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I pledge my honor that I have abided by the Stevens Honors System.

Destigmatizing Altered States of Consciousness

The mystic dances in the sun,

hearing music others don't.

'Insanity,' they say, those others.

If so, it's a very gentle,

nourishing sort.

-Rumi

As one textbook of psychiatry notes, “the obvious similarities between schizophrenic regressions and the practices of yoga and zen meditation” (Alexander and Selesnich 457) are an incredibly important comparison to examine, especially for those who have had direct experience with either subject. This comparison is based on two significantly different outcomes that stem from similar pivotal experiences. One outcome is characterized by increased socialization, positive change in well-being, and deeper feelings of peace. On the other side of the spectrum,

pivotal experiences can also lead to psychotic or dissociative reactions, a condition which 2.8 million adults in the United States are currently diagnosed with. Many researchers have observed that these distinct outcomes arise from parallel beginnings, primarily, altered states of consciousness (ASCs) induced by a life-changing experience. These experiences can be profoundly traumatic for individuals, leading to sudden dramatic change. They can also be spiritual in nature, either naturally occurring or instigated by psychedelic drugs. In this essay, I would like to discover what links these experiences, and spur the conversation on how individuals who have experienced pivotal states can best transition from negative outcomes into positive ones. First, I will outline the current conversation on the parallels between schizophrenic and mystical experiences, and make the claim that the outcomes of these experiences are based on societal (in)tolerance for mystical experiences in addition to genetics and personal experience. Next, I will compare psychedelic experiences with mystical experiences, and examine the importance of set and setting. Finally, I will extrapolate the concept of set and setting to society as a whole, and make the claim that our society is currently not conducive to positive spiritual experiences, and this intolerance is to blame for the psychotic or dissociative reactions to pivotal mental states.

Parallels of Pivotal Experiences

Many researchers have observed that the pivotal experiences leading to psychosis or spiritual revelations are parallel, and can branch to either based on context and personal background. A pivotal mental state (PiMS) is a construct developed by Ari Brouwer and neuroscientist Robin Carhart-Harris which they describe as “an evolved human capability for sudden and radical psychic change” which can “mediate psychological transformation” in

individuals (Brouwer 5). Some naturally occurring pivotal experiences include “social loss, despair, physical illness, metabolic disturbance or extreme danger” (Brouwer 7). Besides being clearly stressful situations, these experiences all have shared neurobiological processes, specifically, the activation of the serotonin 2A receptor which “increases neuroplasticity, thereby facilitating certain forms of learning that might help an individual overcome challenges” (Brouwer 5-6). While these experiences are painful, pivotal mental states can “function to promote radical transformation” in individuals (Brouwer 6), leading to long-term growth and sustained life improvements. However, PiMSs also have the potential to send individuals into a frightening downward spiral, ultimately leading to psychotic delusions or paranoia. According to Brouwer, the deciding factors for positive or negative experiences are very broad, including “genetic susceptibility, prenatal development, early life experience, adolescence, young adulthood, and... the immediate context surrounding a specific pivotal experience” (6). To highlight the context-based factor, Brouwer proposes the following scenarios. In the first scenario, a monk leaves his community behind, and with their blessings embarks on a spiritual retreat through the woods. For 30 days, he sleeps little, eats nothing, and concentrates only on deepening his connection with God. In the second scenario, a prisoner is forced into solitary confinement for 30 days. Deprived of food and water, he is humiliated by his captors, and can hardly sleep due to the bright lights in his cell (Brouwer 6). While both scenarios are likely to trigger PiMSs, the similar physiological stressors are different in their “social context... The monk consents to his experience, welcomes the presence of benevolent agency (eg, God), and prepares for positive change. Our prisoner does not consent, and prepares to resist the influences of what he perceives to be malevolent agents (his captors)” (Brouwer 6). This difference in social context is crucial to determining if a PiMS will lead to a positive or negative outcome.

Brouwer is correct in highlighting the importance of social context, but I would expand on his reasoning and argue that the difference in outcomes has roots in a cultural intolerance for spiritual experiences. To explore this, we can look at one profound area of overlap between the two, which Brouwer calls “the prevalence of religious delusions or spiritual themes in psychosis” (3), (alternatively, the prevalence of psychotic themes in the religious experience) specifically a feeling of closeness to God. John Cusance, author of *Wisdom, Madness and Folly: The Philosophy of a Lunatic*, describes his feelings during a manic phase of bipolar disorder: “I feel so close to God, so inspired by His Spirit that in a sense I am God. I see the future, plan the universe, save mankind: I am utterly and completely immortal; I am even male and female. The whole Universe, animate and inanimate, past, present and future, is within me” (Cusance). Nearly identical feelings are also expressed by some of the most influential spiritual texts around the world. In the revered *Tao Te Ching*, a classic Chinese text describing the Tao, or the Way, Lao Tzu says, “See the world as your self” (13). In *The Art of Peace*, Morihei Ueshiba, who some call history’s greatest martial artist, echoes this: “All the principles of heaven and earth are living inside you... When you bow deeply to the universe, it bows back. When you call out the name of God, it echoes inside you” (22, 123). In comparison to those with positive spiritual experiences, “the onset of psychosis in particular involves a strikingly similar transformation of reality,” however, the main difference is that the psychotic’s pivotal experience is “one that precedes a frightening descent into mental illness” (Brouwer 1). This “descent” is characterized by panic, terror, or paranoia, while certain spiritual texts describe contradicting feelings. This is clear in *The Art of Peace*, which is characterized by a dedication to self-improvement and the practicing of virtues. Ueshiba compels us to “calm the spirit and return to the source. Cleanse the body and spirit by removing all malice, selfishness, and desire. Be ever-grateful for the gifts

received from the universe, your family, Mother Nature, and your fellow human beings” (37). It is not that beings like Lao Tzu or Ueshiba just so happened to have favorable genetics and a positive childhood. Alongside these factors, a lack of tolerance for spiritual experiences in Western culture is to blame for the “descent into mental illness.” For this, we need to examine the pivotal mental states that are induced by psychedelic drugs, and the clinically proven importance of set and setting.

Set and Setting

In his essay “The Trip Treatment” American journalist Michael Pollan reported on the experience of Patrick Mettes in a clinical psilocybin trial conducted by New York University in 2010. At the time of writing, Mettes was a 54-year-old television news director who had been diagnosed with cancer of the bile ducts three years earlier. He was admitted into the program after intensive screening for psychological problems. The co-principal investigator of the trials, psychologist and therapist Anthony Bossis, went to great lengths to ensure a proper set and setting for Mettes’ trial. Set and setting refers to one’s mindset going into a psychedelic experience as well as the physical environment they are located in (Pollan). For Mettes’ sessions, Bossis took care to create a “room decorated to look more like a living room than like a medical office, with a comfortable couch, landscape paintings on the wall, and, on the shelves, books of art and mythology” (Pollan 1). During the session, Mettes would lie on the couch “wearing an eye mask and listening through headphones to a carefully curated playlist... a second therapist would be there throughout, saying little but being able to help should [Mettes] run into any trouble” (Pollan 1). The results of these trials were profound. According to Pollan, “cancer patients receiving just a single dose of psilocybin experienced immediate and dramatic

reductions in anxiety and depression, improvements that were sustained for at least six months” (2-3). Empirical data from the modern resurgence of psychedelic drug research shows us that hallucinogens have the potential to reorient our minds for the better. Neuroscientist at John Hopkins University, Roland Griffiths, “likens the therapeutic experience of psilocybin to a kind of ‘inverse P.T.S.D.’ - ‘a discrete event that produces persisting positive changes in attitudes, moods, and behavior” (Pollan 11). Pollan makes the suggestion that “great secrets of the universe often become clear during [these] journey[s]” (11). At the end of his trial, Mettes reflected on his experience: “Love was the only consideration. It was and is the only purpose. Love seemed to emanate from a single point of light. And it vibrated... no sensation, no image of beauty, nothing during my time on earth has felt as pure and joyful and glorious as the height of this journey” (Pollan 10). Feelings of such profound understanding are reminiscent of the positive mystical experiences as described by Lao Tzu and Ueshiba. The connections between the two are further suggested by Roland Griffiths in a 2006 study.

Intrigued by the spiritual aspect of psychedelic drugs, Griffiths conducted a double-blind experiment with 36 participants, paying close attention to set and setting. In the conclusion of his research paper published in the journal *Psychopharmacology*, Griffiths noted that “psilocybin occasioned experiences similar to spontaneously occurring mystical experiences” (1). Griffiths used many cross-cultural questionnaires such as the *mysticism scale*, developed by psychologist Ralph Hood, the *spiritual transcendence scale*, and the *states of consciousness questionnaire*, among others, to determine the legitimacy of the participants’ experiences. These questionnaires were designed to test a participant's feelings of internal and external unity, sacredness, intuitive knowledge, transcendence of space and time, ineffability, and more (Griffiths 10), and then compare them to spontaneously occurring mystical or religious experiments. This study was

meant to be an expansion of Walter Pankhe's *Marsh Chapel Experiment*, which I will detail in a later section. If we accept psychedelic experiences to be of a similar nature empirically to mystical experiences, we can extrapolate that set and setting is key to the positive or negative outcomes brought on by either experience. This also shows why "the recreational use of psychedelics is famously associated with instances of psychosis, flashback, and suicide" (Pollan 8). As Pollan notes, "a psychedelic therapy session and a recreational psychedelic experience have very little in common" (9). Recreational use of psychedelic drugs can be quite disarming to individuals lacking a healthy mindset and/or a safe physical environment.

Clearly, set and setting is incredibly important in contributing to a positive psychedelic experience, and more broadly, mystical experiences in general. We can compare the direct differences in the reports of Anton Boisen, who once suffered from psychosis at a psychiatric hospital in 1920, and Aldous Huxley, who was a participant in a controlled psychedelic experience. In *The Exploration of the Inner World*, Boisen describes his experience of psychosis as such: "Strange and mysterious forces of evil of which before I had not had the slightest suspicion were also revealed. I was terrified beyond measure... There is probably no three-weeks period in all my life that I can recall more clearly. It seemed as if I were living thousands of years within that time" (3). In *The Doors of Perception*, an essay detailing his experience with mescaline in a controlled environment, Huxley notes something similar about time: "My actual experience had been... of an indefinite duration... of a perpetual present" (21). Huxley became indifferent to space and time, not lost in it but simply disinterested. When asked about time, he would repeatedly answer, "There seems to be plenty of it" (21). With this example, it is clear how parallel experiences can have vastly different effects on an individual based on their environment. Boisen was horrified by the experience of infinite time, while to Huxley it hardly

seemed to matter. This difference can be attributed to Boisen and Huxley's set and setting. Admitted to a psychiatric hospital by his family, Boisen had little trust in his environment. He felt quite alone, surrounded by other patients deemed too unwell for society, and was even told his condition (*catatonic dementia praecox*, now disused) held "no hope for recovery" (4). Through a window in his room, he saw what appeared to be a cross of light over the moon, which he took to be "a confirmation of my worst fears... that of a coming world catastrophe," an observation which an attendant confirmed, furthering Boisen's anxiety (4). Boisen eventually discovered that the cross of light was actually a hole in the wire screening of his window, and "with this discovery the edifice I had reared upon the basis of the original [fear] began to fall. And only a few days later I was well again" (4). It is important to note that a change in perspective of his environment was enough to settle Boisen's troubled mind. Huxley, who was also experiencing a pivotal mental state, had a much more desirable set and setting. Researchers interested in adding to the psychological material concerning psychedelic drugs had Huxley take four-tenths of a gram of mescaline in the comfort of his own home. During the experiment, the researchers guided Huxley's experience by asking thought-provoking questions. Huxley recalls that "all conversations were recorded on a dictating machine, and it ha[d] been possible for me to refresh my memory of what was said" (17). Huxley was also free to explore his study and garden, contemplating flowers, art books, and chair legs. Alongside the encouraging researchers, his wife was there to offer support. Contrary to Boisen's delirium in the psychiatric hospital, Huxley felt comfortable "exploring the glory and the wonder of pure existence" (34) in a safe and relaxing environment.

Spiritual Intolerance

In Western psychiatry, ASCs are usually “regarded as pathological,” and people who have had these experiences are “neurotic or psychotic” (Walsh 2). Put simply, Western society does not have the correct “set and setting” to accommodate spiritual experiences. Because of this, periods of crisis that might “lead to a life-changing spiritual experience” can potentially lead to a “psychotic episode” instead (Brouwer 11). There are several reasons for this lack of social acceptance for spiritual insight. Roger Walsh, professor of psychiatry, philosophy, and anthropology at the University of Irvine, suggests that our dangerous ignorance is related to “the limited range of Western categories for states other than waking, sleeping, and pathological ones” (2). Huxley finds the same lack of vocabulary to be a cause for concern. He notes that, “Every individual is... the victim of the linguistic tradition into which he has been born... in so far as it confirms him in the belief that reduced awareness is the only awareness” (23). Our lack of vocabulary for describing ASCs adds to their stigmatization. We are limited in our ability to express “the various ‘other worlds’ with which human beings erratically make contact” and because of this, only the most common states of consciousness (waking, sleeping, pathological) are “consecrated as genuinely real” (Huxley 24). Walsh also blames cognicentrism for the censure of ASCs. He describes this as “the tendency to assume that one’s own usual state is optimal” (2). Many researchers and psychiatrists do not have direct experience with ASCs, which can impact trust in professionals. In her essay titled “Spiritual Aspects of Psychosis and Recovery,” Dr. Susan Mitchell examines how patients can be wary “to discuss spiritual issues with psychiatrists for fear that their concerns will be dismissed as illness” (5). This is a deeply rooted societal issue that can have devastating outcomes. A feeling of validity for one’s personal experience is incredibly important for recovery. Without this validation, a patient will experience fear and be less likely to open up to the people trying to help them. This fear may also be

isolating and make symptoms worse. As Mitchell notes, “fear can get in the way and impede communication, both the fear experienced by the patient and the fear of the doctor or therapist” (7). Mitchell echoes Walsh and Huxley’s gripes with cognicentrism, and suggests that we must utilize alternative “languages” to describe ASCs, such as “drama, art, literature [especially poetry] and music; some way for the person to turn their pathology round in a productive and creative direction” (7). These artistic endeavors can be used by patients and doctors alike to get around the limitations of cognicentrism and lead to more understanding and compassion, ultimately helping in recovery. When dealing with the recovery of patients, Mitchell suggests that “a practical, grounded, ‘recovery-oriented’ spirituality that incorporates humanity and compassion while accepting the integrity of personal experience is invaluable” (8).

There are also deeper societal reasons for the intolerance of spirituality in Western society. For this, we can again return to psychedelics, and examine their history in the United States’ counter-culture. One important case study to examine is the *Marsh Chapel Experiment*, conducted in 1962 by Walter Panke, a Ph.D student working under Timothy Leary at Harvard. This was a double-blind experiment in which 20 students ingested a capsule of either psilocybin or an active placebo of nicotinic acid, and observed a Good Friday service at March Chapel in Boston. According to Pollan, “eight of the ten students receiving psilocybin reported a mystical experience while only one in the control group experienced a feeling of ‘sacredness’ and a ‘sense of peace’... Pankhe concluded that the experiences of the eight who received the psilocybin were ‘indistinguishable from, if not identical with,’ the classic mystical experiences reported in the literature by William James, Walter Stance, and others” (4). These findings align with the modern interpretations of Griffiths, Mettes, and others. 60 years later, Paul Gillis-Smith, a correspondent for the Harvard Divinity School, interviewed Dr. Christian Greer for the Harvard

Religion Beat podcast. Dr. Greer, a postdoctoral at Harvard's Center for the Study of World Religions, commented on the significance of the study: "On one level, it was a media sensation. All of the Boston newspapers picked it up, drugs reported to induce mystical experience, and allegedly, it was proven by a Harvard scientist, and a group of Harvard and MIT intellectuals." Greer suggests that the provocative news was enough to cause a stir in the country. He continues, "If we have these sacraments, are the churches obsolete? Is this the religion of the future? All of a sudden, there is no middleman between me and ultimate reality, me and God... Does this make all religion obsolete?" Greer suggests that the culture of the United States at the time was not ready for the surge of spirituality brought on by psychedelics, as they were threatening to greater existing systems. Pollan echoes this, reflecting on a conversation with Griffiths: "'There is such a sense of authority that comes out of the primary mystical experience that it can be threatening to existing hierarchical structures,' Griffiths told me when we met in his office last spring. 'We ended up demonizing these compounds'" (Pollan 5). A complete survey of the demonization of psychedelic drugs is beyond the scope of this paper. See more information in ...

Conclusion

The pivotal mental states that can lead to schizophrenia and psychosis or spiritual revelations run parallel, and determining what causes a positive or negative experience is of utmost importance to those who have encountered altered states of consciousness. In this paper I hope to have outlined the conversation in regards to the profundity of ASCs and how they can have different effects on individuals. As I have illustrated, ASCs can be triggered by pivotal mental states caused by extremely stressful situations or otherwise instigated by the use of psychedelic drugs. These pivotal moments can "culminate in either illness or revelation and

personal growth” (Brouwer 4-5), based on social context. After recovering from his delirious state, Boisen notes the subjectivity of this paradigm: that “certain types of mental disorder and certain types of religious experience are alike attempts at reorganization. The difference lies in the outcome. Where the attempt is successful and some degree of victory is won, it is commonly recognised as religious experience. Where it is unsuccessful or indeterminate, it is commonly spoken of as ‘insanity’ (viii). Boisen’s acknowledgement of the loose definitions involved are crucial. In this view, spiritual revelations are only legitimate if society (or the individual) deems it “a victory.” On the other side of the coin, psychotic delusions are only psychotic delusions contextually.

After confirming that psychedelic experiences can be equated to valid spiritual revelations by investigating the studies of Griffiths and Pankhe, the concept of set and setting was determined to be of common ground. One’s physical environment as well as their mental state are decisive in whether a psychedelic experience is positive or negative, and following this, one’s broader cultural environment and societal state are decisive in determining whether a pivotal mental state will promote radical transformation or psychological disorganization. At least for now, spiritual experiences are not conducive to the society we live in, which diminishes the validity of positive experiences and increases the consequences of negative ones. In dealing with this, we can turn to Dr. Mitchell for advice, who suggests that, “accepting the integrity of personal experience is invaluable” (8). Continuing the conversation on ASCs, working towards the integration of personal validation with doctors and therapists, and compassion-based recovery models are all integral in working towards the destigmatization of ASCs. These actions can all help dramatically in undoing the harms that the Western rationalist perspective has had on individuals experiencing psychosis and schizophrenia. Speaking from personal experience, it can

also be helpful to reorient our lives on the small scale, emulating Bossis' recommendations for proper set and setting. While it may seem trivial, little things like listening to calm music, taking walks through nature, and taking time for ourselves can help us relax and avoid triggers.

Obviously, we cannot always exist in a perfect set and setting, but curating our lives towards a more peaceful environment can help us respond to challenges from calmer perspectives.

Hopefully in these ways we can turn adversities into positive learning experiences.

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