did not.

## ARTICLE HISTORY

Received 31 July 2017  
Accepted 23 May 2018

## KEYWORDS

Intent; mysticism;  
psychedelics; religion; set;  
setting

## Introduction

Psychedelics, which encompass a number of different mind-altering drugs, have been the focal point in a growing number of psychological studies for their effectiveness in treating a range of mental health issues, from addiction to PTSD. LSD, psilocybin mushrooms, ayahuasca, MDMA, and Ibogaine have been central to this research (for example, see Alper, Lotsof, and Kaplan 2008; Bogenschutz et al. 2015; Gasser, Kirchner, and Passie 2015; Griffiths et al. 2006; Johnson et al. 2014; Krebs and Johansen 2012; Mithoefer et al. 2011; Osório et al. 2015; Smith, Raswyck, and Davidson 2014). Despite the increasing number of clinical trials of these substances, little sociological research has been conducted on the subject.

The intent of this study was to understand the relationship between religion and having mystical experiences when using psychedelic drugs. Specifically, this study examined the question: Does being religious and having a religious intent when using psychedelic drugs impact the likelihood that a person will have a mystical experience? Understanding this relationship is important due to the growing interest in these substances among researchers, medical professionals, and the general public for their psychological and spiritual healing potential.

Though recent academic and scientific research has focused mainly on the potential medicinal benefits of psychedelics, studies of users suggest other motivations for psychedelic drug use. Orsolini et al. (2015) found

that only about 15% of the first-time drug users they observed did so as a form of self-medicating, whereas 51% did so out of curiosity, a finding supported by other research (e.g., Kjellgren and Norlander 2000). Other notable motivations for psychedelic use were self-growth and spirituality. For example, Orsolini et al. (2015) found that 21% of first-time drug users in their study were delving into shamanic practices, and Kjellgren and Norlander (2000) found that many respondents used psychedelics for personal growth. For instance, participants made comments such as “Wish to develop mentally; dive into myself,” and “To solve problems (theoretical/practical) both private and professional” (Kjellgren and Norlander 2000, 48). These are consistent with findings from a study of Westerners seeking out ayahuasca experiences in the Amazon (Kavenská and Simonová 2015), which found that one-third of participants were seeking self-knowledge, while one-fourth did so for the purpose of spiritual growth.

Finally, Lerner and Lyvers (2006) found that psychedelic drug users scored higher on measures of mystical beliefs and life values of spirituality. Although it cannot be determined whether these beliefs were established as a result of the use of psychedelics or vice-versa, the data support the notion that there is a mystical aspect to the use of psychedelics. In fact, some studies indicate that medicinal benefits experienced from psychedelic drug use are derived from the religious or “mystical” experiences that can result from their use (Griffiths et al. 2008, 2006; Johnson et al. 2014).

## Psychedelics and religion

Entheogen, a term for psychedelics when they are used for spiritual purposes, means “that which causes god to be within an individual” (Miller 2015, 4). It is hypothesized that some of today’s major religions, such as Christianity and Hinduism, originate from the use of psychedelic drugs. Some of the earliest evidence of this stems from the ancient Hindu texts known as Vedas (Miller 2015). Within these texts, there are references to mystical experiences prompted by a substance called *Soma*, which some have concluded to be the famous mushroom, *amanita muscaria*. Similarly, based on his translations of ancient Sumerian texts, John Marco Allegro (1973) attributed the origins of Christianity to the use of hallucinogenic mushrooms. Likewise, Benny Shanon (2008) hypothesized that certain biblical events were the result of encounters with entheogenic plants native to the Holy Land and the Sinai Peninsula (i.e., the acacia tree), which contain psychoactive compounds similar to those found in ayahuasca.

Regardless of unverifiable theories that credit the development of Abrahamic religions to the use of drugs, there are many modern examples of psychedelics being utilized for religious purposes around the world. The cases most cited in the literature include the use of ayahuasca in the Amazon, peyote in the American Southwest, and iboga among the Bwiti cult in West Africa (De Rios 2005; Labate, Rose, and dos Santos 2009). These instances of entheogenic traditions provide us with examples in which various enduring societies have incorporated psychedelics into their cultural framework.

During the 1960s, psychedelics began to be used more in the United States (U.S.). However, the Controlled Substances Act of 1970 halted legal psychedelic use and slowed research on psychedelics. Before the passage of this act, there were a number of compelling studies conducted that explored the relationship between religion and psychedelic drug use, including the famous Good Friday Experiment (Pahnke 1966). In 1962, under the supervision of Timothy Leary, Walter Pahnke gave a group of 20 Protestant graduate students capsules that contained psilocybin or nicotinic acid prior to observing a Good Friday service at Boston University’s Marsh Chapel. The results indicated that participants who received psilocybin underwent experiences that were significantly more mystical than the control group (Doblin 1991). Despite valid methodological critiques, Rick Doblin (1991) observed persisting positive effects in participants who received psilocybin during the Good Friday experiment over 25 years later.

Although experiments such as these did little to legitimize the use of psychedelics in the 1960s, they

paved the way for recent experiments that demonstrate more scientific rigor. For example, in a double-blind study conducted at Johns Hopkins University, 36 participants who had never encountered psychedelics before were randomly given psilocybin or methylphenidate hydrochloride (Griffiths et al. 2006). Most (67%) volunteers indicated that their experience with psilocybin was the most or in the top five most meaningful experiences of their lives. One-third (33%) also deemed it as being the most spiritually significant event of their lives, while 38% described it as being in the top five most spiritually significant events of their lives (Griffiths et al. 2006). It was also reported in the 14-month follow-up interviews that the impacts were sustained (Griffiths et al. 2008).

Despite the prohibition of psychedelics, studies are being conducted to determine the safety and efficacy of these drugs in the treatment of a number of mental disorders. Aside from clinical applications, the most generally accepted use of these substances exists within a religious framework. There is a clear relationship between psychedelics and spirituality that has existed for thousands of years, but the degree to which psychedelics are being used in the U.S. for strictly religious purposes is unknown.

## Religious set and setting

The concepts of set and setting as they relate to psychedelic use were originally introduced to the Western consciousness in *The Psychedelic Experience* (Leary, Metzner, and Alpert 1964), although the variables they encompass were certainly evident to the peoples who have used psychedelic plant medicines for thousands of years. *Set* refers to an individual’s disposition and is broken up into two categories: long-range and immediate. The long-range set is composed of a person’s general personality characteristics and individual history, while the immediate set refers to a person’s expectations for using the drug and is heavily influenced by the motivation for using. As Leary and colleagues (1964) assert, the first thing that should be done when considering using a psychedelic substance is to determine the goal. One must ask, “why am I using this drug?”

*Setting* refers to the physical and social environment in which the drugs are being ingested, as well as cultural attitudes surrounding the use of such drugs (Baker 2005; Leary, Metzner, and Alpert 1964). The U.S. does not maintain a cultural tradition accepting the use of psychedelics and is much more individualistic; thus, a person’s psychedelic experience will be largely shaped by individual values and beliefs. In

contrast, the use of psychoactive drugs in a traditional shamanic setting will be more likely to reinforce the values and beliefs of the community.

The lack of a generally accepted setting to use these substances in the West may contribute to instances of “bad trips.” If someone uses a psychedelic without proper knowledge regarding the dosage, the influence of set and setting, or the general subjective effects, one could easily become convinced that they have gone insane (Becker 1967). It is for this reason that Leary, Metzner, and Alpert (1964) insist on taking great care to prepare the setting for psychedelic use. This advice has been taken into consideration by researchers, past and present, who have studied the potential benefits of psychedelic use. For instance, in a study examining ayahuasca’s potential to treat patients experiencing a depressive episode, participants were administered ayahuasca “in a comfortable recliner in a quiet, dimly lit room” (Osório et al. 2015, 15). Presumably, the patients’ set also played a role in the success of the study, since they consumed ayahuasca for the purpose of treating their depression.

Huston Smith (1964) also cites evidence for the impact of set and setting on the likelihood of having a mystical experience. It appears that, in a sample from the general population, anywhere from one-fourth to one-third of people will have a religious experience. When people with stronger religious ties were sampled, that figure increases to three-fourths. Finally, when psychedelics are consumed in a religious setting, nine-tenths of people will undergo a religious experience. This evidence supports the notion that religious affiliation (set) and setting contribute to the instances of mystical experience.

It has been shown that set and setting play a large role in the way a user conceptualizes drug use, as well as how they integrate their experience into their cultural framework. The present study aims to determine how religious set influences the likelihood of having a mystical experience. It is hypothesized that identifying with a religion (long-range set) and using psychedelics for spiritual or religious purposes (immediate set) will increase the likelihood of scoring higher on the Mysticism Scale.

## Methods

The present study used an anonymous, self-administered online survey. The survey was constructed using the Qualtrics survey tool. Each participant was asked to complete a series of questions concerning psychedelic use: (1) type and frequency of psychedelic drug use; (2) set and setting for psychedelic use; (3) mystical experiences associated with the use of psychedelics; and (4) demographic

information. Study procedures were approved by the Institutional Review Board at Minnesota State University, Mankato.

Participants were self-reported psychedelic drugs users, recruited using the psychedelic-related websites shroomery.org and bluelight.org. These websites serve as a space for veteran and novice psychedelic users to find and provide information regarding dosage, safety, and other recommendations for using hallucinogens. An account was created on each website and a message was posted in the website forums to recruit participants. The survey was distributed from November 2016 to December 2016. Past research has used such sites for recruiting participants for similar research (Móro et al. 2011; Orsolini et al. 2015). While there are some limitations to using online message boards, such as the potential of duplicate responses, the benefits of anonymity and accessing a hard-to-identify population were important for this study.

There was a total of 119 respondents, of which 96 responded to the demographic portion of the survey. Of the 96 who provided demographic information, 90.7% were male, which is consistent with previous research regarding psychedelic use (e.g., Johansen and Krebs 2015; Kjellgren and Norlander 2000; Orsolini et al. 2015). Similarly, 82.3% of respondents were White, and over 60% had some college education. The study sample of psychedelic drug users, which consisted of mostly White, college-educated males, is on par with those of past samples (Johansen and Krebs 2015; Kjellgren and Norlander 2000; Orsolini et al. 2015). The homogeneity of these samples, particularly those drawn from psychedelic-related web forums, may be more telling of psychedelic users who have adopted psychedelic use as a large part of their identity and immersed themselves in the “psychedelic community.”

## Analysis

To understand the relationship between religion and having a mystical experience on psychedelics, we performed a linear regression using SPSS software for data processing.

## Mystical experiences

The key dependent variable for this study was measured using Ralph Hood’s (1975) 32-item Mysticism Scale. This scale measures the degree to which respondents have mystical or religious experiences when using psychedelic drugs. The Mysticism Scale contains 32 statements related to mystical experiences. Respondents were

asked how much they agree or disagree with each statement as it relates to their experiences using psychedelic drugs. Scores on the Mysticism Scale can range from a low of 32 to a high of 160, with higher scores indicating stronger mystical experiences.<sup>1</sup>

The items for this scale were developed using conceptual categories from the philosophy of religion. This scale has been shown to accurately measure mystical experiences associated with psychedelics, and has also shown efficacy across cultures (Griffiths et al. 2008; Hood et al. 2001). Though the scale was created in 1975, it has continued to be used as a validated measure of mystical experiences (e.g., Johnson et al. 2014; Maclean, Johnson, and Griffiths 2011).

### Long-range set and intent

The key independent variables measured respondents' religious and spiritual set. We used whether or not a person identified as religious to measure long-range set and whether psychedelics are used with a spiritual intent to measure immediate set.

A respondent's religious set was measured as a dichotomous variable indicating whether or not they identified with any faith or religion. Respondents were asked, "What religion or faith do you identify with?" and were provided a list of Abrahamic religions (Christian, Jewish, Muslim), Eastern religions (Buddhist, Hindu), Atheism/Agnosticism, or "Other." Respondents who selected "other" could write in their religion. Forty percent of respondents chose the "other" category and filled in a variety of answers, including Spiritual and Theist. Due to a wide range of responses and a small sample size, to maintain statistical strength in analysis all responses were recoded into a dichotomous variable such that respondents who indicated any religious affiliation were coded as being religious, and those who did not or noted being atheist/agnostic were coded as *not* having a religious set.

While being religious indicates long-term set, a person's short-term set for psychedelic use includes their reason, or *intent*, for using the substance. We had 11 variables to measure intent, each variable measuring a possible reason for using psychedelics. These reasons were taken from a 14-item list previously used in a study of e-psychonauts (Móro et al. 2011).<sup>2</sup> One of the reasons for using psychedelics was for "religious or spiritual purposes." This item was used to measure religious intent.

### Control variables

In the final linear regression model, the following were controls that past research has identified as impacting the set and setting of using psychedelics: number of

people typically with a person when using psychedelics, frequency of use, and types of psychedelic drugs used.

Respondents were asked if they typically do drugs alone; with 1–2 people; 3–5 people; or 6 or more people. Frequency of drug use was measured by asking respondents how often they tended to use drugs: less than yearly; yearly; bi-monthly; monthly; or weekly. To measure drug use, respondents were asked if they used any of the following: LSD; Psilocybin "magic" mushrooms; MDMA, ecstasy, or molly; Ayahuasca; Iboga or Ibogaine; Peyote, San Pedro, or any other mescaline-containing substance; smoked, snorted, or intravenous DMT. Respondents could also select "other" and write in any other drug(s) used. Due to the variety of responses, in order to retain statistical power, these categories were collapsed into three: classical psychedelics, entactogens, and dissociative psychedelic drugs. Although cannabis can sometimes illicit psychedelic-like effects, it was not included in our analysis because it is not generally classified as a psychedelic drug.

### Additional considerations

To enhance understanding of our statistical analysis, we also utilized open-ended questions to better understand the setting for psychedelic use or ritual preparations for psychedelic use. Specifically, if participants indicated that they had performed a ritual prior to using psychedelics, they were asked to "[p]rovide an example of a ritual preparation you perform prior to using psychedelics." Respondents were also asked to describe the typical setting in which they use psychedelics.

## Findings

### Psychedelic drug use

All respondents indicated having used classic hallucinogens such as LSD and psilocybin, while just over half (56.3%) had also used entactogens like MDMA. Only 12% indicated having used dissociative psychedelic drugs (e.g., ibogaine and ketamine). Over half of the respondents were regular users of psychedelics, with about half (52.6%) indicating monthly or bi-monthly use and 12.9% reporting weekly use. Only about a third of the sample used psychedelics yearly (20.3%) or less than yearly (14.4%).

Setting for psychedelic drug use varied across the sample. Most respondents said that they "typically" use psychedelic drugs alone (40.3%) or with only one to two others (40.3%), though a minority reported using psychedelics in a group setting of three to five people (9.2%) or more (5%). We also examined setting with open-



ended questions that ask respondents to describe the setting in which they typically engage in psychedelic use. Since the questions were open-ended, many respondents described multiple settings for psychedelic use. Respondents identified three main settings in which psychedelics were used. The most commonly reported setting for psychedelic use was “home” with 64.7% of respondents indicating that they use psychedelics at home, a specific room in their home, such as their bedroom or living room, or a friend’s home. The second most prevalent setting for psychedelic use was in a natural setting or “outdoors.” Specifically, 42.9% of respondents indicated having used psychedelics in natural settings such as a park, a beach, the mountains, or a hiking trail. Social gatherings, such as a party, a concert, or a music festival, comprised the third most listed setting, and were reported by 14.3%. Some respondents (12.6%) did not provide adequate information to determine the physical setting in which their psychedelic use took place. Notably, no respondents specifically mentioned a religious setting for psychedelic drug use, so this item was not included in the final model.

One variable that contributes to both set and setting is performing some type of ritual preparation prior to psychedelic use. While performing a ritual can contribute to a person’s set by altering their mood, it can also consist of altering one’s physical environment. Some of these rituals included: cleaning, meditating, listening to music, fasting, burning incense, or using marijuana. Of 100 participants who responded to this item, 64% performed a preparatory ritual prior to using psychedelics. As we could not determine if the purpose of these rituals was religious, this variable is not included in the final model. However it is likely that, for some, these rituals held religious significance.

### **Religious set and intent**

The survey included 11 variables indicating reasons for using psychedelic drugs. We found a significant relationship between respondents’ intent for using psychedelics and scores on the mysticism scale  $F(11,88) = 3.911$ ,  $p < .001$ . Using psychedelics for the intent of “spiritual or religious practices” measured religious intent. It was the fourth most common intent, selected by 30.3% of respondents. The sample was split in terms of having a religious set, with just under half (44.7%) indicated affiliation with a religion. Of those who were religious, half took psychedelics for spiritual or religious purposes. There was a significant association between religious affiliation and using psychedelics with a religious or spiritual intent ( $X^2(1, N = 94) = 9.95$ ,  $p = .002$ ).

### **Mystical experiences**

To understand how these factors (being religious and taking psychedelics with religious intent) impact scores on the mysticism scale, we ran linear regressions. The dependent variable was the respondent’s score on the mysticism scale, with higher scores indicating a stronger mystical experience.

In Model 1 (see Table 1), we included the effects of the independent variables. Overall, both being religious and having a religious intent for using psychedelics have a positive significant impact on mysticism scores. The linear regression in Model 1 examined the impact of identifying with a religion and taking psychedelic drugs with religious intent, without controlling for any other factors. Being religious and taking psychedelic drugs with religious intent significantly increased scores on the Mysticism Scale, indicating that religious set and intent both increase the intensity and/or the likelihood of having mystical experiences when using psychedelic drugs. When taken together, a respondent who identified with a religion and had religious intent when taking psychedelics had an average score of 114 ( $se = 2.7$ ).<sup>3</sup>

Model 2 included controls for number of people present, frequency of use, and type of drug used. The average score on the Mysticism Scale was 123.5 when these controls were added (Table 1). When controlling for being religious, frequency of psychedelic use, type of drug used, and number of people present during psychedelic use, those who used psychedelics with a religious intent scored 16.4 ( $p = .001$ ;  $sd = 4.2$ ) points higher on the Mysticism Scale than those who did not. Although only marginally significant ( $p = .052$ ) when controlling for other factors, respondents with a religious affiliation scored 8.3 points ( $sd = 4.2$ ) higher on the Mysticism Scale, compared to those who reported no religious affiliation.

While there is no significant difference between respondents who used psychedelics weekly and those who used them monthly, respondents who used them less than monthly were significantly more likely to score lower on the Mysticism Scale when controlling for other factors. Specifically, the less a respondent used psychedelics, the lower their score on the Mysticism Scale, such that those who used them bi-monthly had a score 11.7 points lower ( $p = .075$ ), those who used them yearly scored 16.8 points lower ( $p = .02$ ), and those who used them less than yearly scored 18.1 points lower ( $p = .01$ ), compared to those who used psychedelics weekly. There was no significant relationship between scores on the Mysticism Scale and the number of people present or the type of psychedelic drug used; however, the variable is retained in the model due to the

**Table 1.** Summary of multinomial regression analysis for predictors of scores on the Mysticism Scale.

Independent Variables	Model 1			Model 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Identify with a Religion	10.6	4.1*	0.249	8.3	4.2 <sup>†</sup>	0.197
Religious or Spiritual Intent	16.2	4.4***	0.354	16.4	4.2***	0.357
<b>Control Variables</b>						
Number of People						
0 (reference)						
1–2				–1.9	4.1	–0.044
3–5				–4.9	7	–0.068
6 or more				4.3	9.1	0.045
Frequency of Use						
Weekly (reference)						
Monthly				–6.2	6.5	–0.13
Bi-monthly				–11.7	6.5 <sup>†</sup>	–0.245
Yearly				–16.8	7.3*	–0.321
Less than Yearly				–18.1	7.4*	–0.303
Type of Drug Used <sup>a</sup>						
Entactogens				5.9	3.9	0.141
Dissociatives				.3	6.6	0.005
Constant	114.2	2.7		123.5	6.7	
R <sup>2</sup>	.25			.37		
N	119			119		

<sup>†</sup> $p \leq .1$ ; \* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ .

<sup>a</sup>The variable Classical Hallucinogens was omitted from this analysis since it perfectly predicted the outcome; all respondents reported trying at least one type of classical hallucinogen.

importance of the presence of others in understanding setting and the theoretical significance of setting for understanding the outcome of psychedelic drug use.

## Discussion

The present study examined whether there is a relationship between having a religious set (both identifying as religious and taking psychedelics with religious intent) and having mystical experiences when using psychedelics. We found a positive and significant relationship between a person's religious set and having mystical experiences when using psychedelic drugs. As hypothesized, being religious and taking psychedelic drugs with religious intent were significantly related to having stronger mystical experiences when using psychedelic drugs.

Identifying with a religion significantly increased scores on the mysticism scale, though the relationship weakened and became only marginally significant ( $p = .052$ ) when controlling for other factors, such as the type of drug taken, frequency of use, and number of people present while using psychedelics. However, the relationship between having a mystical experience and using psychedelics with religious/spiritual intent remained significant ( $p \leq .001$ ) with these controls.

These findings highlight the importance of the intent of psychedelic drug use and the relationship between religion and psychedelic drug use. Although a past study has found psychedelic users to score higher on measures of spirituality, the direction of the relationship between having a religious or spiritual set and intent and having a

mystical experience while using psychedelics is unclear (Lerner and Lyvers 2006). One study of first-time ayahuasca users found that their experiences served to reinforce or enhance their existing spiritual beliefs (Trichter, Klimo, and Krippner 2009). This may point to a general propensity towards spirituality among psychedelic users, but future studies might attempt to better understand the direction of this relationship through in-depth and qualitative investigation.

The relationship between religion and mystical experiences when using psychedelic drugs is sociologically and anthropologically important and warrants further exploration. These substances are currently controlled and banned in most cases for use in the U.S., limiting our understanding of their potential role in current Western religious practices. However, they might have the potential to play an important role in spiritual and religious settings, encouraging further investigation into the relationship between religion and psychedelic drugs.

This study also highlighted that the intent of psychedelic drug use matters. While here we investigate religious intent and mystical experiences, this might extend to the use of psychedelics for clinical and therapeutic purposes and other contexts that may fall outside of regulated frameworks. Understanding the relationship between intent and outcomes of psychedelic drug use might have important implications for effective medicinal use, the promotion of safe practices, and harm reduction. Although many respondents reported habits that indicate some level of awareness about safe practices for psychedelic use, our sample draws on a population

that is actively involved in the psychedelic community. Further efforts should be taken to educate those marginal users who may not be engaged in the psychedelic or harm reduction communities.

## Notes

1. For respondents who missed less than five items on the scale, a neutral score of 3 was assigned to each missing response.
2. Reasons include: self-knowledge and introspection, self-medication, spiritual or religious practices, stimulating artistic creativity/performance, curiosity, enhancing mood, avoiding boredom and hopelessness, increasing sensation and pleasure, rebellion or alternative lifestyle, building personal identity, and expressing membership in a group.
3. Though not specifically hypothesized, due to their significant relationship to each other, we did test for an interaction between being religious and having religious intent. This relationship was not statistically significant and so was excluded from the final models.

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