

Entheogenic spirituality: Characteristics of spiritually motivated psychedelics use

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Abstract

Investigations of the use of psychedelic or entheogenic drugs in spiritual contexts have focused on mystical experience. Arguing that entheogenic spirituality should be understood more broadly, this study recruited 319 individuals into an online survey. Respondents were predominantly from western countries, but reported a connection to an eclectic range of religious and spiritual traditions, with Buddhism as the largest religion. About half of the respondents reported having a meditation practice, and the most endorsed motivations for entheogen use related to personal growth and spirituality. For spiritually motivated respondents, entheogenic experiences were most commonly characterized by feelings of joy, peace, and love, by insight into oneself and one's relations, and by improved connections with nature and with other people. Spiritually affiliated participants were more likely to report mystical experiences involving ego dissolution and contact or unity experiences and reported more positive long-term consequences from entheogen use. The study affirms the existence of a movement of spiritually motivated entheogen users that requires further investigation.

Keywords: entheogen, entheogenic experience, meditation, psychedelic, spirituality

Introduction

Psychedelics are a group of drugs named after the Greek words ψυχή (psyche), meaning soul or mind, and δηλαίν (delein), to reveal or manifest. The classic psychedelics include mescaline (the active constituent of the cactus peyote), psilocybin (the active constituent of

“magic mushrooms”), lysergic acid diethylamide (LSD), and N,N-dimethyltryptamine (DMT). The use of such drugs has sometimes been found to induce or occasion spiritual-type experiences, and they have therefore also been referred to as entheogens, which is derived from ἔνθεος (entheos), meaning inspired or filled with God, and γενέσθαι (genesthai), which means to come into being. In this article about spiritual use, I will refer to psychedelics as entheogens. Experiences with mystical-type characteristics are one important type of spiritual experience, and the characteristics here labeled mystical are ego-dissolution and the experience of contact or unity with transcendent forces.

It is well established that users of entheogens in clinical settings often describe their induced experiences in spiritual terms and find such experiences to be existentially meaningful. Such studies go back to Pahnke’s (1966) classic Good Friday experiment, and after a period of dormancy, have re-emerged in more recent times especially with Strassman’s (2001) series of DMT experiments and Griffiths et al.’s (2006, 2008, 2011) psilocybin research. The 2006 study by Griffiths et al. is particularly interesting as it also asked participants how personally meaningful the induced experience had been, finding that more than two-thirds regarded it as being among the top five most personally meaningful experiences of their lifetime. Studies of entheogenic drug users outside of an experimental context have also found that such use is associated with spiritual experience and beliefs (Bouso et al., 2018; Johnstad, 2018, 2020b, 2021b, 2022a; Carhart-Harris & Nutt, 2010; Griffiths et al., 2019; Lyvers & Meester, 2012; Yaden et al., 2017).

The emergence of spiritually motivated entheogen users in western societies is largely contemporaneous with the appearance of the New Age movement. “New Age” is a term entangled in complications, one of which is that the people it is supposed to refer to tend not to use it about themselves (Sutcliffe, 2003), but it is commonly used as an umbrella term for various 20th or 21st century nontraditional spiritualities. Finding its foundations in western

esotericism, Hanegraaff (1996, 1999) saw the New Age as centered on the idea of the Self being engaged in a process of spiritual evolution, and Heelas (1996) called it a movement of Self-spirituality. This orientation towards the individual implies a break with traditional dogmas and hierarchies, although the extent of this break is sometimes regarded as overstated (Taves & Kinsella, 2013). Other commonly noted characteristics of New Age spirituality include its focus on healing and its tendency to psychologize religion (Sutcliffe & Gilhus, 2013).

Both the New Age movement and western entheogen use grew into large-scale social phenomena during the 1960s, and one way to understand the latter movement would be to see it as one of several modern spiritual trends belonging under the New Age umbrella. This aspect of the New Age movement has received little attention from scholars of religion, however. Hanegraaff (2014) explained the dearth of investigative effort by pointing to a lack of acceptance and visibility especially from the 1970s and onwards: entheogen-assisted spirituality was regarded as suspect and not worthy of inclusion in studies of religion, and the practitioners themselves preferred to de-emphasize their entheogen use when researchers were watching because they wanted to stay out of jail. Nevertheless, said Hanegraaff, a clandestine entheogenic movement was continuing and sometimes thriving beneath the gaze of scholarly attention, and he believed it is time we start investigating it:

Specialists in the field of contemporary religion should become aware of their inherited blind spots regarding the role that entheogens have been playing in these contexts for half a century. That role is not marginal, but central, and requires serious study. Scholars may have agendas and preoccupations of their own, but these cannot be an excuse for refusing to take notice of what is happening right in front of our eyes (Hanegraaff, 2014, 409).

Recent years have seen more work in this area, however, both of an empirical nature (Cozad, 2018; Ellens, 2014; Heide et al., 2021; reviews in Johnstad, 2022a, 2022b) and on more conceptual levels or with regard to the entheogenic movement's leading figures (Davis, 2020; Monteith, 2016; Partridge, 2020; Richards, 2014, 2015; St John, 2017, 2018). There is also a long-standing research tradition related to entheogen use among indigenous peoples (Dobkin de Rios, 1972, 1990; Hultkrantz, 1997; Labate & Cavnar, 2014; Maroukis, 2012; Naranjo, 1979). Most of the recent empirical studies into entheogen use have been performed by psychologists and psychiatrists, however, where there is now a rapidly growing literature on the therapeutic effect of entheogens on medical conditions such as depression (Carhart-Harris et al., 2016, 2018; Davis et al., 2021; Griffiths et al., 2016; Roseman et al., 2018; Ross et al., 2016), anxiety (Gasser et al., 2013; Goldberg et al., 2020; Griffiths et al., 2016; Grob et al., 2011; Ross et al., 2016), and substance dependence (Bogenschutz et al., 2015; Garcia-Romeu et al., 2019; Johnson et al., 2014). This research builds on earlier findings from the 1950s and 60s that indicated therapeutic potential on a variety of psychiatric conditions (Johnstad, 2020a; Rucker et al., 2018). While these clinical applications of entheogens are motivated by therapeutic rather than spiritual concerns, some have observed that the therapeutic effect seems to depend on the quality of the induced experience, with peak or mystical experiences being predictive of positive clinical outcomes (Majić et al., 2015; Roseman et al., 2018). It has been suggested that the feeling of awe mediates the therapeutic effect from entheogen-induced mystical experience (Hendricks, 2018), and an fMRI study by van Elk et al. (2019) found that the experience of awe correlates with reduced activity in the default mode network, which has been hypothesized to play a role in high-level psychological constructs such as the self or ego (Carhart-Harris et al., 2008; Carhart-Harris & Friston, 2010).

Secondly, psychologists have sometimes investigated explicitly religious aspects of entheogen use. Groundbreaking work of this type by Pahnke (1966), Strassman (2001) and Griffiths et

al. (2006, 2008, 2011) was briefly discussed above, and in recent years several new contributions have been made. Yaden et al. (2017) compared entheogenically induced religious, spiritual, or mystical experiences with experiences that occurred through other means in a sample of 739 participants, finding that their participants rated the entheogenically induced experiences as being significantly more mystical and having a stronger positive impact on the individual's spirituality. Timmermann et al. (2018) compared experiences induced by N,N-Dimethyltryptamine (DMT) to naturally occurring near death experiences in a matched sample of 26 participants, and found a significant overlap in their phenomenological features. Finally, Griffiths et al. (2019) compared naturally occurring and entheogenically induced "God encounter experiences" in 4285 survey participants. They found "striking similarities" in the details and consequences of the two types of encounter experiences, which both led to increases in life satisfaction, social relationships, and spiritual practice.

These investigations offer valuable insights into the characteristics of entheogenic experiences and their relation to other types of spiritual experience, but they are also limited in certain ways. The fact that their focus is predominantly on spiritual experience means that they provide little insight into entheogenic spirituality in the broader sense of living a spiritual life that is somehow centered on, or at least informed by, entheogen-induced experiences.

Spirituality, after all, is not only about having special experiences, but is also a question of how one integrates such experiences into one's daily life, and there is a long-standing suspicion that entheogenic experience is more difficult to integrate than other forms of spiritual experience. As Smith (1964/2000) observed, "[d]rugs appear to be able to induce religious experiences; it is less evident that they can produce religious lives" (p. 30). We have some evidence pointing to the long-term spiritual value of entheogenic experiences, however. Tworokov (1996), in an editorial for the western Buddhist magazine *Tricycle*, observed that

“[f]or the new Buddhists of the 1960s and 1970s it was a rare bird indeed who came through the dharma gates totally independent of ‘mind-expanding drugs’” (para. 1), indicating that drug-induced spiritual experiences can lead to long-term spiritual practice at least for some individuals. In an interview study of entheogen use in spiritual contexts, Johnstad (2018) found that entheogen-induced spiritual experiences would serve as anchors for long-term growth processes, so that one could understand entheogenic spirituality as a program for personal growth and spiritual development. This is congruent with the therapeutic value and impact on personality traits identified for these drugs in psychologically oriented research (Bouso et al., 2018; Carhart-Harris et al., 2016, 2018; Erritzoe et al., 2018; Griffiths et al., 2006, 2008, 2011, 2016; MacLean et al., 2011).

Besides being predominantly focused on entheogen-induced spiritual experience, existing investigations into the spiritual aspects of entheogen use are also limited in the sense that they for the most part concern themselves with one specific type of spiritual experience, namely mystical experiences. These experiences may involve the feeling that one’s ordinary sense of selfhood dissolves and that one is united with something transcendental, and they are obviously an important type of spiritual experience, but researchers working outside the field of entheogenic studies also recognize many other forms of spiritual experience. A recent study identified two different types of entheogen-induced spiritual experience: one that could be labeled mystical and another that was centered on insight, positive feeling, and increased relatedness (Johnstad, 2021b). Mystical experiences were more intense and powerful, but they were also less common than the second type of spiritual experience. By virtue of the frequency of their occurrence, therefore, the latter type of experience could be understood as having as much influence on the broader program of entheogenic spirituality as the rarer, but more powerful mystical experiences.

Thus, while mystical experience is obviously important to entheogenic spirituality, I believe it is necessary to recognize that the latter is not reducible to the former. Spirituality is a broader concept than spiritual experience, and spiritual experience is in turn broader than mystical experience. We should therefore understand and study entheogenic spirituality within a comprehensive framework that does not limit itself to experiences of ego dissolution and other mystical-type characteristics. For this purpose, it will be necessary to develop and validate scales and instruments available to measure the characteristics of general entheogenic experiences. Previous research into the experiential characteristics of entheogen use has often relied on instruments such as the Mystical Experiences Questionnaire (MacLean et al., 2012; Barrett et al., 2015) or the Ego-Dissolution Inventory (Nour et al., 2016), but more comprehensive investigations of entheogenic spirituality will necessitate the development of generalized scales and instruments that cover all major conceptual facets.

By broadening the scope of inquiry into spiritual entheogen use, one could also investigate how entheogenic experience relates to the religious or spiritual backgrounds of the users, as well as to their present religious or spiritual affiliations. One could study the relationship between entheogenic practices and other forms of spiritual practice such as meditation or prayer, and inquire into what forms of ritual may surround the consumption of these drugs. This would open for a clearer understanding of the spiritual context within which entheogenic experiences take place, and allow us to better characterize the social dimension of the entheogenic movement.

The hypotheses tested in the present study are based on the findings of a previous interview study of 26 spiritually motivated entheogen users (Johnstad, 2018). This study found that entheogenic spirituality was centered upon the entheogenic experience, but in such a way that both the preparation for the experience and its subsequent integration into one's life were regarded as essential aspects of the process. The frequency of entheogen use was therefore

quite moderate, in order to allow time for these preparatory and integrative processes. Entheogenic experiences furthermore impelled many users to take up more conventional spiritual practices such as meditation and yoga, and with time, these practices became entwined with the entheogen use. Many interviewees would practice yoga in preparation of entheogen use, and practice meditation during the entheogenically induced altered state of consciousness. For the most part, they used entheogens in solitude or in the company of a partner or close friends, but some also sought out more organized practices under the guidance of a shaman. Many started out using entheogens because of explicitly spiritual concerns, but others were interested in psychological self-exploration and personal growth in a more general sense, or simply wanted to have a good time. Regardless of their initial motivation, however, all eventually ended up with experiences they recognized as spiritual. These experiences were characterized by feelings of peace, joy, and love, insight into themselves and their worlds, and sometimes visions, the dissolution of their feeling of self, and a state of unity with a transcendent force. However, even when the experience was of a more challenging kind, characterized by fear and sadness rather than peace and love, they still regarded it as a valuable learning experience. Interviewees did not regard their entheogenic experiences as being shaped by their religious background, but instead emphasized the discontinuity between their, for the most part, secular or Christian backgrounds and the spiritual experiences they gained access to via entheogens. Part of their motivation for using entheogens was a desire for the healing of various psychological problems and issues, and they regarded both their health and their relations as being improved by their entheogenic practices. Most saw themselves as well-functioning in their work and their relations.

The purpose of the present study was to test these tentative interview findings with statistical analyses of data from the Cannabis and Psychedelics User Survey. It tested the hypotheses that spiritually motivated entheogen users tend toward moderate frequency of use (H1), tend

to engage with ordinary forms of spiritual practice such as meditation or prayer (H2), and tend to prefer intimate social settings for entheogen use (H3). Furthermore, the survey study tested the hypothesis that entheogen users sometimes start out without any interest in spirituality, yet end up with experiences they characterize as spiritual (H4), and, as a consequence, tend to become more interested in eastern religions such as Buddhism and Hinduism (H5). Whereas the initial interview study was confined to spiritually motivated respondents, and therefore could not compare spiritual and non-spiritual use, it clearly identified spiritual entheogen use as being substantially different from what is normally termed recreational drug use. In the present survey study, it was hypothesized that having a spiritual motivation for entheogen use results in more powerful entheogenic experiences (H6) and better respondent-assessed consequences from use (H7).

Materials and Methods

The survey was made available online via SurveyXact from April to September 2019 for self-selected participation. It was fully anonymous and recorded no identifying participant information, including IP addresses. Since the survey was anonymous and SurveyXact has an agreement with the University of Bergen guaranteeing General Data Protection Regulation (GDPR) compliance and participant privacy, the Norwegian Social Science Data Services waived ethical approval. As several articles based on the Cannabis and Psychedelics User Survey have been published, the discussion of general methodology is here kept to a minimum; the reader may consult previously published works for more information (Johnstad, 2020b, 2021a, 2021b, 2021c, 2022a, 2022b).

Participants were obtained from seven communities: www.shroomery.org, www.dmt-nexus.me, www.bluelight.org, the Facebook page for Portland Psychedelic Society, the

Reddit group r/Psychedelics, the Norwegian Association for Safer Drug Policy, and an informal group of entheogen users in Bergen, Norway, reached via a snowballing email invitation. All current or former entheogen users were invited to participate, and the survey did not present itself as specifically interested in entheogenic spirituality. Women were especially invited to participate. The only inclusion criteria were adulthood (18 years or older), the ability to understand English well, and having experience with a commonly used entheogenic drug. Individuals who did not meet the inclusion criteria were linked to a shorter version of the survey, and their data were not used in the analyses.

A total of 527 forms were submitted, but 202 of these lacked answers to initial demographic questions and were excluded. Further inspection of the dataset revealed six responses with substantial internal discrepancies, which were also excluded from the analyses. Of the 319 included participants, 213 completed the full survey, while 106 opted out from parts of it. Respondents reported using between 10 and 30 minutes to complete the survey.

Measures

The survey included basic demographic questions relating to age, gender, education, work status, and relationship status. Gender was measured with three categories (female, male, and other). Education was quantified from 1 = “Have not completed high school” to 6 = “PhD”. Participants were also asked about their religious or spiritual background and their present religious or spiritual affiliations, as well as their current spiritual practice. With regard to entheogenic drugs, the survey measured use of the 2C family (2C-B etc.), 5-MeO-DMT, Ayahuasca (or analogues), DMT (smoked), LSD, MDMA, Mescaline/Peyote, Psilocybin/Magic mushrooms, and Salvia divinorum. Participants chose one entheogen from this list that they had experience with, and they were queried about their motivations for the

use of this drug and asked to characterize emotional, cognitive and relational aspects of a typical experience with this drug on a dichotomous basis. One of these motivational items related to spiritual experience, and respondents' endorsement or non-endorsement of this item was used as the basis for comparing spiritually motivated entheogen users with users lacking such motivation. Finally, respondents were asked to characterize the consequences of their use of this drug for their physical health, psychological health, personal happiness, ability to get along with other people, and spiritual practice on a five-level Likert scale.

In order to measure the personality of the participants, the survey included a version of Gosling et al.'s (2003) Ten-Item Personality Inventory (TIPI), as well as a version of Nicholson et al.'s (2005) Risk Taking Index (RTI). The TIPI is a concise measurement tool with only two items for each Big Five trait but has been shown to have adequate construct validity, test-retest reliability, and patterns of external correlates (Gosling et al., 2003). See Johnstad (2021c) for a more detailed discussion of how personality measurement tools were modified for the Cannabis and Psychedelics User Survey.

Statistical Analyses

In order to analyze differences in motivations for drug use, characteristics of drug experiences, and self-assessed consequences of drug use between spiritually motivated entheogen users and other users, multivariate regression was used to assess the impact of spiritual motivation while controlling for commonly used demographic covariates (Hendricks et al. 2015; Nour et al., 2017) as well as the Big Five personality traits, and the overall risk taking score (RTI). Separate multivariate logistic regression analyses were used to identify the independent variables that predicted dependent variables related to motivations for drug use and characteristics of drug experiences, and multivariate linear regression analyses were used

to identify the independent variables that predicted dependent variables related to consequences of drug use. For each multivariate regression, independent variables were age, education, the six personality traits, and dichotomous variables for whether or not the participant endorsed having a spiritual or an escapist motivation for entheogen use (yes = 1). Some models also include an indicator for mystical entheogenic experience, operationalized as endorsement of the experiential characteristics ego death or dissolution, contact with transcendent forces, and unity with transcendent forces for both the respondents' most meaningful entheogenic experience and for what they characterized as a typical experience (range 0-6). In order not to exclude nonbinary participants from multivariate analyses, these analyses did not control for gender, but marginally different gender-controlled versions (which exclude participants with 'other' gender) are available in the online appendix. In all these analyses, ordinal variables were treated as continuous. Data was analyzed with IBM SPSS Statistics 25.

Results

Participant Characteristics and Entheogen Use

An overview of participant characteristics, grouped according to whether they endorsed having a spiritual motivation for their entheogen use, is provided in Table 1. There were no significant differences in age or gender between the two groups, but the group of non-spiritually motivated respondents trended towards being more educated. The respondents whose entheogen use was spiritually motivated were more likely to report a connection to Buddhism and New Age / Alternative spirituality, both in terms of their background and having a present affiliation. There was a tendency for respondents from Western Europe to be less spiritually motivated than the rest of the sample. Spiritually motivated users reported

lower scores on the personality trait Extraversion than non-spiritually motivated users, but higher scores on Openness, Agreeableness, and Risk Taking.

Participants reported having used their chosen entheogen a median of 2-3 times over the past 12 months, with a minority of less than 2% reporting 51-100 or more use occasions. Some 21% reported no use of this entheogen over the past 12 months. The most commonly chosen entheogen was psilocybin (49%), followed by LSD (22%), DMT (12%), and MDMA (7%). Entheogens were most commonly taken in solitude (43%), with a single partner (21%), or with a close group of friends (27%). Some 6% reported using entheogens with a larger group of friends and acquaintances, and 3% reported use at a party, nightclub, concert, festival or other public event. Respondents most commonly planned their entheogen use a few days or a few weeks in advance. The only significant difference between spiritually and non-spiritually motivated respondents with regard to these usage characteristics was that the former were more likely to choose DMT for the survey (16% vs. 4%, $p = .003$), while the latter were more likely to choose MDMA (2% vs. 19%, $p = .001$).

(Table 1 here)

Religion and Spirituality: Background and Present Affiliation

Most participants reported having a religious background and a present religious or spiritual affiliation. As we can see from Table 2, however, there has been considerable movement between the background and the present affiliation of participants. A number of individuals who had no background in Buddhism, Hinduism, or New Age / Alternative spirituality nevertheless reported a present affiliation with these forms of spirituality. In logistic regression models, such spiritual conversion was associated with mystical entheogenic experiences, operationalized as endorsement of the experiential characteristics ego death or

dissolution, contact with transcendent forces, and unity with transcendent forces (Table 3; for a gender-controlled version see Table A1 in the online appendix).

(Table 2 here)

(Table 3 here)

Conversely, the sole negative change between background and present affiliation was for Christianity, although this change was only marginally significant at $p = .06$. Supporting the overall tendency toward increasing spirituality, 21 respondents endorsed having a spiritual motivation for their later entheogen use but not for their initial explorations (Table A2 in the online appendix), indicating that these people picked up an interest in spirituality after initiating entheogen use. Participants were generally quite eclectic in their religious and spiritual preferences, and among those who considered themselves Christians or Buddhists, about half also considered themselves connected to New Age/Alternative spirituality. Among those who reported feeling a connection to Hinduism, 89% also felt connected to Buddhism.

Spiritually motivated entheogen users were significantly more likely than non-spiritually motivated users to have at least at least one spiritual practice besides their entheogen use (77% vs. 51%, $t = 3.89$, $df = 226$, $p < .001$). Meditation was by far the most common practice, with 59% of the spiritually motivated participants reporting a current meditation practice. Other commonly reported forms of practice among these respondents included visualization/inner journeys (37%), reading spiritual or religious texts (25%), hatha yoga (19%), dream work (21%), prayer (15%), and energy work (17%).

Motivations for Entheogen Use

The most commonly endorsed motivations for entheogen use were insight and understanding for personal growth and psychological self-exploration, and especially so for the 69% of respondents who indicated that their use was spiritually motivated (Table 4). A majority of these spiritually motivated respondents also endorsed being motivated by a wish to cure or heal personal problems, to obtain the experience of ego death, and by curiosity and a search for adventure, while non-spiritually motivated respondents endorsed these items at significantly lower levels. There was no significant difference between the two groups with regard to recreational motivations, which may indicate that participants did not necessarily see spiritual and recreational motives for entheogen use as incompatible. We probably see similar overlapping motives for instance for church attendance, which has recreational value for many people in the sense that it is a way to meet friends and neighbors. The impact from the variable for spiritual motivation generally maintained significance when controlled for a range of demographic and personality trait variables in logistic multivariate regression analyses (Tables A3-A4 in the online appendix).

(Table 4 here)

Characteristics of Entheogen Experiences

The most commonly endorsed characteristics for a typical entheogenic experience related to insight, positive emotions, and improved connections with nature and other people (Table 5). This was true both for spiritually and non-spiritually motivated respondents, although the former endorsed these characteristics at higher levels. Mystical-type characteristics were less common, and were endorsed at significantly higher levels by spiritually motivated users. Relatively few respondents endorsed negative characteristics such as anger or hate, confusion, disgust, fear, and sadness, and although the effect was mostly not significant, spiritually motivated respondents trended toward higher levels of endorsement. It is possible that

entheogen use for the purpose of inducing spiritual experiences tends to involve higher dosages than use in recreational settings, and use of high doses probably also leads to more challenging experiences.

(Table 5 here)

In order to test whether these differences between spiritual and non-spiritual motivations would remain significant under statistical control from demographic variables and personality structure, logistic multivariate regression analyses were performed for each experiential characteristic. Three models for ego dissolution and contact experiences are presented in Table 6 (for a gender-controlled version see Table A5), while the remaining models are available in Tables A6-A8 in the online appendix. The impact from the variable for spiritual motivation on experiential characteristics generally maintained statistical significance in these models, indicating that spiritual motivation has an independent impact on entheogenic experiences that is not reducible to demographics or personality structure. It is also interesting to note that the Openness trait positively predicted mystical-type contact experiences, while the Extraversion trait served as a negative predictor of such experiences. The effect from Extraversion on contact experiences probably relates to the fact that such experiences are introvertive in nature, and high extraverts are more oriented towards social interactions. Ego death experiences were positively predicted by the respondents' propensity for risk taking, perhaps indicating that respondents regard such experiences as challenging or that such experiences are frequently the result of using entheogens in high doses, which risk-takers may be more inclined to do.

(Table 6 here)

Consequences of Entheogen Use

Respondent-assessed consequences of entheogen use were measured on a five-level Likert scale, with scores above the middle value of three indicating positive consequences. With few exceptions, respondents reported that their entheogen use had either neutral or positive consequences for their physical and psychological health, their spiritual practice, their ability to get along with people, and their personal happiness (Table 7). Spiritually motivated respondents reported significantly better consequences across the board. This finding might be related to the tendency among spiritual entheogen users to understand personal growth as a form of spirituality (Johnstad, 2021b).

(Table 7 here)

Linear multivariate regression analyses were performed to test the impact from spiritual motivation under statistical control from variables related to demographics and personality structure. The models for spiritual practice, psychological health, and personal happiness are presented in Table 8 (for a gender-controlled version see Table A9), while the two remaining models are available in Table A10 in the online appendix. The impact from the variable for spiritual motivation maintained significance in the three models in Table 8, while the trait Openness predicted better psychological health. Having an escapist motivation predicted worse outcomes with regard to psychological health and one's ability to relate to other people, while mystical experience predicted improvements in spiritual practice, personal happiness, and physical health.

(Table 8 here)

Discussion

The findings of this survey study largely confirm the understanding of entheogenic spirituality in my original interview study (Johnstad, 2018). In both studies, participants reported a moderate usage pattern of entheogenic drugs ranging from a few use occasions per year to about one use occasion per month. There is not much research into usage patterns for entheogens with which to compare these findings, but one recent study in Australia found that the median pattern of use for “hallucinogens” was two times during the past six months (Karlsson & Burns, 2018). In the interview study, this moderate pattern of use was originally understood as a characteristic specifically of spiritual entheogen use, but the present study found no significant difference in usage frequency between spiritually and non-spiritually motivated respondents, and the moderate pattern thus appears to be common generally. Thus, there is support in these survey data for the hypothesis (H1) that spiritually motivated entheogen users tend toward a moderate frequency of use, although this tendency seems to extend also to non-spiritual use.

Some 77% of the spiritually motivated entheogen users reported having at least one form for spiritual practice, supporting hypothesis H2 that was based on the finding from the interview study that entheogen users tend to engage with practices such as meditation and yoga.

Furthermore, this finding is congruent with recent research by Simonsson & Goldberg (2022) and with the ‘seeker narratives’ identified by Dollar (2022). Support was also obtained for the hypothesized preference for intimate social settings (H3), as 91% of survey respondents used entheogens in solitude, with a single partner, or with a close group of friends. However, as with the moderate frequency of use, the spiritually motivated entheogen users were not different from other users in this regard.

A full 69% of the sample endorsed having a spiritual motivation for their entheogen use. This number was significantly above the 60% who endorsed being spiritually motivated for their initial exploration of entheogens, and there were also significant increases in respondent

affiliations to Buddhism, Hinduism, and New Age / Alternative spiritualities as compared to their backgrounds. This is congruent with the finding from the interview study that entheogen users sometimes gained an interest in spirituality because of their entheogenic experiences. The findings support both hypothesis H4 that entheogen users sometimes start out without any interest in spirituality yet end up with experiences they characterize as spiritual, and hypothesis H5 that people who discover spirituality during entheogenic sessions tend to favor eastern religions such as Buddhism and Hinduism. Logistic regression models indicated that spiritual conversion towards eastern religions was associated with the mystical-type characteristics ego dissolution and contact or unity with transcendent forces.

Large majorities of respondents also reported that their entheogen use was motivated by a desire for personal growth and psychological self-exploration, and this applied to both spiritually and non-spiritually motivated users, although the level of endorsement among the former was significantly higher than among the latter. This finding harmonizes well with an understanding of entheogenic spirituality as belonging under the New Age umbrella, as New Age spirituality has been characterized as emphasizing in particular the process of spiritual growth or evolution (Hanegraaff, 1996, 1999) as well as for its tendency to psychologize spirituality (Sutcliffe & Gilhus, 2013). The same might be said for the prospect of healing personal problems, which was a highly endorsed motivation especially for spiritually motivated respondents, and which is reflected in the emphasis on healing practices that characterizes the New Age movement.

Regarding the entheogenic experience itself, the survey findings directly support the characteristics identified in earlier interviews. As hypothesized (H6), having a spiritual motivation for entheogen use had a powerful impact on the resulting experience, and especially so for mystical-type characteristics. Spiritually motivated entheogen users endorsed these experiential characteristics to a significantly higher extent than users without such

motivation. Entheogenic experiences were most commonly characterized by insight and feelings of peace, joy, love, and somewhat more unusually by inner visions, the dissolution of one's feeling of self, and a state of contact or unity with a transcendent force. The latter types of characteristics probably relate to the experience of awe, which has been emphasized in recent entheogen research (Hendricks, 2018; van Elk et al., 2021). Thus, there was evidence in these data of mystical experiences, which have often been the focus of previous research on entheogen-induced spiritual experience (e.g., Griffiths et al., 2006; Lyvers & Meester, 2012; Timmermann et al., 2018; Yaden et al., 2017), but also of a more common and less powerful type of entheogenic experience (Johnstad, 2021b). The emphasis on connectedness to nature identified in these survey data exceeded expectations based on previous interviews, but is congruent with other research findings (Forstmann & Sagioglou, 2017; Lyons & Carhart-Harris, 2018).

There was broad agreement among respondents in seeing mainly positive long-term consequences from their entheogen use, which agrees with previous self-assessments of consequences of entheogen use (Carhart-Harris & Nutt, 2010). As hypothesized (H7), however, spiritually motivated entheogen users reported significantly better consequences from use, and this impact retained significance in multivariate regression models that controlled for demographic factors and variables related to personality structure. The positive assessment extended even to what they regarded as their worst entheogenic experience, which agrees with previous research that found that a large majority of respondents endorsed having benefitted from their most difficult psilocybin experience (Carbonaro et al., 2016).

In conclusion, the Cannabis and Psychedelics User Survey, which was developed on the basis of insights gained from previous interview studies, resulted in data that served to confirm the findings of these previous interviews. Hopefully, the findings of the present study, which should still be regarded as explorative, will lead to further investigations into the apparently

thriving entheogenic movement, which in many ways remain understudied. This applies especially to its spiritual aspects, which has been studied mainly in terms of the centrally important but overly narrow framework of mystical experiences. In order to study entheogenic spirituality in a more comprehensive manner, it will be necessary to develop and validate scales and instruments to measure, among other things, the characteristics of general entheogenic experiences, a possible starting point for which can be the range of emotional, cognitive, and relational experiential characteristics used in the present study. I would acknowledge that a number of well-validated scales have been developed especially for mystical-type entheogenic experience, with recent contributions including the Ego-Dissolution Inventory (Nour et al., 2016) and the Awe Experience Scale (Yaden et al., 2018), and that scales are also emerging for other facets of the entheogenic experience such as emotional breakthrough (Roseman et al., 2019) and psychological insight (Peill et al., 2022). Furthermore, there is also the much utilized five-factor measure of motives for cannabis use that includes an ‘expansion’ motive of spiritual relevance, but no explicitly spiritual indicators (Simons et al., 1998). Nevertheless, the development of a comprehensive instrument for general entheogenic motives and experiences that includes both positive and negative aspects of cognition, emotion, relations, and behavior would seem useful for future entheogen research.

Besides being relatively small and explorative in nature, this study had clear limitations in the sense that participants were recruited via online communities and had to self-select for participation. It has previously been found that participants recruited on the internet have more education and higher incomes (Hamilton & Bowers, 2006), which might potentially bias findings. While the internet is probably more accessible to those with lower education and income levels today than it was in 2006, the internet recruitment in this study may have served to exclude some entheogen users. Furthermore, the study measured motivations for

and experiential characteristics of entheogen use on a dichotomous basis, which does not allow for nuanced responses. (On the other hand, by forcing respondents to make a choice between endorsement and non-endorsement, this approach arguably enabled the detection of a clear signal.) Another limitation of the study was that it recruited mainly among current entheogen users, who as a group are probably favorably inclined towards such drugs. While there is no obvious way to get users of (mostly) criminalized drugs to speak truthfully about their drug use without relying on self-selected participation, this approach to recruitment probably entails an oversampling of people with strong opinions about the merits of entheogen use. The study should therefore be considered biased towards positive results, and its findings have limited external validity until confirmed by future research.

Ethical approval

All research reported in this article was conducted in accordance with the principles stated in the Declaration of Helsinki. Since the survey was anonymous and SurveyXact has an agreement with the University of Bergen guaranteeing General Data Protection Regulation (GDPR) compliance and participant privacy, the Norwegian Social Science Data Services waived ethical approval.

Data availability statement

The data that support the findings of this study are openly available in figshare at

<https://doi.org/10.6084/m9.figshare.13121846.v1>

Declaration of interest

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Table 1. Participant characteristics for 228 Internet survey respondents (grouped according to motivation for entheogen use).^a

	Spiritually motivated users (N = 158)	Non-spiritually motivated users (N = 70)	Diff.
Age	M = 34.6, SD = 12.6	M = 35.3, SD = 11.9	$p = .53$
Gender	16% female, 82% male, 3% other	23% female, 76% male, 1% other	$p = .22^c$
Education	5% PhD 14% Master's degree 24% Bachelor's degree 33% some university 18% high school 6% not completed high school	6% PhD 21% Master's degree 21% Bachelor's degree 41% some university 9% high school 1% not completed high school	$p = .07$
Religious background ^b	15% Buddhist 20% Christian 4% Hindu 4% Jewish 3% Muslim 20% New Age/Alternative	3% Buddhist 26% Christian 1% Hindu 0% Jewish 1% Muslim 9% New Age/Alternative	$p < .01$ $p = .36$ $p = .26$ $p = .10$ $p = .40$ $p = .03$
Religious affiliation at present ^b	40% Buddhist 16% Christian 15% Hindu 6% Jewish 3% Muslim 33% New Age/Alternative	14% Buddhist 14% Christian 10% Hindu 3% Jewish 3% Muslim 17% New Age/Alternative	$p < .01$ $p = .68$ $p = .29$ $p = .36$ $p = .90$ $p = .02$
Geographical location at present	57% North America 23% Western Europe 5% Eastern Europe 9% Oceania 2% Middle East 2% South America 1% Africa 1% Asia	47% North America 44% Western Europe 1% Eastern Europe 6% Oceania 0% Middle East 0% South America 1% Africa 0% Asia	$p = .17$ $p < .01$ $p = .20$ $p = .42$ $p = .25$ $p = .25$ $p = .55$ $p = .35$
Personality traits	3.65 Extraversion 4.91 Conscientiousness 5.99 Openness 4.95 Agreeableness 4.78 Emotional stability 35.65 Risk taking	4.16 Extraversion 4.99 Conscientiousness 5.65 Openness 4.45 Agreeableness 5.00 Emotional stability 32.71 Risk taking	$p = .01$ $p = .71$ $p = .01$ $p < .01$ $p = .25$ $p = .02$

Note: The 'Diff.' column indicates significant difference between the two groups on the Mann-Whitney U test, with significant values indicated in bold ($p \leq .05$). ^aSums may differ from 100% because of rounding. ^bMay sum to more than 100% because respondents could choose several alternatives. ^cOther gender ($N = 7$) excluded. M = mean. SD = standard deviance.

Table 2. Spiritual or religious background and present affiliation.

	Background	Present affiliation	Change	
Buddhism	10%	29%	+ 19%	***
Christianity	23%	18%	- 5%	
Hinduism	3%	12%	+ 9%	***
Islam	2%	3%	+ 1%	
Judaism	2%	5%	+ 3%	
New Age / Alternative	16%	27%	+ 11%	***

Note: $N = 289$. Stars indicate significant difference on the paired t -test between background and present affiliation: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Table 3. Mystical experience as predictor of spiritual conversion in multivariate logistic models.

	Conversion to Buddhism (N = 195)			Conversion to Hinduism (N = 212)			Conversion to New Age / Alternative (N = 183)		
	B	SE	p	B	SE	p	B	SE	p
<i>Intercept</i>	-.833	1.658		.234	2.032		-2.793	1.980	
Age	-.339	.170	*	-.232	.202		.018	.163	
Education	.186	.159		-.150	.202		.076	.186	
Extraversion	-.132	.128		-.124	.166		-.236	.156	
Conscientiousness	-.297	.153		-.103	.199		-.249	.177	
Openness	.141	.202		-.192	.231		.360	.251	
Agreeableness	.293	.149	*	.149	.181		.020	.167	
Emotional stability	-.122	.137		.154	.182		-.005	.167	
Risk taking	-.027	.026		-.062	.035		-.001	.029	
Mystical experience	.467	.103	***	.503	.130	***	.243	.111	*

Note: Results from multivariate logistic models containing 9 independent variables: age, education (quantified from 1 = "Have not completed high school" to 6 = "PhD"), the Big Five personality traits, the overall Risk Taking score (RTI), and an indicator for mystical experience that combines the three experiential characteristics ego death or dissolution, contact with transcendent forces, and unity with transcendent forces. The dependent variable is a dichotomous indicator for having a current affiliation to Buddhism (model Nagelkerke R-square = .27), Hinduism (model Nagelkerke R-square = .20) or New Age / Alternative (model Nagelkerke R-square = .12) among those respondents who did not report having a background in these forms of spirituality. Values in bold represent statistically significant associations. B = unstandardized regression coefficient, SE = standard error, * p <= .05, ** p <= .01, *** p <= .001.

Table 4. Motivation for psychedelics use grouped according to spiritual motivation.

	Non-spiritually motivated users (N = 70)		Spiritually motivated users (N = 158)
Adventure	39%	**	60%
Curiosity	27%	***	52%
Ego death experience	21%	***	52%
Fun/party/recreation	49%		38%
Insight and understanding for personal growth	60%	***	94%
Psychological self-exploration	71%	**	90%
Socializing	27%		21%
To cure or heal medical conditions	10%	**	25%
To cure or heal personal problems	24%	***	53%
To forget or escape from personal problems	7%		8%

Note: Stars indicate significant difference on the independent t-test between spiritually and non-spiritually motivated respondents:

* p <= .05, ** p <= .01, *** p <= .001.

Table 5. Characteristics of a typical psychedelic experiences grouped according to spiritual motivation.

	Non-spiritually motivated users (N = 64)		Spiritually motivated users (N = 156)
Anger or hate	2%		3%
Confusion	17%		26%
Contact with non-ordinary beings	11%	***	31%
Contact with transcendent forces	11%	***	43%
Disgust	2%		6%
Ego death or dissolution	19%	**	38%
Fear	13%	**	28%
Feeling of homecoming or return to your essence	42%	***	67%
Feeling of isolation from other people	11%		13%
Improved connection with nature	55%	***	83%
Improved connection with other people	58%		71%
Inner visions	41%	**	63%
Insight into the world	56%	***	87%
Insight into your relations	69%		76%
Insight into yourself	80%		88%
Joy	77%		87%
Love	63%	**	82%
Peace	70%	**	87%
Regrettable behavior towards others	11%		4%
Sadness	14%		21%
Surprise	25%	***	49%
Unity with transcendent forces	17%	***	51%
Words cannot describe the experience	33%	**	55%

Note: Stars indicate significant difference on the independent *t*-test between spiritually and non-spiritually motivated respondents:

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Table 6. Spiritual motivation as predictor of entheogenic experience in multivariate logistic models.

	Contact with non-ordinary beings			Contact with transcendent forces			Ego death or dissolution		
	B	SE	<i>p</i>	B	SE	<i>p</i>	B	SE	<i>p</i>
<i>Intercept</i>	-3.934	1.617	*	-5.346	1.479	***	-3.714	1.335	**
Age	.183	.138		.098	.127		.157	.123	
Education	-.293	.154		.017	.136		.078	.132	
Extraversion	-.274	.124	*	-.258	.113	*	-.016	.107	
Conscientiousness	.141	.145		.057	.130		.132	.125	
Openness	.687	.218	**	.515	.194	**	-.109	.169	
Agreeableness	-.397	.143	**	-.133	.128		-.012	.125	
Emotional stability	.162	.135		.030	.121		-.127	.115	
Risk taking	-.016	.023		.033	.021		.067	.022	**
Spiritual motivation	1.311	.485	**	1.600	.456	***	.904	.393	*
Escapist motivation	.526	.618		-.226	.600		-1.145	.692	

Note: *N* = 220. Results from multivariate logistic regression models. Each model contains 10 independent variables: age, education (quantified from 1 = "Have not completed high school" to 6 = "PhD"), the Big Five personality traits, the overall Risk Taking score (RTI), a dichotomous variable for spiritual motivation (1 = yes), and a dichotomous variable for escapist motivation (1 = yes). Results from three models are shown, one for each of three dependent variables: contact with non-ordinary beings (model Nagelkerke R-square = .24), contact with transcendent forces (model Nagelkerke R-square = .24), and ego death (model Nagelkerke R-square = .15). Values in bold represent statistically significant associations. B = unstandardized regression coefficient, SE = standard error, * *p* <= .05, ** *p* <= .01, *** *p* <= .001.

Table 7. Consequences of psychedelics use grouped according to spiritual motivation.

	Non-spiritually motivated users (N = 62)		Spiritually motivated users (N = 151)
Physical health	3.34	***	3.79
Psychological health	3.97	***	4.38
Spiritual practice	3.40	***	4.09
Ability to get along with people	3.82	*	4.12
Personal happiness	3.95	***	4.40

Note: Numbers indicate average scores on a five-level Likert scale (from 1 = "Serious worsening" or similar to 5 = "Serious improvement" or similar). Stars indicate significant difference on the independent t-test between spiritually and non-spiritually motivated respondents: * p <= .05, ** p <= .01, *** p <= .001.

Table 8. Spiritual motivation as predictor of consequences of entheogen use in linear multivariate regression models.

	Spiritual practice			Psychological health			Personal happiness		
	B	SE	<i>p</i>	B	SE	<i>p</i>	B	SE	<i>p</i>
<i>Intercept</i>	2.928	.482	***	3.433	.452	***	3.158	.410	***
Age	-.063	.046		-.074	.043		-.052	.039	
Education	.022	.049		-.010	.046		.019	.042	
Extraversion	-.048	.038		-.077	.036	*	-.062	.033	
Conscientiousness	.073	.046		.025	.043		-.012	.039	
Openness	.061	.061		.190	.057	***	.084	.052	
Agreeableness	-.024	.045		-.019	.042		.037	.038	
Emotional stability	-.073	.041		.024	.039		.022	.035	
Risk taking	.010	.008		-.005	.007		.012	.006	
Spiritual motivation	.355	.137	**	.254	.129	*	.241	.117	*
Escapist motivation	.091	.206		-.542	.193	**	-.100	.175	
Mystical experience	.159	.030	***	.049	.028		.055	.026	*

Note: *N* = 213. Results from multivariate logistic regression models. Each model contains 11 independent variables: age, education (quantified from 1 = "Have not completed high school" to 6 = "PhD"), the Big Five personality traits, the overall Risk Taking score (RTI), a dichotomous variable for spiritual motivation (1 = yes), a dichotomous variable for escapist motivation (1 = yes), and an indicator for mystical experience that combines the three experiential characteristics ego death or dissolution, contact with transcendent forces, and unity with transcendent forces. Results from three models are shown, one for each of three dependent variables: spiritual practice (model adjusted R-square = .26), psychological health (model adjusted R-square = .15), and personal happiness (model adjusted R-square = .13). Values in bold represent statistically significant associations. B = unstandardized regression coefficient, SE = standard error, * *p* <= .05, ** *p* <= .01, *** *p* <= .001.