

2018

Determining Criteria for Distinguishing States of Consciousness

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Walden University

College of Social and Behavioral Sciences

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Barry Klein

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Walden University
2018

Abstract

Determining Criteria for Distinguishing States of Consciousness

by

Barry M. Klein

MS, University of Southern California, 2001

BS, California State University, 1983

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Psychology

Walden University

February 2018

Abstract

Even though there are many views on consciousness theory in the pertinent literature, there remains a need for a unifying framework for specifying the features of specific states of consciousness. In order to know what kinds of experiences conscious states have in common, researchers need to elicit testimony that is more direct and finer-grained than has been previously available. This dissertation endeavors to fill a gap in current research by addressing concepts and methods for making requisite distinctions and illuminates the question of whether specific states of consciousness can be reliably and validly distinguished from each other. In order to do this, 41 individuals were invited to be interviewed. The interview was designed as a conversational-type synthesis of 5 well-known questionnaires pertinent to states of consciousness, but without their explicit and implicit assumptions; that is, the volunteers' responses would not conform to predetermined questions. Encoding their responses allowed me to develop a model that helped to answer the research question ("Are there identifiable features that can reliably and validly distinguish among states of consciousness thought to be distinct from each other?") by formulating a model in which any given conscious state can be catalogued in terms of its component factors (background, resistances, setting, induction, tradition, energies, and breakthrough events). The results of this study provide much-needed insights into people's internal experiences of their various states, thus forming a basis for improved treatments and analyses. Better understanding of these states can be an impetus for social change by allowing for more incisive analyses and treatments, as well as fostering improved interpersonal communications.

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Chapter 1: Introduction to the Study

A recurring theme, in transpersonal psychology as well as in most forms of psychotherapy, is how to scientifically specify and operationalize subjective and nonverbal data, especially from nonordinary states. Numerous theories and methods have been proposed for determining the most useful and reliable approaches for reliability and validity. Examples of such approaches include use of neuro-imaging as feedback on meditative and heightened states (Alyushin, 2011; Cahn & Polich, 2013; Carhart-Harris et al., 2014; de Araujo et al., 2011; Huth, Nishimoto, Vu, & Gallant, 2012; Moll et al., 2014); use of psychometric tests and scales (e.g., Muhamad, Roodenburg, & Moore, 2014; Dittrich, Lamparter, & Maurer, 2006; Hood, 1975; Pekala, Steinberg, & Kumar, 1986); use of measures sensitive to the meaningfulness of auditory hallucinations (Suri, 2011); use of dream states (Hobson, 2009; Wamsley, Domhoff, Perogamvros, & Cicogna, 2013); use of psychedelic substances (Alyushin, 2011; Anderson, 2015); and my own approach that combines many of the above methods. Each of these approaches is summarized and cited in Chapter 2.

Background

Even though there are many views on consciousness theory in the pertinent literature, there remains a need for a unifying framework for specifying and operationalizing the features of specific states of consciousness. This approach has been impeded by a systemic resistance, among researchers within cognitive and consciousness studies, to regard people as having a more-or-less standard conscious state in which they perform all their responsibilities and have their relationships, a dreaming state, a

dreamless sleep state, and, in some cases, a higher or *cosmic* consciousness (Frecska, 2008; Wilber, 2000). Some of the gaps in previous research are that (a) existing models and approaches (e.g., dynamic ground, perennial philosophy, hierarchal models, phenomenological models, paradigms based on religious dogma, “common sense,” or symbolic archetypes such as astrology, Tarot, and *I-ching*) have only limited utility and inadequate theoretical bases; (b) individuals have been describing wide ranges of conscious states for thousands of years, yet Western academics commonly subscribe to a perspective of little more than “sleeping and waking”; and (c) “professional objectivity” has often trivialized the supernatural and the miraculous as delusion and superstition, or have “explained away” those phenomena as merely heightened acuity to physical attributes (Friedman & Pappas, 2006).

Relevant papers from the literature, discussing theories and methods for discriminating among levels of consciousness and self-awareness, are reviewed in Chapter 2. Chapter 1 sets the stage for the literature review in Chapter 2 and the discussion of methodology in Chapter 3.

Problem Statement

In order to know what kinds of experiences ordinary and nonordinary states have in common, what people see and feel, whether the experiences change their lives in some way, and how durable such changes are, researchers need to elicit testimony from them that is more direct and finer-grained than has been previously available. Many studies have been conducted over the years on some of these questions (Cardeña & Alvarado, 2014; Cardeña & Pekala, 2014; Hartelius, 2007; Kerns, Karcher, Raghavan, &

Berenbaum, 2014; Klein, Altinyazar, & Metz, 2013; MacDonald & Friedman, 2002; MacLean, Leoutsakos, Johnson, & Griffiths, 2012; Vollenweider & Geyer, 2001), but a critical level of detail, which has not been addressed in the literature, is how cognizant and intentional state shifts can be, and whether such knowledge could lead to improved therapies and methods of self-improvement.

With this dissertation, I endeavored to fill a gap in current research by addressing concepts and methods for making requisite distinctions among various states of consciousness that have not previously been identified adequately. The results of this study provide much-needed insights into people's internal experiences of their state shifts, including dysfunctional, pathological, and nonordinary states, thus forming a basis for improved treatments and analyses. Better understanding of these shifts can be an impetus for social change by allowing for more incisive analyses and treatments and enabling greater understanding of other people's inner process, thus providing for better communications and agreements between individuals, communities, and even nations. At the same time, the findings of this type of study can help researchers and practitioners reduce harm that may occur by the confounding of psychopathology with higher levels of functioning when it involves spiritual and transpersonal experiences (Cortright, 1997, Ch. 6; MacDonald & Friedman, 2002; Pappas & Friedman, 2012).

Research Design

This current study seemed best suited to a qualitative design due to the need for understanding what kinds of nonordinary experiences people have had, how those

experiences have affected their lives, and how consistent such findings might be shown to be. One approach was phenomenological (Creswell, 2007) according to these criteria:

- It is necessary to understand the common experience of people who have shared an insufficiently understood occurrence, without presumptions.
- There should be a considerable philosophical groundwork to the topic.
- The meaning of the phenomenon must be expressed in the personal terms of the informants.

Numerous and diverse research models have been used for this type of research, including *neuroscience* (Boly et al., 2008; Cahn & Polich, 2013; Daitch et al., 2013; Freedman, 2010; Haas, 2011; Luke & Friedman, 2010; Picard & Craig, 2009; Shields, 2006; Vollenweider & Kometer, 2010; Walley & Weiden, 1973;), *consciousness and psychoanalytic theory* (Adamski, 2011; Farrer & Frith, 2002; Hobson, 2009; Hunt, 2007; James, 2011; Paller & Suzuki, 2014; Polito, Langdon, & Brown, 2010; Rosenthal, 1993; Suhail & Ghauri, 2010; Walker & Johnson, 1974), and *approaches to observing state features* (Dubois & VanRullen, 2011; Frecska, 2008; Gecici et al., 2010; Griffiths, Richards, McCann, & Jesse, 2006; Huth, Nishimoto, Vu, & Gallant, 2012; Just, Cherkassky, Buchweitz, Keller, & Mitchell, 2014; Kerns, Karcher, Raghavan, & Berenbaum, 2014; Marks, 2014; Melo, R., 2011; Novoa & Hunt, 2009; Pistoia, Mura, Govoni, Fini & Sara, 2010; Strassman, 2008; Zvielli, Bernstein, & Koster, 2014).

The choice of a holistic qualitative methodology as the appropriate means to examine the phenomena is examined in depth in Chapter 3. Literature supporting the

methodology and instruments are presented in Chapter 2, and the proposed method for this study is explored in depth in Chapter 3.

Research Question

In light of the previous sections, my research question can be summarized as follows: Are there identifiable features that can reliably and validly distinguish among states of consciousness thought to be distinct from each other?

Definition of Terms

The literature varies in the depiction and vocabulary used for the subject of conscious states, so the following list includes the most appropriate terms for this particular paper.

- *Altered state*: Transient state of consciousness, independent of structures, discrete from each other—see also *peak experience* (Wilber, 2000);
- *Bardo*: A term from The Tibetan Book of the Dead, similar to the idea of purgatory; a place between worlds; the shadow side (Evans-Wentz, 2009);
- *Conscious state*: A particular frame of experience or perspective that contains its own reference points and features (Pagel, 2012);
- *Consciousness*: A particular level of awareness (e.g., dreaming, waking, rapture, trance; Pekala, Wenger, & Levine, 1985). Note that I am side-stepping many philosophical issues pertaining to consciousness, including the “hard question” of who or what it is that makes the observations and considers the meaning of everything; the goal in this dissertation is practicality;

- *Marginalia*: A researcher's observations of interviewee responses (e.g., facial expressions, posture shifts, breathing changes, utterances) which were not specific answers to questions (McClelland, 2016);
- *Pathological states*: Those states in which people lose control over themselves or feel lost or confused (Tarlaci & Pregnolato, 2015);
- *Peak experience*: Transient state of consciousness which is ecstatic, life-changing, or mystical, independent of ordinary structures – see also *altered state* (Wilber, 2000, p. 134);
- *Qualia*: Distinct experiences or influences relating to or describing recalled memories (Tressoldi, Facco, & Lucangeli, 2016);
- *Set*: The participant's frame of mind and composure (Cortright, 1997);
- *Setting* (whether in a laboratory, hospital, residence, or nature): A condition which supports the transformational process (Cortright, 1997);
- *Spirit*: Any supernatural force or entity, whether real or imagined (Cortright, 1997); according to Wilber (2000), the term may be confused with soul, but is the highest part of a being;
- *State features*: Recognizable impressions, feelings, sensory perceptions, or realizations (e.g., falling, bliss, epiphany, other-worldliness) which would distinguish a given state from other states if the premise of this proposal can be demonstrated (Pagel, 2012);
- *Trance state*: Any of a range of states in which one's attention is narrowly focused and external stimuli have little or no effect (Walsh, 1995). Such states

may be induced by another person, by some monotonous external stimulus, by a substance, or by internal practice such as meditation;

Transpersonal, mystical, or transcendent states: States having ineffable, noetic, divine, other-worldly, or revelatory qualities (Walsh, 1995).

Assumptions

For this study, I assumed that a qualified observer (see Chapter 3, Method, “The Researcher”) could be both sensitive and objective enough to collect complex-reported consciousness data accurately, and that participants could report these intelligibly, although not necessarily verbally. Such an observer would need to have experienced a sufficient range of transpersonal and related experiences that s/he will be able to recognize and distinguish what most volunteers reported or indicated, or at least could relate to these experiences. I also assumed that the optimal volunteer subject would be relatively free of addictions (understanding that psychedelic-using volunteers will likely have long histories of usage) and complex psychopathologies in order to provide manageable data.

Summary

In Chapter 1, I introduce the basic premises for this current study, the research question, and the type of approach taken in researching the problem.

In Chapter 2, I review the literature, beginning with current and classic research on state-distinguishing, and then current approaches like neuroscience and cognitive styles.

In Chapter 3, I present the methodology of the study including a description of the tools used in this study and a description of the proposed population, design, and analysis.

In Chapter 4, I provide details of the research methods I used, elaborate on the interview data, organize them into useful categories, compare them to five standard instruments, and compare them to a follow-up survey I developed from the original transcripts.

Chapter 5 includes an evaluation my data and methods, details on the limitations of the study, and a proposed model for categorizing specific states of consciousness in terms of the discriminating factors I developed in Chapter 4.

Chapter 2: Literature Review

Introduction

Chapter 2 includes a review of the literature and forms the basis for my research on the use of several validated instruments for measuring states of consciousness in individuals of various backgrounds, including people with significant training in self-transformation; people experienced with psychedelics, hypnosis, and other methods of inducing altered states; and generally typical people. This review comprises a systematic search of a variety of databases and different search engines for articles on the subject published as far back as the 19th century; the reason for this is that much of the theoretical and philosophical bases for this research was put forth at the beginning of the era of modern psychology and later sidelined in favor of more narrowly empirical approaches. Databases included Academic Search Complete, EBSCO Host, Google Scholar, OVID, ProQuest, PsycINFO, PsycARTICLES, SAGE Full-Text Collections, and Wiley Interscience. Sources from the Internet included web pages of established psychological and consciousness-studies organizations, for example, the Multidisciplinary Association for Psychedelic Studies (MAPS), the Association for Transpersonal Psychology, and the Society for the Anthropology of Consciousness.

Analysis of the Pertinent Literature

The keywords and psychological subject heading terms searched alone or in combination included *assessment, cognitive, consciousness, expansiveness, holistic, humanistic, level, psychopathy, questionnaire, religious, spiritual, subconscious, superior, test, transformational, transpersonal, and transcendent.*

The review begins with the theoretical foundation for this current project, then moves on to qualitative studies that examine what and how people experienced the issues relevant to various states of consciousness. I also incorporated several quantitative papers, focused on issues such as reliability and validity.

The referenced papers covered a range of issues including instrument and treatment validations; a comparison of relevant theories, techniques, and therapies; studies on self-concept; how transpersonal research interacts with neuroscience; consciousness in terms of psychoanalysis; and observations of the features of states of consciousness. The detailed listings in this chapter summarize the references' theoretical bases, their hypotheses and research questions, their methods and results, conclusions drawn from the studies, and resulting implications for practice and for future research.

After gathering the data, I categorized and included sources in this Literature Review that had proved useful in conducting and analyzing the research in the following subsections:

- Method and Theory in the Study of Religion and Nonordinary States,
- The Role of Autoethnography,
- Techniques of Qualitative Research,
- Interpretation of Language, and
- Influences of Cultural Background.

Examples of Instrument and Treatment Validations

Friedman (1983) noted that a standardized measure of transpersonal concepts was needed in order to further transpersonal research. After formulating the Self-

Expansiveness Level Form (SELF), he needed to know whether the SELF produced consistent and useful data for transpersonal therapies and research. For this purpose, Friedman used exploratory factors and discriminatory analysis to develop the SELF instrument, from which data was collected for validation. To test this, Friedman administered 42 items on the form to transpersonal (TP) and non-TP groups, divided into personal and transpersonal factors. Then he combined the questions into 18 items for the SELF and analyzed correlations among all factors statistically. In Group 1, 80 psychology students were given the SELF battery, the Fordyce Self-Description Inventory, and the Tennessee Self-Concept Scale. Group 2 was comprised of 86 students and given the Hood Mystical Experience Scale, the Otis Quick-Scoring Mental Ability test, and the Crowne and Marlowe Social Desirability Scale.

For future research, according to Friedman (1983), the value of the middle scale would need to be validated. Studies would also need to be generalized with non-college-student samples. In current practice, noted that author, generalized use of the SELF should encourage transpersonal research in distinguishing mental-health characteristics and understanding of religious and supernatural experiences.

Friedman and Pappas (2006) wished to answer some important questions about the SELF instrument, so their research question was whether this examination could reconcile paradoxes between ideas of immanence and transcendence underlying much of transpersonal ideation. The researchers conducted no empirical test for this abstract paper, but offered logical considerations based on the definitions involved. The authors

concluded that integrating two different perspectives on the given model allowed for a more holistic view of the relationship between self-expansiveness and self-contraction.

As this approach matures in future research, reconciling competing worldviews could be applicable not just to the complementary transpersonal constructs of self-expansiveness and self-contraction but also to other transpersonal concerns, leading to a more integrative understanding, according to the authors, and that a good transpersonal approach required an understanding of the available models and how they relate to each other, in this case, the self-expansiveness approach.

Friedman (2013) reviewed studies exploring whether the SELF instrument achieved scientific credibility as a mid-range transpersonal theory of psychology. In order to make the SELF instrument testable empirically, Friedman conducted analyses to compare results with several other studies and with such standard instruments as the 5-factor scale. Friedman also made note of other studies using the SELF. According to Friedman, applications of the SELF proved consistent with each other and produced reliable results when used as an instrument in several empirical studies, leading to his conclusion that self-expansiveness, as a model, provided clarity and consistency in assessing level of development and, as a praxis, might form the basis for a constructive psychotherapy.

In the future, according to Friedman (2013), a reliable instrument for measuring self-expansiveness could provide insights into psychological disorders and blocks to transformation. The instrument would need to be standardized for a variety of populations. In practice, stated Friedman, the standardized SELF instrument allowed for

improved analyses and insights into clients presenting with psychological as well as organic issues, being a holistic technique.

Hood (1975) created the *M* scale (Mysticism Scale, Research Form D), which has become one of the most widely used instruments for assessing states of consciousness (the *M* scale), based originally on Stace's (1960) Categories of Mysticism, Hoge's (1972) Religious Motivation, and Taft's (1970) Ego Permissiveness. Hood's 1975 paper set the foundation for the scale's ultimate validation. Hood's *M* scale had Stace's eight categories, 20 items in the mystical experience section, and 12 items in the religious interpretation section. Preliminarily, the *M* scale appeared to indicate higher religious motivation, more openness to ego-permissiveness, and somewhat higher scoring on MMPI's *Hs*, *Hy*, and *L* scales.

Lefrançois, Leclerc, Dubé, Hébert, and Gaulin (1997) based their research on three versions of Shostrom's (1974) Personal Orientation Inventory (POI), in turn based on Maslow's (1956) concept of self-actualization, Riesman's inner- and other-directedness (Zinkhan & Shermohamad, 1986), and Perl's time-competence idea (Shostrom, 1964), which has been used to assess changes toward self-actualization in both research and growth or therapy groups, and has been utilized for screening, training, and evaluating professionals. This study sought to answer whether the newer Measure of Actualization Potential (MAP) is superior to the POI in terms of data relevancy and psychometric properties.

Three factors were measured:

1. the development and validity of the MAP instrument (four steps),

2. the instrument's construct validity, and
3. its internal consistency reliability.

The steps were: (a) a literature review to clarify the domain of the latent variable; (b) a Delphi review; (c) translation of the items into French; and (d) two focus groups of ordinary people. For construct validity, the questionnaire was given to four different strata of people to: (a) eliminate redundant or skewed responses, (b) perform an exploratory factor analysis, and (c) refinement of data. Lefrançois and colleagues concluded that actualization of potential seemed best conceived of as forming a hierarchical structure, comprising *openness to experience* and *self-reference*. The correlations seemed sufficient, to the authors, to confirm the hypothesis.

Lefrançois and colleagues noted that a highly reliable instrument implies an increase in statistical power. The scale contains only 27 items as compared to the 150 items in the POI. The nonambiguous and short statements, claimed Lefrançois and colleagues, made the MAP easier to administrate than the POI, suitable for a self-report format, and suitable for any adult population, from the young to the elderly. Social desirability, fakability, known-groups validity, criterion validity, and test-retest reliability, according to Lefrançois and colleagues, could provide other relevant psychometric properties of this new instrument.

MacDonald and Friedman (2002) conducted a survey of instruments and techniques, in existing literature and data, relevant to psychometric testing of transpersonal phenomena. The research questions they sought to answer were 1) What arguments support the use of quantitative assessment in humanistic/transpersonal

research? 2) What types of measures are currently available in the literature? 3) What does the relevant empirical literature tell us about the relation of spiritual and humanistic/transpersonal concepts to human functioning? 4) What are the recommendations for investigators interested in doing transpersonal research?

The authors found three measures which were generally consistent: Existential Well-Being leading to inverse relation with measures of pathology and neuroticism, Paranormal Beliefs eliciting measures of unusual thought processes and nonordinary temporal-lobe activity, and the Experiential/Phenomenological dimension leading to bidirectional constellation of relationships leading to both positive and negative functioning. Two ESI dimensions were inconsistent: Religiousness and Cognitive Orientation toward Spirituality.

The authors concluded that: 1) Studies should incorporate multidimensional measures of constructs of interest and/or multiple measures, 2) Need for consistent application of same method and tests across studies, 3) Researchers should heed statistical power and confounding covariates, 4) Findings should be corroborated and replicated, and 5) Researchers should heed limitations of tests and concepts. In future studies, asserted the authors, investigators should pay attention to the arguments and information presented in their paper, and make strong efforts to have humanistic and transpersonal psychology find their place at the forefront of spirituality and consciousness studies.

Muhamad, Roodenburg, and Moore (2014) sought to re-validate MacDonald's Expressions of Spirituality Inventory (ESI) in the Malaysian setting, as part of a larger

study comprising spirituality, cognitive beliefs, and predispositions of personality. The ESI measures five major dimensions of spirituality common to general literature on the subject:

- Cognitive Orientation toward Spirituality (COS) – spiritual attitudes, beliefs, and perceptions relating to normal life experiences;
- Experiential Phenomenology Dimension (EPD) – spiritual experiences in general;
- Existential Well-Being (EWB) – as sense of meaning and purpose in life, and coping abilities;
- Paranormal Beliefs (PAR) – spirituality in terms of paranormal phenomena;
- Religiousness – religious attitudes, behaviors, beliefs, and practices.

The first task the authors faced was to translate the ESI back and forth in order to assure that the English-language items meant the same thing in Malaysian; they used Brislin's back-translation-and-committee approach to this. The next step was to distribute the translated instrument to 437 Malaysian university students (193 male, ages ranging from 18 to 25). Malay nationals constituted 80% of the sample, and 83.8% of the sample were Muslims, essentially reflecting the overall population of the country. The participants were randomly divided into a calibration sample (236) and a validation sample of 201.

Data analysis included multivariate coefficients, with compensation for multivariate non-normality, further corrected by random redrawing of samples to arrive at a χ^2 adjustment. The next filter was the Maximum Likelihood Confirmatory Factor

Analysis, with bootstrapping. Finally, the authors used a 2-step method for refining their estimates. Findings supported the 5-dimensional structure of spirituality which was non-related to chance relationships, and also that Malaysian spirituality ideas were generally commensurate with Western concepts and should be adaptable to many other cultures.

The authors stated that future studies should be of a mixed-methods design in order to sort out cultural differences prior to data analysis, exemplified by the finding that the Malaysians regarded some items as superstition rather than religious. Another possible comparison could be made with the Islamic Spirituality Scale.

Pappas and Friedman (2007), wanted to see how self-concept measured up in terms of expansiveness, asking: How do measures with the SELF scale compare with other measures? Their hypothesis was that known transpersonal participants should score higher than the volunteer students on the SELF-TS (SELF-TS; Friedman, 1983), the Spiritual Transcendence Scale (STS; Piedmont, 1999), the Temperament & Character Inventory-Transcendence Dimension-Total (Cloninger, 1996), the East-West Questionnaire-Man and the Spiritual-East instrument (Gilgen & Cho, 1979), and the Rosenberg Self-Esteem Scale (Rosenberg, 1979). The authors conducted three studies using these instruments. In the first study, there were 22 male and 83 female undergrad students; 51 were religious and 75 spiritual. They completed demographics and a version of the SELF instrument. Study 2 had 15 male and 81 female technical college students. Half were religious and 81 were spiritual. These participants completed three versions of SELF plus the STS. In Study 3, 30 males and 126 female members of a known

transpersonal group participated, in which 63 self-identified as religious and 153 as spiritual.

Correlations and one-way ANOVA analyses scored males higher than females on spiritual–transpersonal measures. Religious and spiritual differences were not significant, nor were the TS versus the PS (personal) versions of SELF or the Transpersonal Orientation To Learning-Transcendent Consciousness (TOTL-TC; Shapiro & Fitzgerald, 1989). However, SELF-TS did correlate with STS. Longer meditation practices corresponded with higher scores. Self-expansiveness showed a complex relationship with age and gender. In order to allow better validations, claimed the authors, future studies should include more diverse samples (non-students).

Comparisons of Theories, Techniques, and Therapies

Avants, Beitel, and Margolin (2005) set out to demonstrate the validity and effectiveness of their proposed Spiritual Self-Schema (3-S) therapy, integrating a cognitive self-model with a non-sectarian Buddhist framework, replacing the addict self-schema with wholesome habits that lead to the spiritual self-schema.. 3-S therapy was expected to allow a shift in self-schema from an addictive level to a spiritual one, thereby demonstrating a change in drug use and other HIV-risk behaviors. In the experiment, 3-S sessions were divided into three trainings provided in eight sessions: a) mastery of the mind, b) morality, and c) wisdom.

The authors performed 7 tests on the participants: 1) a computerized reaction-time task, 2) the Multidimensional Measure of Religiousness/ Spirituality, 3) measurement of spiritual qualities in daily life, 4) influence of spirituality on behavior, 5) toxicology

screens, 6) Risk Assessment Battery, and 7) post-treatment assessment. Statistical analyses were performed with pre-post mixed ANOVA. The study resulted in significant adherence and improvement of drug-addiction behaviors, thereby supporting, according to the authors, the effectiveness of the 3-S therapy for drug addiction, with promising prognoses for other types of addictions and destructive behaviors. Practical application of 3-S therapy, asserted the authors, requires practitioners to have mastered the disciplines specified in the manuals (3-S, n.d.).

Cardeña and Pekala (2014) wanted to help unify research methods regarding anomalous states of consciousness; therefore they conducted a literature review for best practices. In terms of reliability and validity, they examined such distinctions as those between “external-objective” and “internal-subjective,” calling into question whether these distinctions had been applied correctly. In examining the standard tools of this type of research, the authors found that there were 10 types of errors associated with *introspection*: 1) Poor recollection by participants, 2) Construction of artifacts to make up for memory omissions, 3) Difficulty in finding words to describe experiences, 4) Distortions and substitutions in the descriptions, 5) Censoring of sensitive insights, 6) Lack of independent verification, 7) Dissembling in favor of sounding socially acceptable, 8) Bias influences on both participant and researcher, 9) Influence of inappropriate metrics or confounding of reports from multiple metrics on the same phenomenon, and 10) Inaccessibility of altered-state memory to objective-state recall.

For examining methodological approaches, Cardeña and Pekala (2014) first itemized two methods of phenomenology: the “first-person” approach and a second

method's being to cull out bias and fabrication by conducting multiple interviews with the participants as "co-researchers." The authors then identified four concurrent-report methods: 1) "thinking out loud," 2) counting and recording events, 3) sampling of thoughts or experiences in response to a signal, and 4) numerical ratings for depth of trance or altered state.

Six types of retrospective reporting were identified in the paper: *a)* longitudinal diaries of the life experiences of participants, *b)* in-depth interviewing, *c)* content analysis of previously reported data, *d)* administering of psychological instruments, *e)* use of case studies and life histories, and *f)* triangulation and integration of multiple methods of investigation.

The authors (Cardeña and Pekala, 2014) concluded that the nature of any "reality" reported is only a function of perceptual and cognitive channels available to the subjects combined with the choice of research methods and instruments. The authors itemized five recommendations for further studies in this area:

1. Researchers should use a broad enough sampling to include both control subjects and people who are likely to have had the experiences of interest;
2. Reliability and validity should be assessed as rigorously as possible;
3. Better information can be obtained by using a diversity of introspective methods;
4. Researchers should avoid assuming that reports of anomalous or schizotypal features are indicative of psychosis, although that possibility should not be ruled out; and

5. Investigators should adjudge whether reported experiences are “materially real” or “imaginally real,” or even a psychoid hybrid of the two.

Hartelius (2007) constructed a Quantitative Somatic Phenomenology (QSP) for defining, operationalizing, and taking state of awareness into account in terms of one’s body postures and movements. The author proposed QSP as a remedy for the common view that subjective states of consciousness could not be studied scientifically. Hartelius’ solution was to combine the tools of somatics and neurophenomenology (NP), based largely on Husserl’s (1981) groundwork. Of particular interest to me, in this dissertation, is the author’s focus on the conscious shift required of the observer in order to apprehend the phenomenology of the subjective states, although his criteria fall short of what I propose for my own observational methods (see Chapter 3). In summary, Hartelius’ adopted the steps needed from Depraz and others (Behnke, 2006; Depraz, 1999; Ginsburg, 2005; Varela et al., 1991; Vermersch, 1999): *intentionality, awareness, acceptance, and explication.*

Johnson and Friedman (2008) sought to differentiate transpersonal, spiritual, or religious experiences (R/S/T) from psychopathology, in order to address the distinction adequately in the forthcoming DSM-5 release. The authors conducted a comparison of various definitions of psychopathology and of religious/ spiritual/transpersonal crises. They concluded that familiarity with spiritual emergence and emergency and how they differ from psychopathology may prevent misdiagnosis and subsequent iatrogenic harm, and that more researchers need to subscribe to the R/S/T distinction in order to build a larger and more inclusive research base. Clinicians and clients, according to the authors,

would benefit from mental-health professionals' possessing more knowledge about common R/S/T experiences encountered in psychotherapy. The authors recommended differential diagnoses of transpersonal experiences as distinguished from psychopathology and that diagnosticians and psychotherapists required adequate self-awareness concerning their own beliefs and assumptions concerning R/S/T experiences.

Ferrer (2014) critiqued Friedman's (2002) position that the disciplines of Transpersonal Psychology should be divided between the naturalistic (materialistic) approach and that of metaphysics and spirituality. Ferrer argued that such a distribution of labor would still bias research in favor of naturalism.

Joormann and Vanderlind (2014) conducted a literature review based on the observation that cardinal symptoms of major depressive disorder are sustained negative affect and resistance to positive affect, whereas previous research indicated that these were caused by problems with emotion regulation (ER). An analysis of the ensuing data from that review was to determine whether cognitive biases and deficits in cognitive control associated with depression affected emotion regulation in critical ways, thereby leading to maintained negative affect and diminished levels of positive affect.

The authors found that heightened emotion nonacceptance, as well as fear of high intensity affect, was associated with major depressive disorder (MDD), but that it is not clear to what extent people can accurately report on their use of strategies, and the self-report of ER may be affected by current mood state. Processing of mood-incongruent material and the regulation of positive affect led to MDD, according to the authors, who admitted that more work was needed to further clarify the role of suppression and

distraction in MDD, and that more studies were needed on strategy use in response to a mood manipulation or in an experience-sampling design.

Kerns, Karcher, Raghavan, and Berenbaum (2014) examined the relationships among several types of non-normal phenomena: anomalous experiences (AE), peculiarity of personality, and psychopathological features. The authors' research questions were: 1) How are AEs distinguishable from the other two areas? 2) What features do the three types share in common?

The method used in their paper (Kerns, Karcher, Raghavan, & Berenbaum, 2014) was a review of the relevant literature, so no empirical experiment was performed. First, the authors provided concise definitions for each of the three areas of study. They conceded that the definition of psychopathology is not totally agreed upon, or even whether it should be regarded as a physical (brain) disease or a psychological disorder; this confusion is exacerbated, according to the authors, by the disparity of definitions between DSM-IV and DSM-V, so they left it somewhat open.

For *peculiarity*, the authors (Kerns, Karcher, Raghavan, & Berenbaum, 2014) simply provided a range of eccentric features, from nonstandard beliefs to odd behaviors not extreme enough to warrant institutionalization. Their definition of AE, as distinguished from peculiarity, seems to be one of degree, in that, for example, a person with AE would be more likely to reveal his experience to others. The most pertinent distinction that the authors make, between AEs and psychopathology, is that AEs are more likely to be viewed as positive experiences for the individual, whereas psychopathologies tend to have negative impact requiring treatment or

institutionalization. The authors gave examples showing how the effects of AEs are often confused with psychopathologies and how this confusion has led to better diagnoses and research studies for distinguishing between the two types of phenomena.

The paper concluded with five recommendations for future studies:

1. Future research should make a point of distinguishing among beliefs, experiences and perceptions in order to differentiate between AEs and mere peculiarities.
2. Future researchers should study varieties of AEs, psychopathologies, and peculiarities in order to make finer, more reliable distinctions.
3. Researchers should take mediating and moderating variables into account, such as culture, gender, or economic class.
4. The authors recommended pursuing longitudinal studies, which they claim would be more valuable than only cross-sectional research.
5. Future studies should pay special attention to the overall context of subjects with anomalous experiences.

Fiore and Schooler (2002) examined how verbal reports affected spatial mental models. They found that verbalization hindered participants' ability to estimate map connections and memory, but not their estimations of map features. The authors inferred that there are two separate forms of memory representation.

Zamore and Barrett (1989) compared hypnotic susceptibility (absorption) to various dream features and content types (dream recall, topic choice, conflict resolution, creative ideas, color and intensity, pleasantness or bizarreness, flying or floating, and

precognition in dreams), using a Dream Questionnaire based on Hilgard's hypnosis theories and Gibson's Dream Inventory, and adapting the Harvard Group Scale of Hypnotic Susceptibility and the Field Inventory for Evaluating Hypnotic Response. The volunteers were 36 psychology undergraduates (18 of each gender, ages from 18 to 21). As expected, absorption predicted the above-listed features, although there were wide differences in scores between males and females. Statistical analyses between instrument pairs were done with Pearson Correlations.

Studies on Self-Concept

Cardeña and Alvarado (2014) observed that subtle (and not so subtle) changes occur in people's minds and bodies throughout the day, influenced by moods, changes of context, and normal exigencies. This phenomenological treatise sought to demonstrate whether people's sense of self and identity can be substantively altered by such influences as quietude, sexual activity, rituals, and shocks of various kinds. In order to assess this point, the authors described several major types of anomalous states:

- Fusional – a sense of merging with another person, a supernatural entity, or even with the universe in some way;
- Out-of-body experiences (OBEs) – one's sense of self seems to be outside of his or her normal body, often as if looking down at the physical body.
- Absorption, proneness to hypnotic trance or fantasy, and dissociation – the authors provided these conditions (along with neural dysfunction and psychopathology) particularly as influences for OBEs.

- Spiritism – trance states, spirit possession, mediumship, and channeling. Some of these states, according to the authors, may be induced by fasting, rituals, difficult postures, sleep deprivation, or prolonged repetition of chanting, drumming, movements, or isolation.
- Psychic phenomena, presumably including telepathy, premonition, psychometry, remote viewing, and psychic healing, although the authors did not elaborate on the specifics of these.

Upon completion of the above examination, the authors (Kerns, Karcher, Raghavan, & Berenbaum, 2014) concluded that such anomalous states should not be too quickly diagnosed as merely organic or psychopathological, but that researchers and therapists should allow for the possibility that these phenomena are real to the client. According to the authors, this transforms the inquiry from why people believe that their sense of self has been permeated by external forces, to why Western models deny the factual nature of such a possibility.

Jankowski and Sandage (2012) centered their study on differentiation-based spirituality to test the relationship between spiritual dwelling and well-being in view of differentiation of self (DoS). They began with the hypotheses: 1) DoS would significantly mediate the relationship between spiritual dwelling and negative mood, and 2) DoS would *not* mediate the relationship between spiritual dwelling and positive mood. To test these hypotheses, the authors screened graduate students from a Protestant seminary, ending up with $N = 140$ (60% female, avg. age = 33.6, 90% European-American) with the Bartone Symptoms Checklist (Bartone, Ursano, Wright, & Ingraham,

1989). Survey instruments were the Hall/Edwards Spiritual Awareness scale (Hall & Edwards, 2002) and the Religious Well-Being scale (Ellison, 1983). Analysis was done with the AMOS-7 structural equation modeling and bootstrap analyses, with Byrne MLE analyses (Arbuckle, 2006; Byrne, 2010). The study was controlled for gender and age, but not for race, whose sample size was too small.

According to the authors, results supported the first hypothesis, thereby offering support for the differentiation-based spirituality premise that the mechanism by which spiritual dwelling is associated with well-being involves the capacity to regulate negative emotion, and offered support for the paradigm of differentiation-based spirituality. DoS, as an indicator of affect regulation, facilitated decreased negative mood in the association with spiritual dwelling, claimed the authors, although an over-arching theoretical framework was still needed, despite the promising results.

Kiesling, Sorell, Montgomery, and Colwell (2008) sought to delineate the categories of the sense of spiritual identity, hypothesizing that one's sense of identity derives from the interaction of individual traits and experiences with socially imprinted mores and conditions. Their paper is a qualitative study in which interviews were conducted, based on the RRII instrument, on 28 spiritually devout respondents, 13 male and 15 female. The interviews produced categories of family roles, employment/student roles, relationships, spirituality, and "other." Participants were classified as *Foreclosed* ($N=11$), "*in moratorium*" ($N=4$), and *Achieved* ($N=13$).

The authors concluded that their method of contextualizing participants' narratives captured the subjective content of participants' spiritual identity, and is in

keeping with the contemporary emphasis on theory and on linking structure and content in the human-development disciplines. The contextualized narratives revealed, to the authors, how the exploration of one's spiritual sense of self can assist with major facets of adult development (resiliency, personal identity, and meaning-making). The authors predicted that future longitudinal studies could track the degree to which these theories and analyses predict the spiritual development of larger sample populations.

Klein, Altinyazar, and Metz (2013) founded their study on the premise that a sensitive appreciation of self is necessary in order to understand the relation between the self and its disruption, leading to the research question: How does Trait Self-Knowledge (TSK) interact with schizophrenia? They tested 45 Turkish schizophrenic out-patients (m=28, f=17) and 40 healthy controls (m=25) on the Global Assessment of Functioning (Mosolov, Potapov, & Ushakov, 2012), Positive/Negative Syndrome Scale (Kay, Fiszbein, & Opler, 1987), Beck Cognitive Insight Scale (Beck, Baruch, Balter, Steer, & Warman, 2004), and the Scale to Assess Unawareness of Mental Disorder (Cuesta, Peralta, & Zarzuela, 2000), concluding that individuals suffering a range of cognitive and neurological impairments of self-knowledge nonetheless maintain intact TSK.

According to the authors (Klein, Altinyazar, & Metz, 2013), this study of TSK, in a sample of patients diagnosed with schizophrenia, added to a growing body of evidence that some memory-based components of self can be selectively spared while others are profoundly damaged. The authors found no cases where a person had deviated from personality traits; the one mediating TSK seemed, to the authors, to be most resilient in the case of cognitive chaos from developmental or environmental insult to neural

function. The authors expected clear explanations to come from expanded studies in the future.

Transpersonal Research and its Interaction with Neuroscience

Back-Madruga and associates (2003) gave 22 recreational MDMA users a battery of neuropsychological tests, and compared them with 28 normal-control volunteers with respect to age, education, and IQ. Cognitive differences showed up only in those who had used MDMA more than 50 times, and these were limited mostly to nonverbal or visual memory. The authors noted that usage was engendered by enhancement of pleasure, intimacy, and self-development.

Boly and colleagues (2008) investigated the relationship between observable brain activity, using PET, fMRI, voxel, and blood-oxygen scans, and altered states of consciousness. They found intriguing patterns among them, but concluded that no precise causality or even correlation could be asserted.

Cahn and Polich (2013) noted that, despite a 50-year history of electroencephalography (EEG) studies on meditative states, there was still no clear agreement on the underlying neuro-physiological changes due to meditation. Therefore, the authors' research question was to determine the actual neurophysiological changes which occur from meditative practice. The procedure was to scan experienced meditators of various types, with EEG, event-related potential (ERP), and several neuro-imaging technologies. The authors found that meditation produces significant changes in the anterior cingulate and dorsolateral prefrontal areas of the brain. They concluded that central nervous system function was clearly affected by meditation, but that the specific

neural changes and differences among the various practices were still unclear. In future studies, according to the authors, varying, neurophysiological meditative state and trait effects should continue to demonstrate reliable outcomes for research and clinical applications. Needed was a clear quantitative distinction between meditation and early sleep stages. However, the authors believed that there was already enough justification to currently apply EEG, ERP, and neuroimaging for studying the trait effects of meditation.

Fink, Schwab, and Papousek (2011) tested the relationship between creative cognition and EEG alpha activity. The increased activity (10-12 Hz in the upper alpha band) was most pronounced in the right hemisphere and in the prefrontal cortex. The authors surmised that these results indicated heightened internal awareness leading to increased creativity.

Freedman (2010) examined psychic (“psi”) functions which could be associated with functions and loci of the frontal lobes of the brain. Promising regions were the reticular formation, the right parietal and occipital regions, the temporal lobes, and the right hemisphere as a whole. The author attempted to explain psi phenomena, or the lack thereof, in terms of evolutionary advantages (e.g., ability to foresee or to move objects by thought vs. the inherent distractions posed to the attention), but the putative advantages fairly balanced the disadvantages. Freedman also reviewed the theory that reduced self-awareness could foster mind-over-matter influences; this is an area for further investigation.

Picard and Craig (2009) noted that the anatomical correlate of epileptic seizures with ecstatic auras had not been established. They documented accurate descriptions of

the ecstatic seizures experienced by five patients, all of whom reported intense feelings of well-being and a heightened self-awareness. The authors proposed that the descriptions by these patients, together with the neurophysiological and neuroradiological evidence, supported a theoretical framework for understanding ecstatic states based on hyperactivation of the anterior insula, rather than of the temporal lobe, and that epileptologists who have access to patients experiencing episodic feelings of ecstasy and heightened self-awareness can provide insights that might help clarify the neural basis of consciousness.

Shields (2006) used a dream specimen, as interpreted during psychoanalysis, to support Freud's dynamic unconscious, imaginative processes in the mind, the retranscription of memory in psychoanalysis, and intersubjective processes in the analytic relationship. He did this by using Modell's hypothesis that Edelman's theory of neuronal group selection (TNGS) could provide a valuable neurobiological model for it. The author showed parallels between the interpretation of the dream material with keen attention to affect-laden meanings in the evolving analytic relationship in the domain of psychoanalysis and the principles of Edelman's TNGS in the domain of neurobiology. The author noted how this correlation may underscore the importance of dream interpretation in psychoanalysis. He also suggested further investigation in both realms based on study of their interplay.

Walley and Weiden (1973) proposed a neuropsychological theory of attention in which the encoding of one stimulus interfered with the encoding of other stimuli. This interference effect was termed *cognitive masking* and was attributed to recurrent lateral

inhibition between neurons in association cortex. The authors reviewed evidence which indicated that there was a facilitation of cortical recurrent inhibition during arousal, and that cognitive masking was related to the level of arousal. They presented a mathematical model describing the activity of sets of cortical neurons having reciprocal inhibitory interconnections. The results of some computer simulations of this model indicated to the authors that the model could account for cognitive masking and several other attentional effects.

Haas (2011) introduced a novel approach to explain the appearance of telepathy-like effects as the consequence of disturbances in the normal equilibration or “equilibrated non-equilibrium” of ordinary human experience. The author proposed a new electromagnetic version of Freud’s psychoanalytic model, which began by treating the mind as a charged object that interacts with others and the environment in a generally balanced, pairwise fashion. If the brain is assigned a net charge for a given state of mind, according to Haas, there may be considered to be a balancing of superego, ego, and id-level interactions, and that a temporary altered state of consciousness might result from an over- or under-charged experience (from a social perturbation or unconscious wish) that would otherwise be processed during normal habituated experience as part of interdependent behavior during conscious awareness or sleep. Haas theorized that deviations from the normal “equilibration” of such balanced charge states that are not immediately cathected or decathected during personal interactions may result in the deceptive perception of telepathy or a neurosis-like symptom, perhaps in the form of a remembered dream.

According to Haas (2011), a genuine telepathy-like phenomenon may be postulated to exist due to synchronistic effects when considering the unique aspects of synchronous human behavior and possible subconscious information acquisition through inference. The author posited that electrochemical charges and energies could be assigned to the thoughts, emotions and actions of the human body and these may often be psychologically and socially coordinated and coherent with others: two people may change state at the same time. A macroscopically relevant coherence may result in approximately simultaneous thoughts and actions, and even a form of knowledge, between separated people, averred Haas.

Alyushin (2011) claimed psychedelic experience as a heuristic tool for exploring the mind and the brain. His paper, rather than being the results of any empirical investigation, was a theoretical examination of the ideas relating to psychedelic consciousness, based on observations and theories in the literature. The author divides the field of study into two categories: *a*) the examination of one's conscience typical of many psychedelic experiences, and *b*) the phenomenon of visual and auditory hallucinations associated with such experiences; according to the author, the origins of these two subjects are generally considered disparate. Alyushin proposed a structure for unifying the study of both types of phenomena as an amplification of imagination under the influence of psychedelics. In the first instance, the author claimed that such amplification caused an increase in empathy leading to an increase in moral sensibilities. In the second, he proposed that hallucinations were "quantum mental objects" which spanned separate realities.

Halsband, Mueller, Hinterberger, and Strickner (2009) investigated the similarities and differences between changes in brain plasticity induced by hypnosis (deep vs. light) and that produced by Tibetan Buddhist meditation. Observations were made using EEG, PET, and fMRI on shared and non-shared neural substrates, with attention to alpha and theta-2 bands. The authors observed increased bilateral activity in the pre-frontal and occipital regions, and also better memory performance, with tests of high-imagery word learning. A longitudinal study of the attentional effects of Soto-Zen meditation (baseline, 6 months, and 9 months) showed significant changes in several brain areas, to which the authors ascribe simply as evolving understanding of the neural structures underlying the two inductive methods used (hypnosis vs. meditation). Limitations on this study included having to use only a few individuals as subjects, thus making it impossible to generalize the findings meaningfully; the authors hoped for future studies with more subjects and also using finer measurements with the instruments they utilized (EEG, PET, and fMRI), in addition to emerging instruments (MEG and MR-PET) so that increased differentiation of biochemical (including stress hormones and neurotransmitters) and functional foundations of hypnosis and meditation could be made.

Rock and Krippner (2008) examined issues relating to the ontology and epistemology of the imagery resulting from shamanic, mystical, and non-ordinary experiences, framed in two questions: What is the actual content of shamanic imagery? and how do we learn from it? The authors explored ways of culling out the inherent biases in our thinking and our use of language, and then proposed a way to formulate the necessary understandings. In one particular example, they explored the fallacy of

reification, in which an abstract is mistaken for something concrete. However, what is taken to be an abstract, said the authors, may change over time. Another clarification they made was to replace the term “shamanic states of consciousness” with “shamanic patterns of phenomenal properties”; this replacement will presumably placate scholars who disagree with the entire premise of states of consciousness, although I believe it reduces focus on what we are studying.

Vaitl et al. (2005) examined states of consciousness in terms of four contexts: spontaneous, from physical/physiological stimulation, psychological, and disease-induced. Neurophysically, they found all such states to be induced by disconnectivity in brain dynamics, compromise in brain structures, metabolic processes, and neurochemical bases. The authors applied phenomenological analysis, based on psychological and neurobiological approaches, and described four dimensions characterizing those states:

- Activation – how ready an organism may be in response to its environment;
- Awareness span – the available range of attention and conscious handling of impressions;
- Self-awareness – relation of self to others and the world; degree of sense of individuality; and
- Sensory dynamics – the degree to which sensations or impressions are felt, whether from physical stimuli or from dreams, hallucinations, or synesthesia.

The neurophysiological approach, according to the authors, revealed that the different states of consciousness are mainly brought about by a compromised brain structure, transient changes in brain dynamics (disconnectivity), and neurochemical and

metabolic processes. Besides these severe alterations, environmental stimuli, mental practices, and techniques of self-control also seemed to temporarily alter brain functioning and conscious experience. The authors called for a more universal agreement on what comprises states of consciousness and their shifts, observing that the field of psychology is profuse with particular and confusing ideas about them. They believed that the abundance of data available on the subject could best be sorted out by advances in neuroscientific methods of analysis, and by generating mapping matrices between observable functions of consciousness and what can be measured by neuroscience.

Vollenweider and Kometer (2010) examined the impact of recent neurobiological research on the general understanding of how psychedelic drugs work on the brain and the psyche, especially concerning emotional disorders. The authors investigated the degree to which the neural circuits modulated by psychedelics could alleviate clinical symptoms of such disorders, and that further research into clinical use of psychedelics could reveal new therapeutic approaches based on increased brain plasticity from the psychedelic effect on glutamate channels. The authors relied primarily on Dittrich's 5D-ASC instrument (Dittrich, 1998) for classifying the features of various altered states induced by psilocybin (0.015 – 0.027 g/kg, orally) and by s-ketamine (6-12 μ g/kg, intravenous).

Walker and Johnson (1974) studied the distinctions among various states on the dreaming spectrum (e.g., REM, non-REM sleep, and twilight states). They observed that previous research had been mired by lack of sufficiently precise assessment tools, unreliability of subject reports, and overlap with other neural functioning during sleep.

The authors' particular interest was in how suggestions made prior to falling asleep would affect the content of the subject's dreams. Similarities to other research included methods of inducing the suggestions (i.e., hypnotic, scripted, coached) and types of goals set in the suggestions, including when and how to awaken and signs to watch for.

Walsh (1995) demonstrated a degree of overlap among shamanic, Buddhist, and yogic states of awareness; he then went on to describe features which distinguish from one to another. Likely comparisons given were Buddhistic *nirvana* vs. the *samadhi* scale of yoga tradition, and whether shamanic states match up with mystical states of Western traditions. Then Walsh raised the issue of how different one psychedelically induced state differed from another (as with ketamine, psilocybin, and LSD) as well as from the mystical, shamanic, yogic, and Buddhist states.

Walsh (1995) concluded by calling for further refinements of measurement by using such psychometric instruments as Pekala's Phenomenology of Consciousness Inventory (1982) and to utilize the new neuroscience techniques including PET and multi-channel EEG. Walsh's goal was to underscore the proposal that altered states of consciousness was more than simply altered physiology. Walsh observed the inherent problems of using naïve people as subjects (in their not understanding or being able to describe what they have experienced) and of using experienced adepts and psychonauts whose prior knowledge and experience would likely color their reports.

Wamsley, Domhoff, Perogamvros, and Cicogna (2013), in an informal paper, advocated for taking seriously the subjective reports of dream content. Without conducting an empirical study, the authors illustrated new views of dreaming with

observations made using EEG, positron-emission tomography (PET), and functional magnetic-resonance imaging (fMRI) recordings. The authors made a case for each of the various stages of sleep, including non-REM deep sleep, that the neurological observations, coupled with the self-reports, showed that those states were not qualitatively different from waking consciousness, including reflection on past experiences and future planning.

Wittmann et al. (2007) addressed the literature gap concerning temporal perception in subjects under the influence of psilocybin. To study this issue, the authors administered 12 healthy volunteers with placebo, medium-dose (115 $\mu\text{g}/\text{kg}$), and high-doses (250 $\mu\text{g}/\text{kg}$) of psilocybin on temporal processing and reproduction, controlling with spatial tasks and conscious experience. They found psilocybin to significantly alter interval durations, especially those longer than 2.5 seconds, and also self-reports of depersonalization and derealization. This study illustrates the use of objective criteria in assessing subjective states.

Theories of Consciousness and Psychoanalysis

Carhart-Harris et al. (2014) introduced a theory of conscious states which integrated physics, neurobiology, and psychoanalysis, seeking a distinction between primary and secondary consciousness as fundamentally different modes of cognition and to develop a model of altered states based on the quantity of entropy. The authors posed three research questions for their study:

1. How does the normal waking consciousness of healthy adult humans relate to other states of consciousness?

2. How does the human brain maintain its normal state of waking consciousness?
3. What happens to the human brain's functionality when non-ordinary states such as REM, sleep/dreaming, early psychosis, and psychedelic states occur?

In order to answer these questions, the authors (Carhart-Harris et al., 2014) conducted a review of previous research and current ideas, rather than an empirical experiment, on the use of psychoanalysis, psychedelics, and neuroscience with a view to finding how they can integrate with each other; they elaborated the reported benefits of the given approaches, showing how they support each other. The authors concluded that a key distinction between the primary and secondary modes of cognition is that secondary consciousness seeks to represent the world as *precisely* as possible, whereas primary consciousness is less firmly anchored to reality and is easily misled by simple explanations motivated by wishes and fears.

In the future, believed the authors (Carhart-Harris et al., 2014), a more thorough discussion of the phenomenology of primary states could develop the case that they show characteristics that are consistent with Freudian accounts of “the unconscious” or the “Id.” Research with psychedelics, the authors declared, could herald the beginning of a new scientifically-informed psychoanalysis that has the potential to influence modern psychology and psychiatry. Regarding current practice, the authors noted that mainstream psychology and psychiatry have underappreciated the depth of the human mind by neglecting ideas about the existence of an unconscious mind. Psychedelics' greatest value, they asserted, may be as a remedy for ignorance of the unconscious mind.

Carson, Peterson, and Higgins (2003) demonstrated that highly creative individuals generally scored low on tests of latent inhibition, which they defined as a capacity to screen irrelevant stimuli out of conscious awareness. Such scores had previously been thought to correlate with psychotic tendencies, but high achievers also scored low on these measures.

Crick and Koch (2003) proposed a framework for explaining visual consciousness in terms of interaction among assemblies of neurons. They focused on the general features of some particular awareness associated with a given grouping of neurons, such as intensity of visual impression (less than a few seconds), its shape, or its motion. The ten points of their framework were:

1. The unconscious homunculus – some one part of the brain monitors the activity of the visual cortex.
2. Zombie modes – set heuristic patterns of processing which operate until conscious awareness has had time to decide what to do with the impression.
3. Coalitions of neurons – groupings of neurons, for specific tasks, whose firings are coordinated for a particular experience.
4. Explicit representations – a small set of neurons which recognizes what type of trigger is being perceived (e.g., a face, a car, a dog).
5. The primacy of higher levels – assuming a hierarchy of awareness or cognition, an impression works its way up to the top organization, initiating zombie patterns along the way, and then devolves back down the hierarchy with better distinctions and choices.

6. Driving and modulating connections – a classification of neural cells into two types of inputs; the authors were ambivalent as to which cells and circumstances fall into which category.
7. Snapshots – the perception of motion is represented by the near-constant firing of specific neurons *representing* the motion, rather than by the change of firing rate of the associated neurons.
8. Attention and binding – the authors divided attention between two categories: *a)* rapid and driven by saliency, or *b)* slower, top-down, and initiation by conscious volition. In addition, either of the two types of attention can range from focused to diffused.
9. Styles of firing – the purported use of synchronized firing in a competing neural grouping. This was admittedly conjecture on the part of the authors.
10. Penumbra and meaning – the influence of a main firing grouping on surrounding neurons.

Hobson (2009) noted that, since the discovery of rapid eye movement (REM) sleep, the neural foundations of dreaming had become increasingly well understood, and it was now possible to complement the details of these brain mechanisms with a model of consciousness from the study of dreaming. Hobson's theory suggested that REM sleep may constitute a protoconscious state, providing a virtual-reality model of the world that may help in the development and maintenance of waking consciousness.

Hunt (2007) combined clinical, neurocognitive, and phenomenological theory for understanding the cognitive bases of spiritual transformation and suffering. The author

posed two research questions for a review of the literature on the subject: 1) Why does highly developed mystical spirituality show parallels to the continuum of schizophrenic and schizo-affective conditions? 2) Does the core of numinous or mystical experience lie in its non-conceptual, directly-felt realization of an immediate sense of being?

The author noted that, in examining the pertinent literature, the implicit categories of spirituality, whose function is the struggle for a unifying sense of meaning and purpose, still control in even a highly secularized culture, and that spiritual or mystical experience can lead to a crisis of meaninglessness and despair, connecting to the anhedonia and withdrawal of schizophrenia. Hunt posited that people who are more oriented toward spirituality can experience a long and painful transformation due to Western materialism.

Hunt concluded that emergence of a new self-identity depends on the concurrent deletion of the old one, and that the chasm between conventional research and spiritual or transformational studies must become narrowed in order to understand and properly treat spiritual crises.

Rosenthal (1993) abstractly examined Natsoulas' Appendage Theory for distinguishing conscious and unconscious mental processes, asking how people are aware of their conscious mental states, and why they are aware of them in an immediate way. Rosenthal concluded that requiring a self-intimational construct proved unnecessary for the Appendage Theory to stand; i.e., no special concept of self was needed for a thought to be conscious. This allowed the author to state that developing theories of self could be simplified by not having to interpose special concepts of self or awareness. Future

studies, Rosenthal believed, should be able to avoid some of the complexities of analyzing for such unnecessary assumptions.

Suhail and Ghauri (2010) observed that psychotherapists held a widely accepted view that there was a strong correlation between religious attitudes and psychopathology, leading them to investigate whether cultures in which religion has an especially strong influence produce significantly more religious delusions than otherwise, and what would be the clinical significance of religious delusions and other negative aspects of religion. In order to investigate these questions, the authors screened 53 schizophrenic patients (m=40, f=13, average age = 35) with the Standardized Aetiology Schedule (Wing, Cooper, & Sartorius, 1974) to eliminate physical or drug-related psychoses or personality disorders, followed by a demographics data sheet, the Present State Examination (Wing, Cooper, & Sartorius, 1974) , and the Index of Religiosity (Aziz & Rehman, 1996).

The authors (Suhail and Ghauri (2010) analyzed the data with a χ^2 statistic with cross-tabulation on delusions and religiosity, using SPSS-10, showing that the distribution of delusional themes was positively skewed. More religious patients favored delusions of grandiosity, others of paranormal phenomena and celebrities. Stronger religious convictions tended to produce more, and more violent, delusions, but also helped with coping. The authors noted that the religious affiliations of patients were important to understand due to their dominant role in determining the content of their symptoms. In future studies, according to the authors (Suhail & Ghauri, 2010), the

religious convictions of patients could be used as an effective coping strategy which could assist with rehabilitation.

MacLean, Leoutsakos, Johnson, and Griffiths (2012) observed that a large body of evidence, including longitudinal analyses of personality change, suggested that core personality traits are predominantly stable after age 30. To their knowledge, no study had demonstrated changes in personality in healthy adults after an experimentally manipulated discrete event. Double-blind controlled studies had shown that the classic hallucinogen psilocybin fostered personally and spiritually significant mystical experiences that predicted long-term changes in behaviors, attitudes, and values. The authors assessed the effect of psilocybin on changes in the five broad domains of personality – Neuroticism, Extroversion, Openness, Agreeableness, and Conscientiousness. Consistent with participant claims of hallucinogen-occasioned increases in aesthetic appreciation, imagination, and creativity, the authors found significant increases in *openness* following a high-dose psilocybin session. In participants who had mystical experiences during their psilocybin session, openness remained significantly higher than the baseline more than one year following the session. The findings suggested to the authors a specific role for psilocybin and mystical-type experiences in adult personality change.

Walker and Johnson (1974) noted that both experimental and clinical data indicated that, with some subjects, the administration of presleep suggestions to dream on a specific topic can influence the content of nocturnal dreams. This relationship had been found to occur regardless of whether or not the dream reports were solicited upon

awakening in the morning, upon awakening from rapid eye movement (REM) sleep, or upon awakening from nonrapid eye movement (NREM) sleep. Adequate specification of the relationship between presleep suggestions and dream content, according to the authors, had been hindered by a variety of methodological problems, such as inadequate assessment techniques, dream reports of questionable validity, and the confounding of suggested effects with other effects, and that failure to recognize such nocturnal mental activities other than the dream had also impeded progress.

Fachner (2005) discussed the relationship of music to drug-induced altered states of consciousness. Using electrophysiological studies, the author described how wave changes in the limbic areas were similar for musical impressions as for chemically-induced states of consciousness. In addition, the application of psychedelics led to more vivid relationships of visual and affect to music, especially in the context of guided therapies.

James (1901/2011, Lecture XX) summarized the psychological features of religious states of consciousness. These included

- Zest for life, general optimism, heroic sense of purpose;
- Being at peace, feeling assured of protection, affection for all;
- The sense that the ordinary world is only part of a much larger *spiritual* world;
- Feeling that such spiritual world can be communicated with through prayer or inner communion, allowing its power to influence the phenomenal world;

Accordingly, James (1901/2011, Lecture XX) posed the question what was the proper balance between belief in the spiritual or supernatural, and what the risks of doing

so might be? He then went on to distinguish the *experience* of spirituality from mere morality, philosophy, or study of it and, in so doing, discussed why he believed different people had different dispositions toward spirituality and religion, and why they were affected to such different degrees as we find people to be. James also referred to the role of belief in one's spirituality, and how such belief colored what one can experience. Finally, James compared the indifference of science as to the intrinsic purpose of everything, with the popular 19th-century attitude that nothing is random, but serves God's purposes, even though those may be unfathomable mysteries to mortals.

In order to assess the influence of beliefs in the paranormal in how people describe their nonordinary sensory experiences (ASCs), Polito, Langdon, and Brown (2010) examined this effect in 55 naïve participants of a sweat-lodge ritual. One of their main purposes was to demonstrate that inherent beliefs and emotional biases, rather than the prevailing idea of ASCs being psychological abnormalities, should be taken as foundational for these studies. The measure they used was Dittrich's (1998) APZ instrument due to its high degree of standardization (APZ stands for *Aussergewohnliche Psychische Zustände* or Altered State of Consciousness Scale). From this experiment, the authors concluded that pre-existing beliefs and two dimensions of alexithymia (difficulty identifying and describing feelings) have some influence on their positive ASC ratings.

Observations and Features of States of Consciousness

Barrett (1979) compared the subjective characteristics among several different states of consciousness: hypnotic dreams vs. daydreams of the same people, and the hypnotic dreams of medium-vs.-deep trance subjects compared with their nocturnal

dreams and their daydreams. Characteristics measured included length (in word count) of dream, emotional qualities (anger, fright, sadness, happiness, sexuality, friendliness, and hostility), types of characters identified (female or male family, acquaintances, or strangers), types of settings (indoor or outside), and degree of distortion. Subjects were 16 undergrads, age range from 18 to 26 years, equally divided between genders and trance depth between medium and deep induction. Over a six-week period, the study collected 285 hypnotic dreams and the same number of daydreams, and 277 nocturnal dreams, which were more difficult for the subjects to recall. The author found that, for ordinary people, hypnotic dreams were more similar to nocturnal dreams than to their daydreams but, for trance mediums, their hypnotic dreams fell about halfway between day- and night-dreams. The obvious limitations of this study were that there were too few subjects to draw conclusions, they came from only one context (university undergrads), and too few types of features were analyzed.

Campbell (2009) noted the research gap for the spiritual, medicinal, and educational use of natural psychedelics (particularly psilocybin mushrooms and psychoactive cacti) as used by indigenous cultures, and set out to demonstrate that such substances are useful as cognitive tools for human benefit and development. Aside from Hood's (1975) Mysticism scale (Hood was one of the author's advisors) and the Hallucinogenic Rating Scale (Strassman, 1994), Campbell introduced a new Cognitive Tool Questionnaire for self-assessment of changes and enhancements perceived by the 215 volunteers (182 male, 33 female), of whom 12 were long-time cactus users and 203

were long-time mushroom ingesters. The age range was 18 to 67, with a mean of 27, drawn from a wide variety of ethnic cultures, occupations, and nationalities.

Using descriptive statistics, Campbell (2009) analyzed on religion, dietary habits, and level of psychedelic experience, with subscales of logical skill, language ability, visual and auditory acumen, sensory acuity, physical and emotional health, personal and interpersonal integrity, awareness of temporal changes, and naturalistic and transpersonal features. The qualitative phase was accomplished by allowing for open questions following each subscale; in these, participants offered suggestions for questions which had not been asked or comments on the choices they were given. However, Campbell did not actually perform a qualitative analysis on the open submissions, relying instead on the quantitative results to demonstrate his conclusions.

Cutter (1967) provided a rationale for treating people with “recalcitrant character disorders,” such as drug addicts, with small amounts of LSD-25 (25-50 mcg) per week, as an adjunct to group therapy. He noted that, with these low doses, the effect is relatively short (~3 hours) with fast onset, ego boundaries and normal social relationships can be maintained, and response to group psychotherapy is enhanced.

De Rios (2005) gave a comprehensive description of the types of music and singing used in tribal rituals, especially those enhanced by hallucinogenic plants. She concluded that psychedelic interventions should be done with cognizance of the effect of music on special states of awareness for optimal management of therapy in such states.

Dubois and VanRullen (2011) described “visual trailing” as a transient but significant disturbance of visual motion perception of unknown origin: the subject

perceives a series of discrete stationary images as if trailing in relation to otherwise normally moving objects. Although this phenomenon is most frequently encountered after ingestion of prescription and/or illicit drugs (commonly with LSD), it has also occasionally been reported following brain damage or neurological disorders. A quantitative account of visual trails is lacking, but the authors argued that careful experimental investigation could potentially reveal how people's brains update conscious visual perception in time.

Gecici *et al.* (2010) demonstrated a relationship between the content of delusions and hallucinations and living in different geographic regions of the same country. Although cultural and environmental factors seemed significant in the phenomenology of delusions and hallucinations, the geographic region of residence also stood out phenomenologically.

Garcia-Romeu, Himmelstein, and Kaminker (2014) described a grounded-theory method by. In their project, the authors utilized self-reports from fifteen people by means of face-to-face interviews, and analyzed into three major themes (context, phenomenology, and outcomes) and subthemes which included perceptual changes, setting, and enduring effects. Recruits were healthy adults, ages 17-70, who had undergone transcendent experiences, and who had no addictions, violent criminal history, or severe physical or mental illnesses within the previous six months. The authors collaborated on a semi-structured, qualitative questionnaire which asked the participants to describe their transcendent experience and whether they had had more such experiences, how these experiences had affected their lives, relationships, world-view,

and spiritual/religious orientation. The researchers also asked what meanings the volunteers ascribed to their experiences.

Griffiths, Richards, McCann, and Jesse (2006) noted that, although psilocybin had been used for centuries for religious purposes, little was known scientifically about its acute and persisting effects. Their double-blind study evaluated the acute and longer-term psychological effects of a high dose of psilocybin relative to a comparison substance given in comfortable, supportive conditions. The participants were “straight” adults reporting regular participation in religious or spiritual activities. Volunteers were encouraged to close their eyes and direct their attention inward. Study monitors rated volunteers’ behavior during sessions. Volunteers completed questionnaires assessing drug effects and mystical experience both immediately after and two months after the sessions. Community observers rated changes in the volunteer’s attitudes and behavior.

The psilocybin produced a range of acute perceptual changes, subjective experiences, and transitory moods including anxiety. Psilocybin also increased measures of mystical experience. At two months, the volunteers rated the psilocybin experience as having substantial personal meaning and spiritual significance and attributed to the experience sustained positive changes in attitudes and behavior consistent with changes rated by community observers. The authors observed that, when administered under supportive conditions, psilocybin induced experiences similar to spontaneously occurring mystical experiences, and that the ability to imbue such experiences prospectively might allow rigorous scientific investigations of their causes and consequences.

Huang and colleagues (2012) conducted a qualitative study, based on a modified Delphi committee (seven clinical experts across several disciplines) process, to agree upon the principle features of delirium. They began with 119 descriptive items drawn from the literature and then interviewed 107 patients, giving them cognitive tasks to supplement the general observations of the interviewers. Instruments used were the Blessed Information-Memory-Concentration (BIMC; Blessed, Tomlinson, & Roth, 1968) test, the Digit Span test (Wechsler, 1981), and the Delirium Symptom Interview (DSI; Albert et al, 1992). A subcommittee reduced the feature list to 28 key indicators of delirium characteristics which could then be used as a quick screening instrument for that affliction. The final list included orientation with respect to time and place, sense of confusion, counting forward and backwards, self-reported and interviewer observations of sleep disturbance and of hallucinations and misperceptions, staring into space, disorganized thinking, fluctuation of attention or of consciousness, incoherent speech, psychomotor and emotional disturbances, and degree of cooperation with the interviewer. The term “consciousness” was used simply to distinguish among sleepiness, lethargy, hyperalertness, or unresponsiveness.

Just, Cherkassky, Buchweitz, Keller, and Mitchell (2014) were interested in how autism alters meanings and neural representations of various social notions (e.g., *insulting*), and whether such variations can behave as neurocognitive markers of autism. This research was based on new analysis methods using fMRI which allow identification of specific thoughts and semantic content. Seventeen adults with high-functioning autism, plus matching normal controls, were studied with these fMRI techniques,

particularly in the posterior midline sectors of the brain. In the control group, the neural representation of self-representation was observed, but this was nearly absent in the autism group. The machine-learning algorithms were able to distinguish normal from autistic with 97% accuracy, allowing the authors to conclude that assessment of the form and content of brain activation, induced by altered thoughts, could lead to greater biological comprehension of psychiatric thought alteration. Although this conclusion sounds circular, the point was that psychiatric features could be marked out by neuroscientific observations.

Kerns, Karcher, Raghavan, and Berenbaum (2014) saw a need for operationalizing the definitions of anomalous experiences (AEs), peculiarities, and psychopathologies. They then went on to explore the differences and relationships among the three categories. Not surprisingly, the authors found that, defined in these ways, there was considerable overlap between any two of these categories, and that a careful study of AEs assisted in the understanding of the other two groups. The distinctions they made were based on noting that the usual idea of a peculiar belief was that it is delusional, and that of a peculiar experience was that it is a hallucination. The authors posited that much greater utility could be made by removing the negative connotations of these types of patterns and allowing them to be taken, more or less, at face value. Then an AE was defined as perceptions or experiences of high peculiarity.

Melo (2011) discussed symbolic elaboration of trance at *Centro Espírita Beneficente União do Vegetal* (a syncretic ayahuasca religion originating in Brazil). Through comparative analysis with the Santo Daime religion, he observed types of

contact with the supernatural in both groups, linking them to the representations of forces that drive the subject to action in the world. The author called attention to the dimension of modernity in this field, where a project of self-knowledge goes along with a "Master's teaching." The reason this study is interesting to me is that individuals' contact with the spirit world is one of the dimensions I propose to observe and "quantify," if possible.

Pekala, Wenger, and Levine (1985) sought to determine whether the quality of absorption (responsivity to various influences on a person's consciousness) correlated with phenomenological experience, and also whether level of absorption inclines to different states of consciousness. The authors had a total of 553 participants, in two experiments, complete Tellegen's Absorption Scale and undergo various sorts of stimuli. Participants' phenomenological states were assessed using a self-reporting questionnaire (Retrospective Phenomenological Assessment), and intensity and pattern markers were analyzed quantitatively. The stimulus conditions used were eyes-open-sitting quietly, reading-erotica, and relaxation-meditation. Those with higher absorption tended to have more vivid imagery and alterations of conscious state, but decreased self-awareness.

Petri and colleagues (2014) wanted to validate the concept of applying brain-function observations to networks theory. In order to do this, they gave 15 healthy volunteers intravenous infusions of psilocybin and placebo, finding that, in the case of psilocybin, the brain showed numerous low-stability, short-lived structures and several longer-lasting structures which did not appear with the placebo. Previous studies, claimed the authors, had avoided the weak links among the data from the various neuroimaging sources (e.g., fMRI, EEG, and magneto-encephalography) and had led too

much to the use of *ad hoc* thresholding methods, but the authors asserted that the neglect of such weak links leads to having to choose between clarity and completeness of information. Furthermore, doing so, they said, could prevent significant findings in correlated network states, cognitive control, and resting-state dynamics. In order to overcome these drawbacks, the authors focused on network homology in terms of the combined structure of connections and weights thereby captured. In the actual experiment, each of the 15 volunteers was fMRI-scanned twice, at a two-week interval. In each scan, a structural T-1-weighted image was followed by a 12-minute resting-state, blood-oxygen-level dependent scan, using standard-gradient EPI sequences. A placebo was given in one of these sessions and, in the other session, 2mg psilocybin was infused intravenously. In either case, the 60-second injections were begun six minutes after the beginning of the 12-minute session.

Rock, Denning, Harris, Clark, and Misso (2015) tested whether holotropic breathwork produced, to a significant level, genuine altered states of awareness. To measure this, they had 32 participants take Pekala's (1991b) Phenomenology of Consciousness Inventory (PCI) and the Altered States of Awareness (ASA) instrument. The authors found that the group which performed holotropic breathwork (HB) reported significantly differently from the control group on patterns of relationships among phenomenological subsystems, and produced higher ASA scores than either the control group or baseline. However, transliminality did not significantly predict higher ASA scores.

Rogowska (2011) wished to synthesize the current knowledge about synaesthesia from many fields such as literature, arts, multimedia, medicine, or psychology. The main goal of his paper was to classify various types and forms of synaesthesia. Besides developmental synaesthesia being likely to play a crucial role in developing cognitive functions (constitutional or neonatal synaesthesia), there are types of synaesthesia acquired during adulthood (e.g., phantom or artificial synaesthesia), momentary synaesthesia triggered temporarily in people who do not show signs of synaesthesia every day (e.g., virtual, narcotic, or posthypnotic synaesthesia), and associational synaesthesia which refers to some universal sense relations (e.g., literary, artistic, and multimedia synaesthesia). The author referred to a hypothesis that every kind of synaesthesia holds a different function: compensatory or integrative, and that synaesthesia could be described in one dimension, showing the intensity of this phenomenon. The stronger types of synaesthesia were given as: semantic, conceptual, intermodal, synthetic, comprehensive, external and bidirectional. The weaker types of synaesthesia were: sensory, perceptual, intramodal, analytic, partial, internal and unidirectional. The author noted that there are large individual differences in the ways that synaesthesia presents itself. By including a classification of kinds, types, and forms of synaesthesia into future experimental research would ensure a better understanding of the nature of this phenomenon, its mechanisms and the role that it plays in developing cognitive processes, according to Rogowska.

Studerus, Kometer, Hasler, and Vollenweider (2010) wished to provide a rigorous, objective analysis of the effects of psilocybin on healthy volunteers. The authors conducted eight double-blind, placebo-controlled studies on 110 people over a

nine-year period in Switzerland, and analyzed for subsequent drug abuse, persistent perceptual problems, and any long-term psychoses or cognitive impairments. Each participant was given from one to four oral doses (psilocybin or placebo) of various concentrations ranging from 45 to 315 $\mu\text{g}/\text{kg}$ of body weight.

Prescreening (Studerus, Kometer, Hasler, & Vollenweider, 2010) was done with thorough physical and psychiatric examinations, including the Freiburg Personality Inventory (Fahrenberg et al., 1984), and subjects were excluded if they or close relatives had any history of psychiatric diseases. Dittrich's 5D-ASC scale (Studerus, Gamma, & Vollenweider, 2010) was used for survey data in all eight studies, and six of the studies also included the Adjective Mood Rating Scale (short version; Janke & Debus, 1978). Six of the studies also included von Zerssen's self-rating List of Complaints (1971), 24 hours after ingestion; this instrument included 65 common physical and psychological maladies and allowed the researchers to arrive at a general score of the volunteer's comfort level.

The authors (Studerus, Kometer, Hasler, & Vollenweider, 2010) performed statistical analysis with mixed-effect models in the *R* statistical package, accounting for large heterogeneities among the eight studies. The authors concluded, from those results, that none of the subjects suffered any great harm (two of them only needed some reassurance) and most of the volunteers regarded their experiences as highly positive, both short-term and long-term.

Studerus, Gamma, and Vollenweider (2010) observed that the use of hallucinogens such as psilocybin have become of increasing interest in human research,

yet the socio-political controversies attached to these compounds have made data sparse. The authors sought to correct this literature gap by analyzing existing raw data from eight experiments conducted from 1999 to 2008. These studies were controlled by placebo and double-blind methods in 110 healthy volunteers who were given from one to four oral doses of psilocybin (~3.5g/dose). Abreaction was demonstrated only in the volunteers having the highest doses, and even they did not require more than temporary counseling. The authors concluded only that administering moderate doses of the substance to well-prepared volunteers would amount to an acceptable level of risk.

Taylor (2012) observed that “awakening experiences” usually occurred spontaneously rather than within religious or spiritual settings as one would have expected, nor necessarily connected to practices such as prayer or meditation. For these reasons, the author presented a view of *spontaneous* awakening experiences ($N=161$) in psychological and energetic terms. Taylor noted the ambiguity inherent in such terms as mystical or spiritual as either too easily confounded with specific traditions, or suggesting fantastic ideas of the paranormal; Maslow’s “peak experiences” came closer as a description, but included experiences which were generally positive but did not suggest awakening. Instead, the author looked for experiences which had an intensity, a clarity, and an expansiveness beyond the normal state, and which featured non-usual characteristics of different kinds. Taylor described such experiences of low, medium, or high intensity, each level having particular qualities ranging from well-being, euphoria, and clarity, to “an ocean of blissful, radiant spirit-force.” The study catalogued the triggering contexts which seemed to induce these awakening experiences.

Wilde and Murray (2010) noted that a great deal of contemporary research on anomalous experiences had focused on confirming the authenticity of the phenomena, or to determine the underlying processes by which these phenomena may manifest themselves. This research had largely been nomothetic, relying mainly on laboratory experiments and/or questionnaire surveys. Traditionally, however, there had existed a third strand of exploration in this field of study—phenomenological research—which had recently been somewhat overlooked in this field. In an attempt to redress this shortcoming, the authors proposed the use of Interpretative Phenomenological Analysis (IPA) to research anomalous experience. IPA possessed, according to the authors, strong theoretical and philosophical underpinnings and a focus on describing and interpreting the process, intricacy and novelty of personal experience. The authors argued that IPA appeared ideally suited as a method of qualitative investigation to address important fundamental research questions posed by the study of anomalous experiences.

Method and Theory in the Study of Religion and Non-ordinary States

Andersen, Schjoedt, Nielbo, and Sørensen (2014) demonstrated that mystical could be reliably induced and recalled under controlled experimental conditions, thus refuting, or at least extending, previous theories of mysticism and inadequate research approaches, especially perennialism and particularism. The authors also examined ways to make the data more reliable; thus, their work provides a foundation for this current study in terms of both theory and practice.

Anderson (2015) explained how transpersonal research requires approaches not limited to traditional methods, due to the personal, subjective, and intimate nature of its

subject matter. The author enumerated what she considered the most salient issues for transpersonal scholarship: valuing the encounter with something sacred, the meaningfulness of the enquirer's holistic experience, having a realistic understanding of the enquirer's psycho-spiritual maturity, recognizing universal spiritual values (e.g., compassion, inclusion, and humility), and contributing to a possible future.

Bonner and Friedman (2011) conceded that the quality of awe, while not strictly measurable, can at least be better defined and recognized through qualitative methods, particularly with interpretative phenomenological analysis, which allows deriving meaning through the observation of common themes among the experiences of the participants. The authors grouped their results into categories of Profoundness, Connectedness, Numinosity, Fear, and Vastness. I make use of their approach although my present research seeks to greatly expand and refine the resulting categories of experience.

Bouso et al. (2016) analyzed the psychometric validity of three instruments commonly used for evaluating the effects of hallucinogens: the Hallucinogenic Rating Scale (HRS), the Addiction Research Center Inventory (ARCI), and the Mystical Experience Questionnaire (MEQ). The authors obtained only inconclusive correlation which they claimed was likely due to insufficient sample size and inconsistencies in the ways that previous researchers had applied those scales and analyzed their data.

Dennett (2001) attempted to clarify what consciousness is, and to distinguish various academic ideas about it from each other. He expressed his approach in terms of *modularity* (specialized information processing), lack of standard terms for event

information stored in the brain, lack of a single organizational hierarchy, time duration for an event to be considered conscious, and that global availability is, in itself, a conscious state. What was helpful to me about this essay was to know some of the current academic ideas about consciousness and distinguish them from what my data suggested.

Lifintseva and Gasparyan (2015) and MacKenzie (2016) compared Western ideas about consciousness with Brahmanic and Buddhist concepts, illustrating the conundrums of whether there must be an external reality separable from the ego or personality, and whether the ego needs to exist at all. In my own research, I was interested in these problems, but chose to allow each participant's experiences to speak for themselves without the burden of whether such recollections came from within or from the external context.

Walsh (1995) made careful comparisons between preconceptions about altered states and what is actually found in proper research; between what occurs in such Eastern disciplines as yoga, Buddhism, and meditation, and states induced by psychedelics, both in shamanic contexts and Western settings, although Walsh grouped shamanic practices with the Eastern traditions. Despite conceding that his assessments were inconclusive, Walsh brought ideas about conscious states into welcome question for future research involving phenomenology and neuroscience.

Yamashiro (2015) discussed ways of measuring the effects of Buddhist absorption (meditation, mindfulness, and *samadhi*) from both Eastern and Western perspectives. He noted that such research is still in its early stages and made recommendations for future

research in both cognitive disciplines and neuroscience. I propose to refine the author's distinctions.

The Role of Autoethnography

Berry and Patti (2015) examined the benefits and caveats of using the researchers' personal experience as data for opening the perspectives for qualitative research, taking advantage of mindfulness disciplines and applications of relational communication. I use their example to help balance the benefits of my long experience with the subject matter, of distinguishing and describing non-ordinary experience, and the inherent bias that it introduces in analysis and conclusions.

Janzen (2016) discussed three factors she observed in her preparing to undertake her Master's thesis project, terming them "reflexivity," "liminality," and "the third space," where *reflexivity* refers to the relationship between the decision-making process and its concomitant thoughts and emotions, *liminality* describes an ambiguous state characterized by doubt and anxiety, and *the third space* represented a place of peace and resolution between dichotomies. This approach helps me to find my way among conflicting pressures and ideations.

Mizzi (2010) pointed out that autoethnography recognizes the value of the researcher's life experience, and is advanced by his method of multivocality, which provides perspectives for diverse voices located within the researcher. This approach helped me to balance my role as researcher with my necessary part as co-participant.

Moon and Strople (2016) examined the limitations of both language and researcher perspectives when addressing multiple, ambiguous, or highly subjective

realities. They also focused on needing approaches other than traditional ones relying heavily on numeric or taxonomic strategies. Their perspective allowed me to find new ways to evaluate my subjective data.

Techniques of Qualitative Research

Castillo-Montoya (2016) outlined a four-phase framework for refining interview protocols. He identified those phases as 1) ascertaining that the interview questions coordinated with the research questions, 2) establishing a conversation based on the inquiry, 3) obtaining feedback on those protocols, and 4) driving the interview protocol. I endeavored to reach a high level of data quality by respecting these guidelines, although my own research design called for more open-endedness than a strict protocol might entail.

Creswell's textbook (2007) provided useful guidelines for conducting this type of research. I adhered to those guidelines as much as possible within the constraints of my particular research design.

Johnson (2016) used interpretive phenomenological analysis in a two-phase series of interviews of people with dementia. The parallels that I draw between Johnson's subjects and my own participants are that the interviewees in both cases have difficulty in describing their experiences, and prior research has not adequately addressed the fundamentals of those experiences. I believe that my approach addressed both of these concerns.

Iso-Ahola and Miller (2016) investigated the influence of priming in questioning participants. In the example the authors examined (exercise goals), they found that nonconscious priming discouraging exercise significantly decreased motivation for exercise, whereas conscious priming in favor of exercise correlated with increase in that factor, but not vice-versa. This study helped me to avoid bias in framing my interview questions.

Kerwin-Boudreau and Butler-Kisber (2016) analyzed their qualitative data (concerned with teaching and learning) by means of visual inquiry (using concept mapping), categorizing by means of constant comparison thematic analysis, and narrative analysis for making connections. I applied these perspectives in analyzing my own data.

McClelland (2016) focused on valuation of marginalia, which includes researcher observations, field notes, side comments made by interviewees, journal entries, and other information not part of the core research. My own strategy was to actively induce the expression of marginalia during my interviews, thereby eliciting novel data and perspectives.

Marshall and Friedman (2012) compared the results of three computer-aided qualitative data analysis software packages to results obtained by hand, and concluded that the software consistently found more relevant data than the manual method, regardless of the premises on which the software was based. This conclusion challenged me to find more useful results than a machine could identify, although without the use of such software, I have no way of proving the superiority of my manual techniques other than by producing high-quality results.

Simmons, Nelson, and Simonsohn (2011) established a method for reducing false positives (motivational bias), and the risks of flexibility and ambiguity in culling data, in any type of research. To alleviate such biases, the authors proposed the following six guidelines for researchers:

1. Decide in advance when to terminate data collection,
2. Collect sufficient observations to establish power or credibility (more pertinent to quantitative research),
3. Enumerate all variables collected (this is what I did),
4. Report all experimental conditions, including failed procedures,
5. Estimate the impact of discarded data or procedures, and
6. Estimate the impact of discarding covariates (in the case of my current study, the equivalent of this was my avoiding established protocols).

Soros (2013) replaced some principles of economic theory with the ideas of *fallibility* and *reflexivity*. The former refers to the principle that informants' beliefs about themselves or the world can never be an accurate representation, whereas the latter concept implies that such beliefs actually change the world, or at least the region local to the informant. Recognizing these principles in my data-gathering process added to validity triangulation in my results.

Takyi (2015) argued that the most productive role (of four theoretical roles: complete participant, complete observer, observer-as-participant, and participant-as-observer) for a qualitative researcher was that of the participant-as-observer, due to the high degree of involvement and the depth of understanding it affords of the area under

investigation. He cautioned, however, that in this role the researchers biases must be carefully controlled for. This is the role that I endeavored to model in my data-gathering.

Tressoldi, Facco, and Lucangeli (2016) compared how different theories can explain the differences among non-ordinary experiences, meta-awareness, meta-cognition, the placebo effect, out-of-body experiences, cognitive therapy, and brain changes induced by meditational disciplines. One theory assumed that non-ordinary experiences derive from specific neural patterns, and another theory proposed that such experiences derive from the interaction of a proto-consciousness with the brain's neural activity. The authors believed that it might be possible to assess which theory seemed a better description of the different experiences. I considered these types of assessments in my analysis of the new data.

Interpretation of Language

Damm (2011) observed factors contributing to emotional self-deception, particularly those motivated cognitively and those phenomenologically motivated. The author distinguished her approach from the classical contemporary theories of intentionalist and motivationist ideations. She also refuted the view that emotions can be divided between cognitive and noncognitive approaches. This author's distinctions helped illuminate my analysis process.

Digdon (2017) used a well-known case study ("Little Albert") to illustrate the effects of implicit assumptions in provoking bias and logical errors in researchers' findings. The author selected improvements for such erroneous approaches: a) consciously adjusting one's belief in all intuitive instincts and inferences rather than

trusting common sense, b) rigorous peer review, c) authors must include all relevant information, d) avoid inferences from adductive reasoning ($A \rightarrow B \neq B \rightarrow A$) and other logical fallacies. I endeavored to abide by the precepts in conducting the interviews.

Kassin, Dror and Kukucka (2013) described several forensic contexts that could contaminate the behaviors, judgments, and perceptions of witnesses and jurors: observer effects, primacy, and expectancy effects. The authors recommended best practices for reducing bias: a) assess evidence prior to comparison with the target, b) shield examiners from extraneous information, c) avoid singling out a given target, d) use double-blind verification whenever possible, e) randomize evidence and target lists to avoid the false perception of patterns, and f) ensure appropriate psychological training. In line with these suggestions, I made my interviews as open-ended as possible and endeavored to minimize the influence of my own experience on the interviewees, although it was often necessary to offer an anecdote to get them started.

Sand and Nilsson (2017) investigated the cognitive effects of Stroop priming (response-time differentials between congruent and incongruent pairs of stimuli) and reverse-Stroop priming. They determined that Stroop priming paralleled perceived congruency rather than objective congruency, calling reports of subliminal priming into question. This approach illuminated my rationale for open-endedness in my interview methods, although doing so made it more difficult to interpret the data.

Wallbott and Scherer (1986) studied how verbal and non-verbal cues were variously interpreted over different audio and visual channels, by diversely prepared judges (all academic but in disparate fields). The authors noted the limitations of their

approach and suggested several possible improvements, particularly regarding the use of actors, who tend to introduce idiosyncrasies and artifacts, such as exaggerating the emotional affect. The value of this paper, to me, was to sharpen my interview techniques in watching the original Skype videos (where available) and assessing participants' verbal responses accordingly.

Yaden et al. (2016) undertook a project to quantify ineffable experiences by analyzing the online survey responses of $N = 777$ volunteers (51% male, 45% female, 26% atheist, and 31% other religions), using Hood and Morris' Death Transcendence Scale and Hood's M-scale. The authors' main conclusion was that people who had actually had mystical experiences tended to use more personal and inclusive vocabulary for describing their experiences, whereas those who had not would prefer more typically religious terms. Of my participants in this current study, all had had mystical experiences and, therefore, fell into the former category upon my eliciting their reports.

Zuckerman et al. (1975) examined accuracy of encoding and decoding of visual and non-verbal auditory cues in terms of gender and inter-relationships; they found significant distinctions dependent on those factors. I found that my awareness of these issues illuminated my research with the participants.

Influences of Cultural Background

Wang (2016) illuminated thinking about cultural diversity by identifying five misleading assumptions commonly made in the literature:

1. Cultural Psychological Science Focuses Only on Finding Group Differences

2. Cultural Psychology Disregards Group Similarities
3. Cultural Psychology Concerns Only Group-Level Analysis
4. Cultural Psychology Is Irrelevant to Basic Psychological Processes, and
5. Cultural Psychological Research Only Confirms the Generalizability of Theories.

I kept these guidelines in mind during my data-gathering phase, but had no way to test them due to having only white North Americans (with the sole exception of a partial East-Indian in the UK) in my volunteer population.

Conclusion to Chapter 2

Theoretical and empirical approaches were examined for the study of how conscious states could be differentiated, understood, and operationalized. The theoretical approaches focused on defining terms and conditions in usable ways, and on bridging these approaches to a mystically-based past and to a technologically-oriented future. Qualitative studies seek to understand the ways in which conscious states are actually experienced by individuals, and quantitative research endeavors to uncover relationships among the findings and to validate hypotheses. My own focus has been to explore the possibility and practicality of measuring subjective states of consciousness to a fine enough degree that researchers can retrace the steps to dysfunctional as well as sublime states of consciousness. To that end, it behooves me to detail the gaps that I have identified in the previous research.

Gaps in Underlying Theories of Consciousness and Self-Concept

I think it laudable the degree to which existing and forthcoming research has employed concepts from Eastern traditions (Avants, Beitel, & Margolin, 2005; Halsband, Mueller, Hinterberger, & Strickner, 2009; Walsh, 1995), transpersonal theory (Friedman et al., 2002, 2008, 2013), appendage theory (Rosenthal, 1993), and even shamanism (Rock & Krippner, 2008; Walsh, 1995) in order to provide an organic or natural foundation for the study of consciousness. What I found lacking in these approaches was a pattern of unification and integration due to each study's being a facet or slice of the task of mapping conscious states.

Several of the referenced papers offered much-appreciated help in identifying problems with assessing subjective experiences and in proposing ways of overcoming those problems (Cardena & Pekala, 2014; Hunt, 2007; Johnson & Friedman, 2008; Joormann & Vanderlind, 2014; Kerns, Karcher, Raghavan, & Berenbaum, 2014; Zamore and Barrett (1989). These studies examined mindfulness, hypnotic trance, peculiarity vs. psychopathology, mood disorders, somatic phenomenology, spiritual self-schema, and distinctions of introspection. I believe that, together, these theories and approaches would constitute a comprehensive-enough method for assessing states of consciousness, and that I could operationalize an integration of the best of these approaches.

Gaps in Instrument and Treatment Validations

We were given a number of very useful tools for measuring various aspects of consciousness. One of these was the SELF (Friedman, 1983, 2013; Friedman & Pappas,

2006; Pappas & Friedman, 2007). Another was the MAP (Lefrançois et al., 1997) which was based on the ideas of Maslow, Perls, Reisman, and Shostrom.

Some other reliable and widely used instruments for assessing altered states are Dittrich's 5D-ASC, which is based on Dittrich's original OSV test, and Hood's Mystical Experience measure (Hood, 1975; Studerus, Kometer, Hasler, & Vollenweider, 2010).

Several of the reference papers sought to quantify (or at least codify) aspects of spirituality (Hood, 1975; MacDonald & Friedman, 2002; Muhamad, Roodenburg, & Moore, 2014), using, for example, MacDonald's Expressions of Spirituality Inventory. These instruments examined dimensions of cognitive orientation toward spirituality, experiential phenomenology, existential well-being, paranormal beliefs, religiousness, the role of quantitative analysis in transpersonal research, the relationship between humanistic and transpersonal ideas about human functioning.

What I found lacking in all of these, from the perspective of my research interests, was an outlook in which spiritual and otherwise nonordinary states were addressed on their own terms rather than from the viewpoint of merely being tangential to "standard reality-awareness" which assumes that everyone experiences, through the lens of their idiosyncratic personality formation, the same world as each other. I sought to demonstrate that "ordinary reality" is not monolithic and solid, but rather more of a collection of projections which only "fit together" due to a kind of mechanism in our minds.

Gaps in the Use of Neuroscience in Identifying Features of Conscious States

Modern research has been attempting to show that practices like meditation, mindfulness, dreamwork, hypnosis, and various spiritual and shamanic practices (as well as ecstatic episodes from seizures and the results from ingestion of psychedelics) would show up consistently in neural scans such as EEG, ERP, fMRI, and other neuro-imaging techniques (Cahn & Polich, 2013; Freedman, 2010; Picard & Craig, 2009; Walker & Johnson, 1974; ; Walsh, 1995 Wamsley, Domhoff, Perogamvros, & Cicogna, 2013; Wittmann et al., 2007). Other researchers sought to demonstrate neural effects of cognitive masking and psychic events (Alyushin, 2011; Haas, 2011; Halsband, Mueller, Hinterberger, & Strickner, 2009; Rock & Krippner, 2008; Vaitl et al., 2005; Vollenweider & Kometer, 2010; Walley & Weiden, 1973).

While I am much in favor of using the tools of neuroscience to find neural correlates of subjective phenomena, the results of all this delicate work, thus far, are limited to identification of superficial processes such as attention and self-awareness (Vaitl et al., 2005), some details of perception (Rock & Krippner, 2008; Rock et al., 2015; Walley & Weiden, 1973) or psychic phenomena (Freedman, 2010; Haas, 2011), whether one is in trance (Halsband, Mueller, Hinterberger, & Strickner, 2009) or dreaming (Shields, 2006; Walker & Johnson, 1974), or has been practicing meditation in general (Cahn & Polich, 2013), some effects of having ingested psychedelics (Alyushin, 2011; Vollenweider & Kometer, 2010; Wittmann et al., 2007)), and whether, inconclusively, the person experiences ecstatic feelings during seizures (Picard & Craig, 2009). My hope is that the field of neuroscience will become exact enough that it can

corroborate the fine distinctions among specific states of consciousness. However, I was not looking for technology to make the determination, but for properly trained practitioners (perhaps using techniques that I lay out in this paper) to use their refined intuitive abilities to make the initial assessment, and only then to utilize the technologies to help refine those assessments.

Gaps in Methods of Observation

Very good work has been done in distinguishing the features of various levels of dreaming states (Barrett, 1979; Hobson, 2009; Shields, 2006; Walker & Johnson, 1974; Wamsley, Domhoff, Perogamvros, & Cicogna, 2013), hallucinations and delirium (Gecici *et al.*, 2010; Huang *et al.*, 2012), psychedelic and drug-induced phenomena (Campbell, 2009; Dubois & VanRullen, 2011; Fachner, 2005; Griffiths, Richards, McCann, & Jesse, 2006; Studerus, Kometer, Hasler, & Vollenweider, 2010), manifestations of autism or psychological ailments (Just, Cherkassky, Buchweitz, Keller, & Mitchell, 2014; Vaitl *et al.*, 2005), anomalous and transpersonal experiences (Carhart-Harris *et al.*, 2014; Kerns, Karcher, Raghavan, & Berenbaum, 2014; Wilde & Murray, 2010), spirituality and religiosity (James (1901/2011, Lecture XX; Melo, 2011; Taylor, 2012), absorption and self-expansiveness (Friedman & Pappas, 2006; Petri *et al.*, 2014; Zamore & Barrett, 1989), psychic phenomena (Haas, 2011), and the effects of synesthesia (Rogowska, 2011).

The problem, for me, with all these studies, is that they capture only the representation of the ordinary persona in its interpretation or remembrance of its extraordinary experience, no matter how life-changing that may be. In other words, the

level of consciousness with which a participant responds to an interview or survey question has, for the most part, been given through the lens of whatever thoughts and symbols are available only to ordinary consciousness, and the neural patterns available for observation are still opaque to the more subtle contents of the psyche. What awaits to be revealed, in my view, is the representation of the inner or higher mind, on its own terms, whatever those may turn out to be. I hoped to accomplish this by using fresh categorizations and taxonomies indicated by the data rather than from prior research and instruments.

The following chapter presents my response to the above-delineated gaps in prior research and approaches to distinguishing and apprehending states of consciousness, particularly those described as altered or non-ordinary. It details some of the prominently-used instruments and methods and explains how I endeavored to refine and expand their utility so that, hopefully, improved theories, methods, and treatments could be developed from my approach.

Chapter 3: Research Method

I designed this qualitative study to identify specific nonordinary states of consciousness, including those induced by trance, meditation, psychedelics, or peak experiences, and distinguish among them by their particular phenomenological features. This led to my formal research question: Are there identifiable features that can reliably and validly distinguish among states of consciousness thought to be distinct from each other? Unlike many previous studies in the psychological literature, my project did not rely on defining consciousness, transcendence, expansiveness, levels, or mystical/religious traditions, although those traditions, in addition to psychological approaches, serve as foundational resources. Instead, I allowed each state or experience to speak for itself, as it were, and then codified the data into nonpreconceived categories which concurred only sporadically with the established categories of consciousness research; those included neuroscientific approaches, cognitive research, spiritual/religious orientation, and perceptual research, among others. New relationships and connections were revealed thereby, so that, ultimately, an improved system of mapping the various conscious states can be made that could be useful in devising further research, new therapies, and tools for transformation.

The following categories and techniques of qualitative methods may illuminate my own research on my topic:

- Using altered states as tools for exploring the brain and mind (Alyushin, 2011; Norman, 2010; Picard & Craig, 2009; Rogowska, 2011).

- Using panels, focus groups, and hermeneutics for achieving consensus to clarify issues and procedures (Bond et al., 2009; Maher, Robertson, & Howie, 2011).
- Using subconscious induction to manipulate and assess alterations of perception and cognition, and to foster recall of deeply embedded memories (Cox & Barnier, 2009; Dubois & VanRullen, 2011; Novoa & Hunt, 2009; Suri, 2011; Walker & Johnson, 1974; Walley & Weiden, 1973).
- Using personality questionnaires for pre-screening and post-analysis (Cutting & Murphy, 1988; Lefrançois, Leclerc, Dubé, Hébert, & Gaulin, 1997; McEvoy et al., 1996).
- Using altered-state questionnaires for assessing the effects of nonordinary experiences (Studerus, Kometer, Hasler, & Vollenweider, 2010; Sumnall, Measham, Brandt, & Cole, 2011; Taft Ego Permissiveness Inventory, 1969).
- Using the phenomenology of delusions and hallucinations with respect to culture and region (Gecici et al., 2010; Suhail & Ghaurim, 2010).
- Assessing improvements and changes in the lives of psychedelic subjects (Kirchner, 2010; Lorencova, 2011; MacLean, Johnson, & Griffiths, 2011).
- The use of phenomenological analysis to study non-ordinary experiences in general (LeCompte & Schensul, 1999a; Wilde & Murray, 2010).
- The nonverbal nature of nonordinary state descriptions (Fiore & Schooler, 2002; Walley & Weiden, 1973).

- The correlation of heightened creativity with decreased latent inhibition in people in non-ordinary states (Carson, Peterson, & Higgins, 2003; Fink, Slamar-Halbedl, Unterrainer, & Weiss, 2011).
- Perceptions and ideations of divinity and the supernatural potentially caused by psychoactive substances (de Alverga, 1996; de Araujo et al., 2011).
- Based on theories of Freud and Jung, dream-type states potentially correlated with non-ordinary states (Dixon, 2005; Giannoni, 2003; Shields, 2006; Walker & Johnson, 1974).
- Cultural and regional influences potentially affecting the degree and quality of hallucinations (Gecici et al., 2010; Hallowell, 2010; McClenon, 1997; Melo, 2011; Polito, Langdon, & Brown, 2010; Suhail & Ghauri, 2010).
- Non-ordinary experiences potentially inducing psychic phenomena and synesthesia (Haas, 2011; Hallowell, 2010; Novoa & Hunt, 2009; Rogowska, 2011).
- Non-ordinary states potentially supporting increased self-awareness (Picard & Craig, 2009; Norman, 2010; Rosenthal, 1993).

Empirical Rationale

Empirical support for my study falls into various categories:

- The observation of how music (instrumental, drumming, and chanting) induces and augments altered states (de Rios, 2005).
- How people continue to seek satisfaction, arousal, pleasure, or other “high” state (Back-Madruga et al., 2003; Kjellgren & Soussan, 2011).

- Observation of increased creativity in conjunction with decreased inhibition (Carson, Peterson, & Higgins, 2003; Fink, Slamar-Halbedl, Unterrainer, & Weiss, 2011).
- Improved openness and communication in therapy and meditation groups (Cutter, 1967; Halsband, Mueller, Hinterberger, & Strickner, 2009).
- Improved responsiveness to both psychological and physical therapies (Griffiths & Grob, 2010; Kirchner, 2010; MAPS, 2010; Vollenweider & Kometer, 2010).
- Enhancement of personal meaning and spirituality (Griffiths, Richards, McCann, & Jesse, 2006; Lorencova, 2011; Polito, Langdon, & Brown, 2010).
- Nonverbal vs. verbal cognition in altered states (Schooler & Engstler-Schooler, 1990).
- Demonstration of the ability to draw gradations among altered states (Studerus, Gamma, & Vollenweider, 2010).
- Demonstration of the ability to change one's own conscious state volitionally (Vaitl et al., 2005).

My hope is that my research will contribute to these nine categories of empirical research, and open up new categories to explore.

in this chapter, I include a description of the sample population, procedures, measures, and analysis of the dataset. I also present ethical considerations here.

Method

The Researcher

In order to ensure a researcher's ability to obtain high-quality data from the participants in this type of study, that person should have previously experienced enough nonordinary states to be able to recognize, or at least relate to, what participants report (Alyushin, 2011; Campbell, 2009; Cardeña & Pekala, 2014; Cortright, 1997; Fiore & Schooler, 2002; Polito, Langdon, & Brown, 2010). This also requires having strong intuitive senses and empathic sensitivities so as not to disrupt the state or recall of the participants, and a solid theoretical and practical understanding of the psychological issues involved. Methods for developing these skills and sensibilities were documented in the Literature Review.

Having such a background could put a researcher at risk of bias in terms of coloring subjects' responses with his or her own experiences. I alleviated such risk by use of feedback from both the participants and faculty advisers, but the risk should be minimal in any event due to the proposed technique of classifying and analyzing the data in as neutral terms as possible. I also made use of autoethnography literature (Berry & Patti, 2015; Janzen, 2016; Mizzi, 2010; Moon & Strople, 2016) to show how a researcher's own personal experience could add important dimensions to a qualitative study while also avoiding the risk of bias.

Sample and Population

Using volunteers who responded to invitations on research boards, in journals, in transformational retreats and workshops, in psychedelic-based and spiritualism-based

religious groups (Santo Daime, n.d.; Umbanda, n.d.), and in online media (e.g., Erowid.org, n.d.; Facebook.com, n.d.; LinkedIn, n.d.; Lycaeum.org, n.d.; MAPS, 2010) helped to ensure that those participants whom I selected would be comfortable with the topic and would probably have sufficient relevant knowledge and experience to make valuable contributions to my research. The acceptance form and initial contact allowed me to determine that participants were able to understand what was expected of them. Physical condition and demographics were noted but not used as selection criteria, thus providing a broad population sample which helped in the final analysis. A total of 36 people responded to my invitation, and 29 successfully set up interview appointments with me (I did not exclude anyone), mostly via Skype, two via telephone due to lack of access to Skype, and three in person. Age distributions are shown in Table 1, tabulated according to age groups and participation.

Table 1

Participation of Respondents by Gender and Age

Participation	Age Range		
	<30	30-50	>50
Interview			
Male	2	12	3
Female	1	3	4
Survey			
Male	2	1	3
Female	0	2	3
Interview + survey			
Male	2	1	3
Female	0	2	2

Invitations and announcements

I placed announcements of the research on the M.A.P.S. mailing list, on the Erowid and Lycaeum websites, on appropriate pages of FaceBook and LinkedIn, and I emailed known leaders of psychedelic workshops and spiritual retreats, asking them to invite their attendees to participate in this study. Volunteers were expected to respond by email or postal mail with their signed consent forms (Appendix A). I also placed an announcement on the Walden University Research page, although no students replied from that source.

Many of the volunteers were self-selecting from research boards and appropriate online forums. Others were invited by the leaders of relevant workshops and retreats. Criterion sampling was the main strategy used – people who had already experienced altered states of consciousness, or who were about to, in controlled settings to which they had been screened and registered outside of my research; I planned for approximately 30 appropriate respondents. That number is fairly typical in this type of study (e.g., Alyushin, 2011; Barrett, 1979; Campbell, 2009; Cardeña & Pekala, 2014; Carson, Peterson, & Higgins, 2003; Griffiths, Richards, McCann, & Jesse, 2006).

Pre-screening forms

I based my consent form on the standard Walden University Informed Consent form (Appendix A). Because participants' experiences will all have occurred elsewhere, I believed that statement to be adequate, and any risks would be limited to abreaction to simple recall of prior experiences. I did not, myself, induce altered states in my subjects

(except to the degree that such recall constituted an induction), but rather, only elicited recall of experiences they had elsewhere.

Inclusions and exclusions

Ideal candidates for inclusion were people who were either experienced with non-ordinary states (including trance, hypnotic, psychedelic, or peak experiences), or those who had been diligently prepared to have them. I excluded only those whose dysfunctions would make the data too complex for reasonable analysis (there were none of that criterion). I made note of any demographic data offered but, since the primary criteria were experience and preparedness, I did not select on demographics.

If a candidate was able to return a properly filled-in Consent Form, I assumed that they spoke sufficient English for the study, although possibly not enough to be one of the interviewees. If pregnant women were allowed to participate in a workshop or retreat in which non-ordinary states were expected, or were supervised by a medical or psychological professional, or experienced an altered state on their own, I would simply have recorded such circumstances (there were none); I did not anticipate its impeding my study in any significant way.

Data Gathering

Survey Instruments

The interview questions were adapted from the relevant sections of several well-validated measures, including the 5D-ASC instrument (Studerus, Kometer, Hasler, & Vollenweider, 2010), Ego Permissiveness Inventory (Taft, 1969, 1970), Mystical Experiences Scale (Hood, 1975; MacLean, Leoutsakos, Johnson, & Griffiths, 2012), the

SELF – Transpersonal Scale (SELF-TS; Friedman, 1983), the Phenomenology of Consciousness inventory (Pekala, 1991b), and the Key Dimensions for Mapping Altered States (Walsh, 1995). Rather than my using these instruments directly for the current study, I incorporated their essential content into a series of questions to be embedded in a semi-conversational interview; this allowed the participants to describe their experiences on their own terms without coercing assumptions or biases.

Interviews

The interviews allowed the selected participants to express their descriptions and reactions in their own words, and also allowed the researcher to investigate particular points which the participant may not have recalled, and to observe their demeanor; this was notated simply in terms of physical attributes (e.g., “head tilted,” “breathing accelerated,” “shoulders straightened”), but without assigning significance to them at that point. The interviews would deepen and expand the data for the research question (LeCompte & Schensul, 1999b, p. 128; Pavkov, Priest, & Fox, 2012). Some of the interviews could have taken place during a session in which the participants had been placed in an altered or non-ordinary state of consciousness outside of my influence (this did not actually occur with my pool); however, all of the participants relied on memory of some peak or altered experience which they chose themselves. This required the researcher (myself) to use the sensibilities acquired in such preparation as outlined in the Researcher paragraph above. I took Johnson’s (2016) considerations for interviewing a population with dementia, into account, given that recollection of non-ordinary states or pre-verbal experiences might prove just as difficult to access as with dementia. As

McClelland (2016) did, I paid attention to marginalia during the interviews; even when the only available channel was audio, I still observed voice changes, pauses, breathing, and other subtle qualities; I used such information to help determine the significance and context of participants' remarks. Specific procedures are outlined below.

I generally guided each participant to find some event in their past that elicited strong emotional or mental images; I then encouraged them to retell the experiences from as personal and sensory-based perspectives as possible – for some of the participants, this interview process may have constituted an induction in itself, although that was not my specific intention; that came simply from the process of deep recollection.

Procedures

Datapoints Yielded

The questions derived from Ditttrich's 5D-ASC (Studerus, Kometer, Hasler, & Vollenweider, 2010) sought responses to these general categories: Experience of Unity, Spiritual experience, Blissfulness, Insightfulness, Anxiety, and Changed Meaning of Percepts. The categories include Experience of Unity, Spiritual Experience, Blissful State, Insightfulness, Disembodiment, Complex Imagery, Synesthesia, and Changed Meaning of Percepts. An exemplary open-ended question for this section might have been, "What can you tell me about your most psychedelic experience?"

The Hood section (1975) questions would illuminate sense of individuality, aliveness and sentiency of things, distortion of time and space, noetic qualities, ineffability, blissfulness, sacredness, and participants' relationship to examples from William James' Varieties of Religious Experience. An open-ended question for this

section might have been, “How was your sense of individuality different between this experience and your normal feeling?”

The Pekala (1991a) questions provided whether the participant’s attention was internally or externally focused, and the quality of sensations, emotions, thoughts, and impressions. An open-ended question for this section might have been, “What did you notice about how you were able to focus your attention, and were you more aware of internals or externals?”

The Friedman (1983) section is oriented on what types of transcendental expansiveness experiences the individual may have had. An open-ended question for this section might have been, “What kind of relationship did you have with life in general, or your own life in particular?” This question is not intended to be at all exhaustive; it is given merely as an example of the conversational tone of the interview.

Walsh’s (1995) Key Dimensions for Mapping Altered States inquires concerning degree of awareness; ability to communicate, control, and concentrate; and sensitivity, emotional state, and sense of self. An open-ended question for this section might have been, “What did you notice about your degree of control or your ability to communicate?”

The participants were asked about life changes due to the experience, whether those changes were positive or negative, what kinds of perceptions or insights they had, and how such phenomena impacted them. I did not know in advance how successful they would be at this, nor what they would find to report; however, this was a key source of new data to be analyzed in this study.

Part of the interview procedure was for the observer to enter into levels of rapport (Bandler & Grinder, 1975) with the participant, first physically (e.g., posture, breathing, tensions, whether the pores or pupils are open or closed), then emotionally (using the empathic skills and sensitivities), and finally mentally (embracing the cognitive perspectives and attitudes of the participant). Most of the interviews ended with the open question, “What else can you tell me about your experience?”

Data Collection and Analysis Methods

Data analysis techniques. Following are the methods I intended to use for analyzing each type of data in the research.

Identifying codes, themes, and patterns. LeCompte and Schensul (1999a, pp. 57-60) provided the following characteristics of operational encodings:

- a) Codes point to some specific object or event, or even to a location on some scale, in a particular area of study.
- b) They are named with single words or with short phrases.
- c) Names are unique for each code.
- d) At least initially, code categories should be as free of inference as possible.
- e) Surveys and questionnaires should have separate codes for n/a or no response.
- f) Codes should reduce the amount of data to be processed.
- g) Code categories should be as hierarchical as possible so they can be summarized or elaborated as needed.
- h) Coding systems can be adapted from sources in the literature, or they may be deduced from the natural structure of the phenomenon under study.

My procedure was then to use the codes to reduce the questionnaire data and research observations to units which can be represented qualitatively, identify patterns and themes with respect for the perspectives of the participants, and then to show how each category related to the research questions. I translated the categorized data into appropriate qualia descriptions, and then found points of agreement among the categories. In a hermeneutic fashion, I extracted patterns and themes from the narrative data, and checked back with the participants for any needed clarifications.

Interview data. The interviews were my best opportunity to derive the perspectives of the participants as distinct from my own background and training. I captured the dialogue on a digital voice recorder and, after encoding, stored them in a secure folder on my office computer. After the research had been completed, I moved all the data to a password-protected optical disk and erased all traces on the computer. My hand-written notes as to the subject's demeanor and external indications were transcribed into the same secure folder, with corresponding encoding for matching up. I will retain these recordings, transcriptions, and notes for five years, after which I will destroy them in a secure manner. After I encoded those responses, I followed up by formatting all the responses into a questionnaire and sent that out to everyone for whom I had consent forms, regardless of whether they had actually interviewed with me.

Procedural details. I am adapting the interpretive phenomenological analysis (IPA) method described in Chapter 2 of this document (Gecici et al., 2010; Hartelius, 2007; Hunt, 2007; Pekala, Wenger, & Levine, 1985; Walsh, 1995). Instead of using an ad-hoc format, as the previously-mentioned Gecici study (Gecici et al., 2010) did, I

adapted a combination of questions based on the several well-validated instruments described above, focusing on internal specifics of the experiences as objectively as possible, rather than on the volunteers subjective impressions, except inasmuch as their feelings were actual features of the experience. In order to avoid assumption bias, I framed each item as an open question rather than as an assumption to be affirmed or negated. Extracting from the cited instruments, I incorporated the following questions for interview; it was not my intention to address all of these questions on each volunteer, but rather to utilize them appropriately for the particular person's experience. This decision is justified by the fact that my research design was to generate a compilation of data, overall, from which to analyze categories and delineations from a new perspective which will then make new state mappings possible for developing treatments and research methods. Following are the questions I adapted from those instruments:

- What sorts of influences, practices, or inspirations helped you to move into your experience (the participant's choice of some recent peak or altered-state experience)? How much or how long did you have those influences?
- Did you wish to have this kind of experience? Why?
- What feature(s) of your experience stood out the most to you?
- What changed in your sense of self? Your relationship to your body?
- How did things and spaces around you change or rearrange themselves?
- What happened with your sense of time, space, and reality?
- Did you have any revelations about the meaning of life and death?

- What happened to your ability to describe your experience?
- What kinds of emotions did you feel?
- Did you have any sensations which seemed beyond the normal five senses?
- Was there anything in your experience that made you feel awe or wonder?
- What changed in your thinking process during your experience?
- Was there a change in your creativity or motivation?
- How was your ability to speak or communicate affected?
- Did you experience any sort of healing or improvement in well-being?
- Were you able to exert control?
- What kinds or levels of realities did you experience?
- Did it seem as if other beings or entities were present with you?
- What kinds of communications, revelations, or visions did you receive?
- How do you feel that you were changed during the experience? Did those changes last?
- How did this experience compare with other special experiences you've had?
- Did it seem as if you were watching yourself, or that some other being was watching you as you observed and shifted?
- Did external stimuli cease to have an effect on you?
- Did you have any moments in which the world disappeared?
- Were there dreamlike qualities to your experience?

In order for the questions not to seem abrupt or disruptive of the participants' process in expressing the phenomena of their experiences, I nested these questions into a semi-structured conversation, rather than asking them one after the other. That way, I expected the data to be clean of any coercion or influence.

Analysis and interpretation. Data was encoded and thematically analyzed in stages, in accordance with methods described in LeCompte and Schensul (1999a). Stage One was to collect the responses from the interviews and optional participants' journals. Stage 2 was to codify and classify the data from those responses. Stage 3 was to interpret the responses into meaningful constructs. In Stage 4, the researcher returned to the participants to check on the accuracy of those interpretations and to elaborate on the earlier responses.

Verification of trustworthiness and authenticity. According to Lincoln and Guba (1985), trustworthiness for qualitative research can be broken into four criteria: credibility, dependability, transferability, and confirmability. The following paragraphs detail how my research intends to conform to these criteria.

Credibility. The credibility of my prospective research lies in the fact that philosophies and reports of various kinds of non-ordinary states exist worldwide and have been incorporated into religious texts and mythologies for thousands of years. Such states include religious and mystical experiences, miraculous apparitions, sightings of ghosts, spirits, elves, faeries, and extraterrestrials (these can be found even on 35,000-year-old cave paintings), and other supernatural phenomena. My case is that these reports all exist, regardless of whether one believes their contents, and I could assume

that my volunteers would report their subjective experiences faithfully, to be confirmed by checking back with the participants.

Dependability. The hermeneutics and member checking I used should suffice to make the data dependable. After I completed my analysis, I submitted my findings to the participants and asked them for feedback as to how close I came to representing their experiences.

Transferability. Because I based my data-gathering and analysis methods on standard, validated instruments and practices, I expect that my findings will be seamlessly able to be added to the scholarly knowledge base on the subject of consciousness.

Confirmability. Triangulation and bias checking were accomplished by the use of the pre-screening and the final feedback from the participants.

Data Interpretation

Strategies for interpreting my qualitative data. Using the coding categories I established, I hermeneutically found more and more inclusive classifications for the encoded data, comparing them to my research question. Once I resolved the data into an optimal classification system, I went back to the original data, or to the participants and possibly peers, to get their feedback on the descriptive accuracy of my conclusions.

How I used the data to answer my research question. The interview dialogues were oriented toward answering the research question and, in addition, were open to significant themes not accounted for by the RQ. I reported such themes in my conclusions as material for future research.

How I used existing research and theory to interpret my findings. The research methods I have described herein are based on a wealth of current knowledge, as I expressed in the Rationale sections of the Introduction. The way that I expected my research to extend current knowledge is that I intended my findings to actually map out non-ordinary states of consciousness by a finer level of detail than has been done previously, including paths to attaining particular states, and excluding material which may have only superficial content, such as hypnagogia, anxiety, paranoia, and “fuzziness.”

Dissemination of Findings

My findings include a summary of the results and my conclusions. My stakeholders include my dissertation committee, Walden University, and the workshop and retreat leaders who passed along the invitations to their attendees. I would also notify the research mail-lists which have interest in this area of study.

There is a substantial lay audience of people who are interested in states of consciousness, either from a spiritual or personal-growth perspective or from an interest in psychedelics. For such people I plan to release my findings on the MAPS, Lycaeum, LinkedIn, and Erowid websites, and on a special page I intend to create on FaceBook. For scholars and researchers, I will submit my results to scholarly journals and also to universities which have departments in consciousness studies or similar.

Ethical Considerations

The welfare of subjects was engendered by personal, informal prescreening, follow-up interviews, and observation done during the psychedelic sessions, with the written consent

of the participants. However, not all of the subjects were expected to be scrupulously truthful in their screening statements, giving rise to a possible case of ensuing psychological disturbance (Studerus, Kometer, Hasler, & Vollenweider, 2010), although none occurred.

Gregory (2011, pp. 26-29) pointed out that virtually all of the test publishers, in addition to the various oversight panels of government and the APA (n.d.), are very clear that test-givers should do no harm to their subjects, and that the test takers should be fully informed to give consent for the examination and its conditions. Because this is not truly possible in experimental conditions such as those for which the OAV/5D-ASC is applicable, extra care must be used in screening, administration, and follow-up.

The National Institutes of Health (NIH) Office of Extramural Research certified that I successfully completed the NIH Web-based training course “Protecting Human Research Participants.” Date of completion: 03/18/2011; Certification# 655947.

In order to ensure the anonymity of the participants, I assigned a code to their identities, and then referred only to those codes in subsequent steps of the research. Such code keys are secreted in the secure folder.

Social Change Implications

My research question was that both ordinary and nonordinary states can be known by their “signatures” (recognizable collections of specific perceptual and cognitive features) irrespective of induction method or diagnosis. This should allow a researcher or a therapist to devise treatments based on just those characteristics rather than on diagnosis or induction method, thereby, adapting treatment or research methods much more efficiently. Furthermore, I believe that a deeper, more precise understanding of how

the mind is composed, and how its features are related, will foster attitudes of compassion and empathy in both researchers and in society as a whole. Instead of pervasive attitudes of “us and them,” people might think more of each other as “what type and combination of ‘us’ is this person?”

Chapter 4: Results

As specified in Chapter 3, I posted invitations for volunteers in the Walden Research forum, in the MAPS forum, and on my Facebook network. Thirty people responded within the first 24 hours, and six others applied during the following 4 weeks; of those, 20 people (16 male and 4 female) were able to schedule interviews with me at that time. Five more took in-person interviews in the following 2 months. I had previously known (to various degrees) five of the volunteers, and I discuss possible effects of this in the Discussion and Conclusions section (Chapter 5).

Due to the informal nature of the interviews and because I did not ask for exact ages, I divided participants into three general age groups with cutoffs at 30 and 50 years of age based on observed level of maturity. One female participant resigned after her interview, so I did not use her recording. Most respondents came through a connection I had with the MAPS organization, and were primarily in Canada; one female participant came through the local Psychedelic Society, three people came through my Facebook posting, and four others were personal friends.

I allowed demographic information to be spontaneous and voluntary, and for the remembered events to be of any kind and of the participants' choosing, as long as it was experienced strongly enough that it could be sufficiently relived. The only demographic information I ascertained, by either observation or direct questioning, was gender and age group, and there was only one non-White participant, a male of indeterminate race.

Upon completion of the interviews, I identified 220 qualia that had been reported and divided them into six major categories that suggested themselves: influences,

experiences, effects, benefits, inspirations, and resistance factors. See Table 2 for a summary of these qualia as I identified them. The abbreviations in the leftmost column are my arbitrary encodings.

Table 2

Tabulation of Interview Qualia

Qualia codes	Description of qualia	Occurrences
<i>Influences</i>		
INFSD	They had experience in the Santo Daimé religion, or similar	4
INFAC	They had an academic background related to consciousness	8
INFCC	They had been influenced by the books of Castaneda	4
INFCFS	Similar to lucid dreaming, but referring to sleep in general	2
INFCHP	Their experience made them feel as if they had come home	2
INFCIN	They were victims of childhood incest or abuse	2
INFCMO	Their relationship with a parent had been disconnected	5
INFCMP	They had a generally competitive personality	2
INFCN	Cannabis use had been a factor in their development	1
INFDRM	They were very interested or influenced by their dreams	5
INFENT	Their experience encouraged them to develop enterprises	3
INFES	They had been influenced by Eastern traditions	11
INFFL	They reported a fear of loss in their experience	1
INFFPS	Early childhood influenced by fundamentalist parents	2
INFGBR	They had practiced Grof breathwork or something similar	2
INFGR	Their extraordinary experience had led to grief or rage	1
INFGS	Their experiences led them to giving sessions to other people	3
INFHIP	He described himself as an old hippie	1
INFHMT	He had lived as a hermit for some time	1
INFINT	Described himself as seeking intensity	2
INFLUD	They had been practicing lucid dreaming	3
INFMA	They had studied music or art	2
INFMU	Music was an important influence for them	2
INFMV	Similar to Eastern traditions, they had been practicing some form of meditation	10
INFNAT	Nature was an important refuge or inspiration to them	8
INFPAIN	Had been into body art	1
INFPPS	Recounted experiences prior to using psychedelics	7
INFSP	One of their parents had been psychotic	2
INFRAV	They had participated in rave culture	2
INFSDP	They had suffered from suicidal depression	3
INFSED	They had used sensory deprivation techniques to induce altered states	1
INFSK	They compared their experience to that of Hesse's Siddhartha	4
INFTH	They had been receiving psychotherapy of some kind	2

(table continues)

Qualia codes	Description of qualia	Occurrences
Influences		
INFTS	Influenced by some sort of tribal or shamanic tradition	13
INFWLG	Assisted by a willingness to explore or change	4
INFBK	Has been writing books or blogs	1
Experiences		
EXPAP	Most often with psychedelics, people reported awe of the power	1
EXPAR	People often drew on childhood memories and feelings	9
EXPBGC	The sense that we had only scratched the surface	0*
EXPBP	Breathing changed during their experience	4
EXPBS	Breathing changes as a person shifts from a given state to another state	7
EXPCR	Particularly with Santo Daime experiences, people report feeling what they call "the current."	4
EXPDA	Sometimes the overwhelming nature of the event led to temporary despair	2
EXPDAW	The dual nature of reality became apparent, and non-duality was envisioned	4
EXPDG	A few people felt some sort of threat in their experience	2
EXPDKN	Direct Knowing – I suspect that more people what have reported this if they had been asked	2
EXPDM	For some people, their experience was demonic or hellish	5
EXPDP	A deep sense of peace after having come through an extraordinary experience	3
EXPDR	Either during or following an extraordinary experience, life appears as a dream	3
EXPDTH	Death sometimes appears as a guide or as a doorway	2
EXPDV	Déjà vu – This applies both to past and future events	2
EXPEB	People found many different ways of describing transcendence of their physical nature during or after an extraordinary experience	14
EXPECE	Similar to the electricity qualia, people experienced ecstatic energies	2
EXPEL	"Electrical" energy, similar to the ecstatic qualia	5
EXPEMP	Another way of describing dissolution of ego	1
EXPES	Another way of saying "transformed" or "transcending the body."	6
EXPFCO	Shattered into multiple selves.	2
EXPFI	The world turns into an infinitely regressive set of patterns	2
EXPGRF	Sad emotions following an extraordinary experience	3
EXPHA	"Heightened awareness" is an abstract state taken from Carlos Castaneda	3
EXPHD	the feeling of being in a higher dimension	0*
EXPIB	One person had the impression that his body was a glowing source of light	1
EXPIBT	Possibly synonymic for "split down the middle" but more negative	2
EXPLV	Many people referred, in some way, to an enhanced or expanded sense of love	13

(table continues)

Qualia codes	Description of qualia	Occurrences
Experiences		
EXPMCH	This refers to it feeling like either being a machine, or being inside of a machine	2
EXPMM	Some people felt like they passed through a membrane between either parts of themselves or states of awareness	2
EXPMO	Something ineffable that is not oneself	7
EXPMS	Information from something that is not different from oneself but not under ordinary control	8
EXPNDO	Doing something illogical for intuitive purpose	1
EXPNTH	One person felt lost in the void	1
EXPNV	Information that could not be expressed in words	6
EXPORG	An orgasmic energy that felt as if going all through the body	1
EXPOW	Their experience was like the opening of a new world	2
EXPPAT	Even ordinarily random things merged into patterns	4
EXPPF	Their experience seemed to resolve everything	3
EXPPLF	Their experience gave them the impression of remembering past lives	1
EXPPS	One could observe a noticeable posture shift as they recalled their experience	2
EXPPSD	Most of the people recalled psychedelic experiences	15
EXPPSK	Manipulation by thought	0*
EXPRD	Their experience somehow prepared them to die	3
EXPRF	The feelings from their experience came to the surface during the interview	10
EXPRO	Feeling like they were returning to the origin of their existence	1
EXPRP	Similar to "posture shift" – the old physiology was visible	14
EXPRS	It was as if a radiating substance was moving through them	2
EXPRT	Similar to "message from higher self," but not from within themselves	4
EXPRV	They felt ripples or vibrations going through them during their experience	4
EXPSD	They felt a sense of the divine or meeting with God	6
EXPSDY	They felt that they now knew their own destiny	2
EXPSEW	Seeing subtle energies at work in themselves and in the world	3
EXPSF	Some of the experiences had science-fiction-type qualities	0*
EXPSHC	The person described a dreamlike "shadow companion"	1
EXPSHP	Telepathic sharing of phenomena with other people in the room	0
EXPSLF	They reported a heightened sense of self-awareness	5
EXPSM	Their experience seemed magical to them	3
EXPSMS	The conscious state of someone else in the room had an odor to it	0*
EXPSN	An unusual number of synchronicities during or after the event	5
EXPSNS	Seeming to have other than only the normal five senses	3

(table continues)

Qualia codes	Description of qualia	Occurrences
Experiences		
EXPSP	The impression was that there was an alien spirit taking possession of them	1
EXPSPR	They developed the impression that good spirits were always with them	2
EXPSW	Their experience seemed to flip a switch in them that changed their perspective	5
EXPSWD	The world seem to stop	1
EXPTF	They felt transformed by their experience	3
EXPTL	Their experience transcended the limitations of language	6
EXPTL	They lost their sense of time, or time became very distorted	8
EXPTR	They seemed to be carried to an alien place	7
EXPTUN	Their experience was so strange that it terrified them	1
EXPUNV	Everything in themselves seem to be connected	11
EXPUT	The experience seemed to untangle any confusion	2
Effects		
EFFANM	Relating to animals became easier than with people	1
EFFAT	They became aware of events or thoughts that triggered mood changes	9
EFFAUR	They became able to see auras	1
EFFBDS	They had bad dreams after a given session	1
EFFBOP	Beauty opened up for them	1
EFFBUD	Their integration felt like the emergence of the Buddha	3
EFFCHN	They were able to channel group energy or prayer	1
EFFCR	They felt complete with a deep sense of relief	4
EFFCT	Their state alters from being in the presence of someone on psychedelics	3
EFFCTS	Increased ability to sense the state of another	2
EFFCWL	An abstract state in the mystical literature	1
EFFECS	Random mood shifts	2
EFFEGS	Allowing themselves to be transformed	3
EFFEN	Their experience filtered out external noise	1
EFFEV	Projectile vomiting	1
EFFFM	It became easy to pass from one emotion to another	3
EFFFXN	They would find themselves fixated on some object	1
EFFHA	A special state in which thoughts come easily	2
EFFHB	The experience reduce them to sobbing, but not negatively	2
EFFHRT	The recalled experience made her heart race	1
EFFIE	Empathy was increased. Distinct from compassion or sensitivity	10
EFFIR	Since their experience, increased interest in ritual and religion	5

(table continues)

Qualia codes	Description of qualia	Occurrences
Effects		
EFFIS	They have led more spiritual lives since their experience	13
EFFKLB	Pranayama-type breathing	3
EFFKLE	Special energy shooting up through their body	2
EFFKYS	Remote awareness of others' states and condition (cf. empathy)	1
EFFMAA	Feeling more awake than awake inside of the special state	3
EFFMSN	Emerging with a sense of mission or purpose	3
EFFNR	Negative feelings followed an experience	2
EFFOF	Since their experience, they have felt more open and flexible	3
EFFOWH	They felt overwhelmed in one of their experiences	5
EFFPLF	Spontaneity	1
EFFPOR	A window through which to step or float	1
EFFPRC	The intensity of the experience made them feel pressure on their chest	1
EFFPRM	knowing in advance (special senses)	1
EFFRCP	They had felt more receptive to new ideas and feelings since their experience	2
EFFREM	They re-experienced a sense of magic from a long time ago	3
EFFRPM	They find old memories emerging	11
EFFRS	Their experience involved a reality shift	2
EFFRSS	In talking about it, they were able to re-access a special state	6
EFFSDE	They were able to self-direct the energies in themselves	2
EFFSH	They felt a transitory shame after one of their experiences	1
EFFSM	"felt small"—this is another version of the "overwhelmed" qualia	2
EFFSMF	Things within their experience had a distinctive smell or taste;	1
EFFSOS	This is another version of overwhelmed	3
EFFSPL	Participants were caught between habitual ideas about themselves and what they discovered in their special experience	5
EFFSST	Especially with psychedelics, the person felt strong after the "passage"	1
EFFSV	It is quite common to feel of-service after a transformation	7
EFFTHD	They couldn't tell if they were thinking it or doing it	1
EFFTHF	In extraordinary experiences, the hands, feet, hair, or spine may tingle	5
EFFTP	Mentally shared (telepathic) thoughts and experiences are also found in the literature	5
EFFTRP	The ordinary senses may be switched with each other	2
EFFXPR	The person felt more creative and expressive after the event	3

(table continues)

Qualia codes	Description of qualia	Occurrences
Benefits		
BENAC	Willingness to accept oneself as is (destiny?)	8
BENBC	Increased benevolence toward others	3
BENCA	The experience helped cure an addiction or alcoholism	7
BENCL	Sense of clarity was increased	4
BENDIE	The recalled experience gave them deep insights into themselves	10
BENDII	The interview process gave them deep insights	4
BENDSO	Healed of obsession(s)	0*
BENEHE	The recalled experience imbued an emotional healing	7
BENEHI	The interview process helps feel something emotionally	3
BENGE	The participant was grateful for their experience that was recalled	11
BENGI	The participant was grateful for the interview process	13
BENGIG	They gradually integrated the insights from the experience	4
BENHAP	They have been happier since the experience (distinct from joyfulness)	3
BENHAR	As if attuning musically	1
BENHG	They had a sense that their experience was for the highest good	3
BENIA	More awareness of the impact that their words or actions have on others	6
BENII	Intuition was increased (distinct from sensitivity)	4
BENJOY	Joy, distinct from happiness	6
BENLD	Lowering doses of psychedelic proved beneficial	1
BENLE	Decreasing number of sessions was beneficial	7
BENMS	Came to enjoy being around people more	4
BENOB	Became aware of obsessiveness	1
BENOS	Something opened in them from singing or dancing	5
BENPE	They experienced increased passion or enthusiasm	5
BENPEM	Their emotional reactions could pivot to something positive	4
BENPH	They experienced a physical healing of some sort	4
BENPR	Being able to be more present in a moment	3
BENPSH	Something in their reported experience gives them a helpful “push”	2
BENSB	More oriented toward self-betterment	1
BENSK	Finding that they have a new skill set for dealing with life	3
BENSKM	Sense of mission to seek mastery	1
BENTHT	Increased awareness of how their thoughts have troubled them	2
BENWT	Their experiences inculcated the “witness perspective” in them	3

(table continues)

Qualia codes	Description of qualia	Occurrences
Inspirations		
INSALR	Insight that "all will be revealed"	1
INSEUR	"Eureka" moment	2
INSLG	Their experience prompted them to let go of what had been stopping them	3
INSLIL	An insight that life is illusory	2
INSLVL	Seeing a hierarchy of ordinary, dream, mystical, and non-levels	1
INSMC	An insight that one had choices, moment by moment	1
INSSTR	One's mission is to resolve karma	1
INSTM	An implicit trust in the efficacy of their favorite psychedelic	6
INSTMP	The insight that everything is temporary	2
INSWP	Convinced of the special power of words	1
INSXX	The impression that "more is coming"	1
Resistance Factors		
RESCTR	The person had a tendency to control the situation	1
RESAC	Academic orientation made it difficult to get underneath	2
RESASS	They wouldn't let go of their assumptions	1
RESCRT	Sensitivity to criticism made it difficult for them to let go	2
RESFA	Their resistance concerned fear of losing their habitual orientation	2
RESFP	They described themselves as "failed perfectionists"	1
RESFRS	They kept running into frustration with themselves	1
RESJDG	Their tendency to be judgmental made things difficult	1
RESLC	Similar to the "controlling" quality	4
RESOBS	They described themselves as being obsessive	2
RESOT	Disconnection from their body made it difficult for them to get out of their heads	4
RESSJ	Tendency to justify their resistance	1
RESSTS	It was hard for them to let go of their narration/abstraction	2
RESSU	Belief in their own superiority made it difficult for them to comply	3
RESTHT	They allowed their thoughts to influence them too much	4

Note: 0* – these only came up in follow-up discussions

To refine the criteria I used for categorizing the responses, I went back through the transcripts to find specific examples that could illuminate each theme leading to answering my research question: Are there identifiable features that can reliably and validly distinguish among states of consciousness thought to be distinct from each other? (Parenthetical codes are my arbitrary identifiers for each transcript.)

Influences: cultural and environmental background data:

(On ibogaine) “I was a heroin addict for 19 years – I lived on the street most of my life. I was in the sex industry I tried everything – I was in and out of rehab ... in jail five or six times. I was always trying to get clean” (50xG);

(On MDMA) “From childhood – chronic pain and medications. Lucid, recurring, terrifying (drowning, suffocating) dreams. Tattoos and piercings.” (19x34).

Experiences: what participants reported about their experiences of the recalled event:

(On ayahuasca) “I disappear. Everything becomes a global or total dissolving into the big pool.” (203b);

(On LSD) “My world collapsed all around me as pain like no other held me in its tight grip and I heard myself screaming, ‘No, it can't be, please, it can't be!’” And I finally understood, and I was finally set free.” (6924t);

(On ritual MDMA) “I closed my eyes and a golden light appeared in the center. I focused on that light, and I felt as if I was moving through a tunnel of light. That light was getting brighter and brighter, and after some time, there was an eruption of ecstatic energy throughout my body.” (T03Z);

(On ritual ayahuasca) “I’m at the place where all the universes come together, each still discernible, but intricately interconnected in exquisite ways. Here both my death and my life await me – there is no time, but there is power here. Everything is meaningless and significant at once. Here I can see directly why I must not only forgive everyone, including myself, but must bless and love everything. I am nothing and everything at an infinite point.” (801j);

(On ritual ayahuasca) “Hypersensitive, body awareness, twitching. Aware of being surrounded by *the Other*, quiet, enveloping me like a fog. Like at a different speed or dimension. Visitor trying on my body, strong sensation. Stages of connectedness and bigness – hard to hold onto when returning. I felt the current of spiritual energy, group telepathy, energies thrown around.” (STL5).

Effects: what participants have experienced *since* the recalled event, except for *benefits:*

(On LSD) “Larger and grander than I thought was possible... It changed my way of engaging with the world – I started noticing synchronicities in different places, in different ways.” (001a);

(On ritual ayahuasca) “Recollection is enhanced by remembering set and setting, including body and emotional state – even causing shared contact-high.” (STL5);

(Ketamine + MDMA and Salvia Divinorum) “The MDMA helped memory and clarity, even group telepathy. It was terrifying with Salvia. As if two universes splitting apart and I was in both at same time, void and all, no sense of self or time.” (19x34).

Benefits: positive changes in participants’ lives or attitudes derived from the recalled experiences or from receiving treatment for them:

“Three years [after starting to use ibogaine], I don’t have the urge to use alcohol and street drugs.” (50xG);

“[With ayahuasca] I can slow things down ... I can take a step back and start feeling sensation and that awareness makes me comfortable with myself again and I start to [think] ‘Okay, this is my body, grounded and firm,’ and that gives me strength. My breathing slows down quite a bit and I start breathing [regularly].” (605e);

(5MeoDMT) “Total recall, life-changing. Contact with God as all-that-is, pure love. Like a drop of water returning to ocean. Confronting all my beliefs like ripples and waves. Breathing becomes

very expansive, expanded beyond all limits.” [smiles from the remembered beauty]. (304c);

(On LSD) “My gratitude knows no bounds, for I know that, without this therapy, all would have been lost – there was nothing else left, the glimmer of hope was almost gone. It has been a long and painful journey, a journey I would not trade for anything, for I have healed.” (6924t);

“Whenever I look back to my [ayahuasca] experiences, I can feel the love and the power of it, and it continues to imbue my thoughts and activities with creativity and passion.” (STL5).

Inspirations: insights and epiphanies that occurred to the participants during recall of a key event:

“From my most recent ayahuasca journey, at one point I realized that I needed to forgive everyone that I need to forgive *someone*. I didn't even realize that I was still not forgiving and I realized that was really a judgment on myself and how much I was so scared of doing some harm to one of my clients or patients and trusting that I know that I am doing my best man doing what I believe.” (0863);

Resistance factors: attitudes and circumstances which may have prevented or delayed participants from benefiting from their experiences:

“I clench my jaw. Agitated resistance in my solar plexus. Little boy saying, ‘Leave me alone,’ to parents, fists clenched, breathing tight,

like dragon, chest tight. ‘The child prevents me from doing what I need to
– tired from weekend, messy room, can’t make goals.’ (7734k).

Functional Categories

In Table 3, I tabulated the interview qualia by functional distinctions according to the following categories, using the codes I assigned in Table 2. Following this, I expand the abbreviations and explain their significance.

Table 3

Functional Organization of Qualia by Codes from Table 2

Awareness and Sensitivity

BENCL, BENIA, BENII, BENLD, BENLE, BENOBS, BENPR, BENSBB,
BENTHT, BENWT, EFFAT, EFFCTS, EFFHA, EFFIE, EFFKYS, EFFMAA,
EXPDKN, EXPES, EXPFCO, EXPHA, EXPHD, EXPIBT, EXPNV, EXPRT,
EXPSLF, EXPSNS, EXPSW, EXPTF, EXPTL, INFINT

Family and Cultural Background

INFCHP, INFCIN, INFCMO, INFENT, INFFPS, INFHIP, INFHMT, INFPAIN,
INFPPS, INFPPSP, INFRAV

Education and Preparation

EXPND, EXPPSD, INFSD, INFAC, INFCC, INFCFS, INFCN, INFDRM,
INFES, INFGS, INFGBR, INFLUD, INFMA, INFMU, INFMV, INFNAT,
INFSED, INFTH, INFTS, INFVLG, INFBK

Energies

EFFCHN, EFFKLE, EFFSDE, EXPECE, EXPEL, EXPORG, EXPRS, EXPRV,
EXPSEW

Insightfulness

BENDIE, BENDII, BENGI, BENGIG, EFFBUD, EFFSPL, EXPBGC,
EXPDAW, EXPDR, EXPDTH, EXPPF, EXPRD, EXPSDY, EXPUNV, EXPUT,
INFSK, INSALR, INSEUR, INSLG, INSLIL, INSLVL, INSMC, INSSTR,
INSTM, INSTMP, INSWP, INSXX

Lasting Effects

BENOS, BENPSH, BENSK, EFFBUD, EFFIR, EFFIS, EFFOF, EFFRCP,
EFFRSS, EXPTF, EFFXPR, EXPSN

Passion and Obsession

BENDSO, BENPE, BENSKM, EFFMSN, EFFSV, RESOBS, RESTHT

Phenomena*Psychic*

EFFAUR, EFFIE, EFFKYS, EFFPRM, EFFTP, EXPDV, EXPPLF,
EXPPSK, EXPSHP, EXPSN

Enhanced sensibilities

EFFBOP, EFFCT, EFFHA, EFFIE, EFFSMS, EFFTRP, EXPCR,
EXPSMS, EXPSNS

Otherwordly

EFFPOR, EFFRS, EFFTHD, EXPDAW, EXPDM, EXPDR, EXPES,
EXPFCO, EXPMO, EXPFI, EXPHA, EXPHD, EXPMM, EXPMO,
EXPNTH, EXPRO, EXPSD, EXPSF, EXPSCH, EXPSM, EXPSWD,
EXPTUN

Physical Context

BENCA, BENPH, EFVEV, EFFHRT, EFFKLB, EFFPRC, EXPAR, EXPBP,
EXPBS, EXPPS, EXPRP, RESOT

Resistance Factors

RESCTR, RESAC, RESASS, RESCRT, RESFA, RESFP, RESFRS, RESJDG,
RESLC, RESOBS, RESOT, RESSI, RESSTS, RESSU, RESTHT

Social and Emotional Points

BENAC, BENBC, BENEHE, BENEHI, BENHAP, BENHAR, BENHG,
BENJOY, BENMS, BENOBS, BENPEM, BENSB, BENTHT, EFFANM,
EFFAT, EFFECS, EFFFM, EFFHB, EFFNR, EFFSH, EXPDA, EXPDG,
EXPGRF, EXPLV, EXPRF, INFCMP, INFFL, INFGR, INFSDP

Spiritism, Mediumship, and Magical Phenomena

BENDSO, EFFAUR, EFFCHN, EFFCT, EFFKYS, EFFPRM, EXPSHC, EXPSD,
EXPPSK, EXPSM, EXPSP, EXPSPR

Note that some of the qualia accrued functionally to different categories than those in the original tabulation, or made sense to be listed in more than one group. I annotated each grouping for relevance to the research question (“Are there identifiable features that can reliably and validly distinguish among states of consciousness thought to be distinct from each other?”)

1. Awareness and Sensitivity – factors of heightened consciousness:

BENCL – Sense of clarity was increased;

BENIA – More awareness of the impact that their words or actions have on
others;

BENII – Intuition was increased; distinct from sensitivity;

BENLD – Lowering doses of a psychedelic proved beneficial; i.e., the lower dose allowed better integration and avoided tolerance or side effects;

BENLE – fewer sessions proved beneficial, allowing better integration and avoiding tolerance or side effects;

BENOBS – Becoming aware of one's obsessiveness;

BENPR – Able to be more present in the moment;

BENSB – Became more oriented toward self-betterment;

BENTHT – They became more aware of how their thoughts have troubled them;

BENWT – Their experience inculcated a “witness” perspective in them; i.e., as if forming a separate identity that records state conditions and transitions between states;

EFFAT – They became aware of events or thoughts that triggered mood changes;

EFFCTS – They reported an increased ability to sense the state of another person;

EFFHA – A state in which thoughts came easily;

EFFIE – Increased empathy, distinct from compassion or sensitivity;

EFFKYS – They reported remote awareness of other states and condition;

EFFMAA – A special state in which they reported feeling more awake than ordinary consciousness;

EXPDKN – A state in which they reported a sense of direction knowing;

EXPES – They reported feeling transformed or having transcended the body;

EXPFCO – They reported feeling shattered into multiple selves;

EXPHA – They reported a state they described as heightened awareness;

EXPHD – They described the feeling of being in a higher dimension;

EXPIBT – They reported feeling disturbed about being split down the
middle;

EXPNV – They reported having received information that could not be
expressed in words;

EXPERT – They reported receiving a message as if from their higher self, but
from outside;

EXPSLF – They reported a higher sense of self-awareness;

EXPSNS – They reported seeming to have more than the normal five senses;

EXPSW – Their experience seemed to flip a switch in them that changed
their perspective;

EXPTF – They reported feeling generally transformed by their experience;

EXPTL – They reported losing their sense of time, or that time became very
distorted for them;

INFINT – They described themselves as seeking intensity.

Heightened awareness and sensitivity were prevalent factors in the interview transcripts and also in the referenced instruments (Dittrich, 1998; Friedman, 1983; Hood,

1975; Pekala, 1991a; Walsh, 1995). Therefore, this category appears to be a valid criterion for distinguishing states.

2. Family and Cultural Background – factors which may have led to the insightful or life-changing experiences:

INFCHP – They reported that their experience made them feel that they had come home;

INFCIN – They reported that they were victims of childhood abuse or incest;

INFCMO – They reported having had a disconnected relationship with a parent;

INFENT – Their experience encouraged them into entrepreneurship;

INFFPS – Early childhood was influenced by fundamentalist parents;

INFHIP – He described himself as an old hippie;

INFHMT – He had lived as a hermit for some time;

INFRAIN – He had been into body art;

INFPPS – They recounted experiences prior to using psychedelics;

INFPS – They reported that one of their parents had been psychotic;

INFRAV – They had participated in rave culture.

While background and culture may not contribute directly to each specific state, it was clear from the interviews that these factors framed and modulated what each person experienced. Standard ethnographic literature (e.g., LeCompte & Schensul, 1999a) encourages us to take these factors into consideration.

3. Education and Preparation – specific efforts the participants made:

EXPND0 – they reported having done something illogical for an intuitive purpose;

EXPPSD – their recollections were of psychedelic experience;

INFSD – they had experience in a psychedelic religion like Santo Daime;

INFAC – they had an academic background related to consciousness studies;

INFCC – they had been influenced by the books of Castaneda;

INFCFS – the experience they reported referred to sleeping, with or without dreams;

INFCN – cannabis use had been a factor in their development;

INFDRM – dreams were significant to them;

INFES – they had been influenced by Eastern traditions;

INFGS – their experiences led them to facilitating sessions for other people;

INFGBR – they had practiced Grof breathwork or something similar;

INFLUD – they had been practicing lucid dreaming;

INFMA – they had studied music or art;

INFMU – music was an important influence for them;

INFMV – they had been practicing some form of meditation;

INFNAT – being out in nature was an important refuge or inspiration to them;

INFSED – they had used sensory deprivation techniques to induce altered states;

INFTH – they had been receiving psychotherapy of some kind;

INFTS – they were influenced by some sort of tribal or shamanic tradition;

INFWLG – their results were supported by a willingness to explore or change;

INFBK – they had been writing books or blogs.

The degree to which participants prepared themselves illustrates either that preparation and discipline contribute to the quality and range of their experiences, or that it identifies the zeal with which they approached whatever extraordinary experience they encountered. I suspect that it will take new instruments and further research to make such a determination but, in the meantime, I made use of the data I have for factoring in the significance that I can demonstrate.

4. Energies – special phenomena described by participants:

EFFCHN – they claim to be able to channel group energy or prayer;

EFFKLE – they reported having had some special energy shooting up through their body;

EFFSDE – they claimed having been able to direct the energies within themselves;

EXPECE – they reported experiencing unusual energies in general;

EXPEL – they reported having felt an electrical energy;

EXPORG – they reported feeling an intensity of energy going all through their body;

EXPRS – they reported a sense of a radiating substance moving through them;

EXPRV – they felt ripples or vibrations going through them during their experience;

EXPSEW – they reported seeing subtle energies at work in themselves and in the world.

Although considerable overlap is apparent among the qualia of energies, they do point to an over-arching impression that extraordinary experiences palpably change more than just a person's thoughts and feelings. Participants emphasized the significance of the energies they felt, far beyond what was assumed in the referenced instruments (Dittrich, 1998; Friedman, 1983; Hood, 1975; Pekala, 1991a; Walsh, 1995). Advances in neuroscience (e.g., Studerus, Gamma, & Vollenweider, 2010) show promise for making useful distinctions among such experiences, but that did not fall within the scope of this present research.

5. Insightfulness – revelations and epiphanies described in the interviews:

BENDIE – the recalled experience gave them deep insights into themselves;

BENDII – the interview process itself gave them deep insights;

BENGI – the participant was grateful for the interview process;

BENGIG – they gradually integrated the insights from the experience;

EFFBUD – they reported that their integration felt like the emergence of the Buddha;

EFFSPL – participants exhibited confusion in confronting their habitual ideas about themselves versus what they discovered in their special experience;

EXPBGC – they reported having a sense that we had only scratched the surface;

EXPDAW – the dual nature of reality became apparent to them, and they reported a sense of non-duality;

EXPDR – life seem to be a dream to them, either during or following an extraordinary experience;

EXPDTH – they reported that death sometimes appeared as a guide to them, or as a doorway;

EXPPF – they gave the impression that their experience seemed to resolve everything for them;

EXPRD – their experience made them feel prepared to die;

EXPSDY – they reported feeling that they now knew their own destiny;

EXPUNV – they reported that everything seemed to be connected in themselves;

EXPUT – they reported that the experience seemed to untangle any confusion;

INFSK – they compared their experience to that of Hesse’s Siddhartha character;

INSALR – they reported having an insight that all will be revealed;

INSEUR – they reported having had a Eureka moment;

INSLG – their experience prompted them to let go of what had been stopping them from moving forward;

INSLIL – they reported an insight that life is illusory;

INSLVL – they envisioned a hierarchy of ordinary levels, dream, mystical, and non-levels;

INSMC – they reported having had the insight that they had choices within each moment;

INSSTR – they reported an insight that their mission was to resolve karma;

INSTM – they reported and implicit trust in the efficacy of their favorite psychedelic substance;

INSTMP – they reported the insight that everything is temporary;

INSWP – they reported being convinced of the special power of words;

INSXX – they reported having the impression that more is coming.

My participants largely reported increased insightfulness, and this was expected from the standard literature (e.g., Cardeña et al., 2014; Cuesta, Peralta, & Zarzuela, 2000; Kiesling et al., 2008; Lifintseva & Gasparyan, 2015; Pekala, 1991b). However, I am not satisfied that the *impression* of having had a valuable insight should be relied upon as actually being significant, especially when the informant is in a non-ordinary state. In

any event, for my purposes here, the impression itself should do as a criterion for distinguishing states.

6. Passion and Obsession – positive and negative urges resulting from the recalled experiences:

BENDSO – they felt that they had been healed of obsessions;

BENPE – they felt that their passion and enthusiasm had increased since their experience;

BENSKM – they felt that their experience had given them a sense of mission;

EFFMSN – emerging from their experience with a sense of mission or purpose;

EFFSV – they reported a desire to be of service to humanity;

RESOBS – they described themselves as being obsessive;

RESTHT – they allowed their thoughts to influence them too much.

Although it would seem to make more intuitive sense to include influencing factors that would be present prior to the participants extraordinary state, I did not want to exclude possible discriminants that mostly occur following such an experience. The interview data indicated that, for many of the participants, their life-changing experience gave them a certain kind of push that had positive or negative consequences. I endeavored to factor in tendencies they had prior to their recollected experience.

7. Phenomena – general effects not falling into any of the other categories:

Psychic

EFFAUR – they reported being able to see auras during or after their experience;

EFFIE – they reported an increase in their empathic sensitivity; I made a point of distinguishing this from compassion and other types of sensitivity;

EFFKYS – they reported having a remote awareness of other people's states and conditions;

EFFPRM – they reported having precognition in similar senses;

EFFTP – they reported telepathic phenomena – shared thoughts and feelings;

EXPDV – they reported feelings of déjà vu;

EXPPLF – their experience gave them the impression of remembering past lives;

EXPPSK – they had the impression that they were manipulating objects or reality by thought alone;

EXPSHP – they had the impression that they were sharing phenomena telepathically with other people in the room during the session;

EXPSN – they reported an increased number of synchronicities following the session.

Enhanced sensibilities

EFFBOP – they claimed that beauty opened up for them;

EFFCT – “contact high” – they claim that, since their session, their own state alters from being in the presence of someone on psychedelics;

EFFHA – they reported a special state in which thoughts seemed to come easily;

EFFIE – they reported having increased empathy;

EFFSMF – things within their experience had a distinctive smell or taste;

EFFTRP – transphasia: the ordinary senses may be switched with each other;

EXPCR – particularly in Santo Daime sessions, they reported feeling “the current”;

EXPSMS – the particular conscious state of someone else in the room had a distinct odor for them;

EXPSNS – they reported the impression of having other than the normal five senses.

Otherwordly

EFFPOR – they reported a sort of window through which they could step or float;

EFFRS – their experience involved a reality shift;

EFFTHD – in their session, they could not tell if they were actually doing something or just thinking it;

EXPDAW – they claimed that the dual nature of reality became apparent to them, and they envisioned non-duality;

EXPDM – for some people, their experience had a demonic or hellish quality to it;

EXPDR – either during or after their experience, life seemed to be a dream;

EXPES – they felt transformed or having transcended the body;

EXPFCO – they felt as if they had been shattered into multiple selves;

EXPMO – they experienced something ineffable that was not oneself;

EXPFI – they described the world as turning into an infinitely regressive set of patterns;

EXPHA – they described a state as “heightened awareness”;

EXPHD – they reported a feeling of being in a higher dimension;

EXPMM – some people felt as if they had passed through a membrane between parts of themselves or between states of awareness;

EXPNTH – one person reported feeling lost in the void;

EXPRO – they reported feeling as if they were returning to the origin of their existence in their session;

EXPSD – they felt a sense of the divine or of meeting with God;

EXPSF – some of the experiences had qualities as if from science-fiction;

EXPSHC – they described a dreamlike “shadow companion”;

EXPSM – their experience seemed magical to them;

EXPSWD – the world seem to stop somehow;

EXPTUN – their experience was so strange that it terrified them.

A very common thread among my participants was their reporting of being sensitive to subtle influences which may be called extrasensory, psychic, or even otherworldly. The interviewees made a clear distinction between such sensitivities and what would otherwise be more properly called hallucinations. Although my research design was not equipped to substantiate their reports, their descriptions were nevertheless quite distinguishable from each other.

8. Physical Context – healing or other phenomena that were described in physical terms:

BENCA – They reported that the experience helped cure an addiction or alcoholism;

BENPH – They reported that they experienced a physical healing of some sort;

EFFEV – They reported experiencing purging during the experience;

EFFHRT – They reported feeling their heart racing during the experience;

EFFKLB – They reported pranayama-type breathing during or leading up to their experience;

EFFPRC – The intensity of their experience made them feel pressure on their chest;

EXPAR – They drew on childhood memories and feelings for their recall;

EXPBP – They reported that their breathing changed during their experience;

EXPBS – I observed that their breathing changed as they moved from one state to another;

EXPPS – I observed a significant positive shift of mood as they recalled their experience;

EXPRP – I observed a shift in their posture as they recalled their experience;

RESOT – their mental attachment made it difficult for them to report feelings.

Specifying the physical state of the participants was a key focus in my interview method, and in describing their physical state, the participants were able to make more detailed recollections of their experiences. Physical details such as posture, breathing, metabolic details, and environment, were also addressed in my five referenced instruments (Dittrich, 1998; Friedman, 1983; Hood, 1975; Pekala, 1991a; Walsh, 1995).

9. Resistance Factors – primarily my own observations about the interviewees, but some of the participants acknowledged these in the follow-up surveys:

RESCTR – the interview we had a tendency to control the situation;

RESAC – the person's academic orientation made them seem a bit stubborn;

RESASS – I couldn't get them to let go of their assumptions;

RESCRT – their sensitivity to criticism made interviewing them a bit difficult;

RESFA – there apparent fear of losing control of the situation made them resistant in the interview;

RESFP – they described themselves as “failed perfectionists”;

RESFRS – there apparent frustration with themselves caused initial resistance;

RESJDG – initially resistant at first due to tendency to be judgmental;

RESLC – another form of being controlling;

RESOBS – they described themselves as being obsessive;

RESOT – their tendency to remain in a mental frame made it difficult for them to tell about their feelings;

RESSI – data tendency to justify their resistance;

RESSTS – it was difficult for them to let go of their tendency to narrate and abstract;

RESSU – belief in their own superiority made it difficult for them to comply with my instructions;

RESTHT – they allowed their preconceptions to influence them.

The ways that these resistance factors contribute to the type and quality of a given state light in the two factors of, first, how they had to discipline themselves and, secondly, the ways that their resistances conditioned them and modulated what sorts of experiences that they could have.

10. Social and Emotional Issues – mood swings and social effects resulting from the recalled events, as well as proclivities and assets that allowed participants to attain positive experiences:

BENAC – they were willing to accept themselves the way they were;

BENBC – after their experience, they felt increased benevolence toward other people;

BENEHE – the recalled experience induced an emotional healing;

BENEHI – the interview process helps them to feel something emotionally;

BENHAP – they have been generally happier since their experience;

BENHAR – since their experience, they have been approaching situations as if attuning musically;

BENHG – they came away from their experience with a sense that it was for the highest good;

BENJOY – they have been generally more joyful since their experience – they made it clear that this was distinct from happiness;

BENMS – since their experience, they have enjoyed being around people more;

BENOBS – they reported having become more aware of their obsessiveness;

BENPEM – they reported that, since their experience, their emotions have been able to pivot to the positive;

BENSB – since their experience, they have been more oriented toward self-betterment;

BENTHT – since their experience, they reported having more awareness of how their thoughts have troubled them;

EFFANM – since their experience, they reported that relating to animals became easier than relating with people;

EFFAT – they became aware of how events or thoughts that triggered mood changes;

EFFECS – since their experience, they have been noticing random mood shifts in themselves;

EFFFM – during and after their experience, it became easier to pass from one emotion to another;

EFFHB – the experience reduced them to sobbing, but not in a negative way;

EFFNR – two people reported negative feelings following their experience;

EFFSH – one person felt a transitory shame after their experience;

EXPDA – in two cases, the overwhelming nature of the event led to temporary despair;

EXPDG – two people felt some sort of threat in their experience;

EXPGRF – in three cases, sad emotions following an extraordinary experience;

EXPLV – 13 people reported an enhanced sense of love;

EXPRF – the feelings from their experience came to the surface during their interview;

INFCMP – they reported having a generally competitive personality;

INFFL – they reported having had a fear of loss during their experience;

INFGRR – they reported that their extraordinary experience had led to grief or rage;

INFSDP – they reported that they had previously suffered from suicidal depression.

To some degree, these emotional factors constitute the opposite face of the previous section on resistances. Although some of these factors could attenuate the quality of participants' experiences, they tended to provide a dimension of passion and integration that might otherwise have been absent.

11. Spiritism, Mediumship, and Psychic Phenomena – reports normally described as metaphysical or supernatural:

BENDSO – they felt that they had become healed of obsessiveness;

EFFAUR – they reported that they had become able to see auras;

EFFCHN – they felt that they had become able to channel group energy or prayer;

EFFCT – they reported having become sensitive to “contact high” – having their own state shift in the presence of another person in an altered state;

EFFKYS – they reported remote awareness of other people’s states or conditions

EFFPRM – they reported having precognition;

EXPSHC – the person described having had a dreamlike shadow companion during their experience;

EXPSD – they felt a sense of the divine or of meeting with God;

EXPPSK – during their experience, they felt that they could manipulate objects or reality by thought alone;

EXPSM – their experience seemed magical to them;

EXPSP – they had the impression that there was an alien spirit taking possession of them;

EXSPR – they reported the impression that good spirits were always with them.

The qualia in the above section are the magical properties that the participants struggled to convey. Although these properties have been extensively addressed in philosophical and mystical literature (e.g., Campbell, 2009; Hallowell, 2010; James, 2011; Muhamad, Roodenburg, & Moore, 2014; Polito, Langdon, & Brown, 2010), we do not yet have a sufficiently scientific taxonomy in modern psychological parlance. My endeavor here is, to some extent, to fill that gap.

I further merged these categories in the operational model that I depicted in Figures 1 and 2 of Chapter 5, resulting in seven types of determinants of conscious states: Background, Resistance Factors, Setting, Energies, Induction Method, Guide/Tradition,

and Breakthrough. See the discussion in Chapter 5 for a detailed explanation of these choices.

Comparison to the Referenced Instruments

In Table 4, I identified qualia from the interviews that corresponded with various items from the five referenced instruments; the numerals shown in the table are item numbers of their respective instruments.

Table 4

Comparison of My Data to the Five Referenced Instruments

<u>QUALIA</u>	<u>DITTRICH</u> (2006)	<u>FRIEDMAN</u> (1983)	<u>HOOD</u> (1975)	<u>PEKALA</u> (1986)	<u>WALSH</u> (1995)
ACCEPTANCE				28	
Pekala: 28 – Control of attention versus acceptance of whatever the experience provided					
INCREASED CLARITY	49			9, 10, 22	3
Dittrich: 49 – They could visualize clearly. Pekala: 9 – Whether thoughts were focused or random; 10 – Whether they were equally attentive to each impression in the stream of consciousness; 22 – Whether, and for how long, they were able to focus their mind on a single impression or event; Walsh: 3 – The degree and quality of concentration.					
DEEP INSIGHT FROM EXPERIENCE	34, 46, 52				8
Dittrich: 34 – They felt very profound; 46 – They gained clarity into connections that had previously puzzled them; 52 – Their thoughts seemed especially original. Walsh: 8 – Insight into the nature of self or identity.					
JOYFULNESS	7				9
Dittrich: 7 – They reported having “boundless pleasure.” Walsh: 9 – Whether the experience was pleasurable or painful.					
THOUGHT THIEVES	24, 45			2, 5, 6, 10, 13, 31-32, 37, 39	
Dittrich: 24 – They had difficulty distinguishing whether something was important; 45 – They were not able to hold the line of thinking. Pekala: 2 – Whether thoughts seemed to be rushing through their mind; 5 – Control of attention versus acceptance; 6 – Whether they were continually scanning and observing their attentional fields; 10 – Whether they were equally attentive to every impression in their stream of consciousness; 13 – Whether their mind was continually occupied or empty; 31 – Whether their impressions were singular or multiple;					

32 – Detachment versus immersion in their impressions; 37 – Whether they were equally attentive to each impression; 39 – Whether their mind was occupied or silent.					
WITNESS	15, 18, 20			23-26, 28, 33, 35-38, 40	4b
Dittrich: 15 – It seemed as if they no longer had a body; 18 – Things around them had a strange new meaning for them; 20 – They saw lights in the darkness. Pekala: 23 – Whether they had singular or multiple focus on their impressions; 24 – Whether they were continually aware of changes in their environment; 25 – Whether their awareness stayed within or moved outside of their body; 26 – Whether their consciousness expanded beyond their body; 28 – Whether they control their attention or allowed it free movement; 33 – Whether they dwelled on impressions or allow them to come as they would; 35 – Degree of vigilance; 36 – Whether their attention was directed inwardly around the world around them; 37 – Whether their attention was focused on one thing or equally focused on everything; 38 – The degree to which they scanned their attentional fields; 40 – Whether they were aware of everything at once. Walsh: 4b – Ability to control the content of experience while in the altered state.					
COMPLETE, RELIEF	60		7		6
Dittrich: 60 – They experienced a profound peace in themselves. Hood: 7 – Whether they experienced a perfectly peaceful state. Walsh: 6 – Degree of calmness.					
FIXATION	24, 17, 37			5, 7, 9, 16, 19	3b
Dittrich: 24 – Ability to distinguish important from unimportant things. Pekala: 5 – Whether they made an effort to control their attention; 7, 16 – Absorption vs. distraction; 9 – Focus vs. randomness of thoughts; 19 – Ability to focus one's attention. Walsh: 3b – Whether their attention was fixed or fluid.					
HYPER-AWARENESS	46, 52		21	9, 11, 22, 33, 37	
Dittrich: 46 – They gained clarity into connections that had previously eluded them; 52 – Their thoughts had a strong impression of originality. Hood: 21 – Whether they could describe their experience in language. Pekala: 9 – Focused vs. random thoughts; 11 – Flexibility of attention; 22 – Ability to focus their mind on some one thing; 33, 37 – Whether they dwelt on some impressions.					
INCREASED RELIGIOSITY	66		20, 22		12
Dittrich: 66 – Their experience was of a religious nature. Hood: 20, 22 – Their experience imbued a sense of sacredness or awe. Walsh: 12 – A stage of spiritual development.					
REALITY SHIFT	18		1, 13, 17		
Dittrich: 18 – Things around them had a strange new meaning for them. Hood: 1 – Something greater than oneself seemed to absorb them; 13 – A whole new perspective of reality was presented to them; 17 – Their experience seemed to be of "ultimate reality."					
LOST SENSE OF SELF	21		4, 12, 24	3, 15, 21	8

Dittrich: 21 – The impression that they were one with the environment; Hood: 4 – Everything disappeared from their mind until they were “conscious only of the void”; 12 – They had the impression that they were connected to everything; 24 – Their individuality seemed to merge into something greater. Pekala: 3, 15 – Whether their consciousness seemed to be within or outside of their body; 21 – Degree of unity with one’s impressions. Walsh: 8 – Insight into one’s intrinsic nature.					
SYNESTHESIA	11, 14, 18, 51				
Dittrich: 11 – Noises seemed to influence what they perceived; 14 – The shapes of things seemed to change according to sounds and noises; 18 – Things around them took on strange new meanings for them; 51 – The colors of things seemed to be influenced by sounds and noises.					
(NON)DUALITY AWARENESS					11
Walsh: 11 – Content of internal experience; having form or formless?					
SENSE OF DANGER	29, 38				
Dittrich: 29 – A sense of nameless dread; 38 – They felt threatened.					
EXPAND BEYOND BODY	15, 42	12		3, 25	10
Dittrich: 15 – They had the impression of no longer having a body; 42 – They had the impression of being outside their body. Friedman: 12 – They had the impression of experiencing the individual atoms in their body. Pekala: 3 – Whether their consciousness seemed to be within or outside of their body; 25 – Whether their awareness seemed focused within or outside of their body. Walsh: 10 – Whether perception seemed to be from outside of their body.					
EMPTY, FREE		17	4		8
Friedman: 17 – “The entire universe beyond time which is me in an ultimate sense.” Hood: 4 – “Everything seemed to disappear from their mind until they were conscious only of a void.” Walsh: 8 – Insight into the nature of self or identity.					
EGO SHIFT	27	6, 12	4	4, 15	1, 12
Dittrich: 27 – They claimed to have experienced “a touch of eternity.” Friedman: 6 – “Experiences of all life forms of which I am one”; 12 – As if aware of the individual atoms in their body. Pekala: 4 – Whether they were aware of being an expansive sphere of consciousness; 15 – Whether they experienced their consciousness to be outside of their physical body. Walsh: 1 – Degree of reduction of experiential awareness; 12 – The spiritual level of the conscious state reported.					
FRAGMENTED CONSCIOUSNESS				40	
Pekala: 40 – Whether they were simultaneously aware of everything at once.					
FRACTAL INFINITY	8, 13, 20				11
Dittrich: 8 – They saw a regular patterns in complete darkness or with closed eyes; 13, 20 – They saw colors or lights in complete darkness or with closed eyes. Walsh: 11 – Whether the content of their inner experience was formless or had form.					
HIGHER DIMENSION		17	13, 17		12

Friedman: 17 – An insight that the entire universe beyond time is oneself in an ultimate sense. Hood: 13, 17 – They claimed to have experienced a new or ultimate view of reality; Walsh: 12 – The spiritual level of the given state of consciousness.					
MYSTIC OTHER	6		2, 17		
Dittrich: 6 – They had the feeling of being connected to a superior power. Hood: 2 – Whether they had an experience incapable of being expressed in words; 17 – Ultimate reality seemed to have been revealed to them.					
NON-VERBAL			2, 23		2, 11
Hood: 2, 23 – Whether they had an experience incapable of being expressed. Walsh: 2 – Changes in their ability to communicate in the altered state; 11 – Whether the content of their inner state had form.					
NEW WORLD		17	17		12
Friedman: 17 – An insight that the entire universe beyond time was oneself in an ultimate sense. Hood: 17 – Ultimate reality seemed to have been revealed to them.					
PERFECTION	28		17		
Dittrich: 28 – Conflicts and contradictions seemed to dissolve for them. Hood: 17 – Ultimate reality seemed to have been revealed to them.					
PAST LIVES		14			
Friedman: 14 – An insight that all that happened before their lifetime had somehow influenced them.					
RETURN TO ORIGIN		6, 17			
Friedman: 6 – An insight that they were one with the experiences of all life forms; 17 – An insight that the entire universe beyond time was oneself in an ultimate sense.					
SENSE OF DIVINE	6, 66				12
Dittrich: 6 – They had the feeling of being connected to a superior power; 66 – They claimed that their experience had religious aspects. Walsh: 12 – The spiritual level of the given state.					
SENSE OF DESTINY	18	14, 18			
Dittrich: 18 – Things around them had a strange new meaning for them. Friedman: 14 – An insight that everything that happened before their lifetime had influenced them.					
SENSE OF SELF		12	3, 4		8
Friedman: 12 – They seemed to be aware of the individual atoms in their body. Hood: 3 – They claimed that something greater than oneself seemed to absorb them; 4 – Everything seemed to disappear from their mind until they were aware only of a void. Walsh: 8 – Insights into the nature of the sense of self or identity.					
OTHER SENSES	17	12		4, 14, 23	7
Dittrich: 17 – Everyday things gained a special meaning for them. Friedman: 12 – The impression of being the individual atoms in one's body. Pekala: 4, 14 – Whether they were aware of being an expansive sphere of consciousness; 23 – Whether they were able to focus on each thought equally, or on some more than others. Walsh: are I 7 – Degree of sensitivity to special perceptions.					
TRANSCEND LANGUAGE	17, 18, 32				
Dittrich: 17, 18 – Things gained a special or transcendental meaning; 32 – One's surroundings seemed strange and weird.					
TIMELESS QUALITY	19		1, 11		
Dittrich: 19 – They were concerned that the state might last forever. Hood: 1, 11 – Whether they had an experience that was timeless and spaceless.					

UNIVERSALITY	10, 27	6, 17	12, 19	14, 20, 26, 40	10, 12
Dittrich:	10 – Everything seemed to unify into oneness; 27 – They claimed to experience a touch of eternity.				
Friedman:	6 – They claimed to feel being part of all life forms; 17 – The insight that the entire universe beyond time was oneself in an ultimate sense.				
Hood:	12 – Whether they had an experience of being one with all things; 19 – They felt everything in the world to be part of the same whole.				
Pekala:	14 – Whether they were aware of being an expansive sphere of consciousness; 20 – Whether they were aware of everything at once; 26 – They felt their consciousness to be everywhere at once; 40 – They claimed to be aware of everything at once.				
Walsh:	10 – An out of body experience, or seemed to perceive from a point outside of the body? 12 – The spiritual level of the given state.				

Legend: Numbers in the above table refer to specific item numbers in each of the five respective instruments.

Of the total 220 interview qualia, 34 (15%) of them were represented, to various degrees, in the five standard instruments. Significantly absent from the referenced instruments are the qualia related to the following (codes per Table 2):

Healing (BENCA, BENDSO, BENOBS, BENEHE, BENPH, EXPDP);

BENCA – The experience helped cure an addiction or alcoholism;

BENDSO – They reported having been healed of obsessions;

BENOBS – They became aware of a tendency to obsessiveness;

BENEHE – The recalled experience imbued an emotional healing;

BENPH – They experienced a physical healing of some sort;

EXPDP – They reported a deep sense of peace after coming through an experience.

Insightfulness (BENHG, BENTHT, EFFBUD, EFFEGS, EFFSPL, EXPUT, EXPDKN, EXPDTH, EXPMS, EXPSPR, INSALR, INSEUR, INSLG, INSLIL, INSLVL, INSMC, INSSTR, INSTM, INSTMP, INSWP);

- BENHG – They had the impression that their experience was for the highest good;
- BENTHT – They reported an increased awareness of how their thoughts have troubled them;
- EFFBUD – Their integration felt like the emergence of the Buddha to them;
- EFFEGS – They deliberately allowed themselves to be transformed;
- EFFSPL – They were caught between habitual ideas about themselves and what they discovered in their special experience;
- EXPUT – The experience seemed to untangle any confusion for them;
- EXPDKN – Their experience imbued them with the sense of direct knowing;
- EXPDTH – Death sometimes appeared as a guide or a doorway to them;
- EXPMS – They reported information that was not really different from themselves, but not under ordinary control;
- EXPSPR – They reported the impression that good spirits were always with them;
- INSALR – They reported an insight that all will be revealed;
- INSEUR – They described an experience as a Eureka moment;
- INSLG – Their experience prompted them to let go of what had been stopping them;
- INSLIL – They reported an insight that life is illusory;

INSLVL – They reported seeing a hierarchy: ordinary, dream, mystical,
and non-levels;

INSMC – They reported an insight that they had choices in the moment;

INSSTR – They had the impression that their mission was to resolve
karma;

INSTM – They reported an implicit trust in the efficacy of their favorite
psychedelic;

INSTMP – They reported the insight that everything is temporary;

INSWP – They reported being convinced of the special power of words.

The role of ritual (BENOS, BENSB, INFSD, INFMU, EXPCR);

BENOS – They reported that something opened in them from singing or
dancing;

BENSB – They reported having become more oriented toward self-
betterment;

INFSD – They had been influenced by a psychedelic religion like Santo
Daime;

INFMU – They reported that music was an important influence for them;

EXPCR – Particularly with Santo Daime experiences, people reported
feeling what they called “the current.”

Tendencies toward obsessiveness (BENPE, BENSKM, EFFMSN, EFFSV,
EXPSP);

BENPE – They reported experiencing increased passion or enthusiasm;

BENSKM – They reported feeling sense on a mission to seek mastery;

EFFMSN – Being imbued with a sense of mission in general;

EFFSV – They reported feeling an increased sense of service;

EXPSP – They reported sensing spirit possession.

Special sensitivities (EFFAT, EFFCT, EFFCTS, EFFHA, EFFIE, EFFKYS, EFFPRM, EFFRCP, EFFSMF, EFFTP, EXPPSK, EXPSHC);

EFFAT – They reported becoming aware of events or thoughts that triggered mood changes in themselves;

EFFCT – They reported that their own state altered from being in the presence of someone who was on psychedelics;

EFFCTS – They reported having an increased ability to sense the state of another person;

EFFHA – They reported being in a special state in which thoughts came easily;

EFFIE – They reported having increased empathy;

EFFKYS – they reported having awareness of other people's states and conditions remotely;

EFFPRM – They reported having psychic preconception or similar acuties;

EFFRCP – They feel that they are more receptive to new ideas and feelings since their special experience;

EFFSMF – They reported that things within their special experience had a distinctive smell or taste;

EFFTP – they reported having shared experiences with other people, telepathically;

EXPPSK – They reported having telekinetic powers in their special experience;

EXPSHC – They described a dreamlike “shadow companion.”

Opening of special energies (EFFKLB, EFFKLE, EFFSDE, EXPECE, EXPEL, EXPIB, EXPORG, EXPRS, EXPRV, EXPSEW);

EFFKLB – They reported going into special, pranayama-like breathing in their experience;

EFFKLE – the reported having special kundalini-like energy shooting up through their body during their experience;

EFFSDE – They claimed, during their experience, being able to direct the energies in themselves;

EXPECE – They reported experiencing ecstatic energies;

EXPEL – They reported experiencing electrical energies;

EXPIB – They reported the impression of their body glowing as a source of light;

EXPORG – They reported having an “orgasmic explosion” in their body;

EXPRS – They felt as if a radiating substance was moving through them;

EXPRV – They reported feeling ripples or vibrations going through them, during their experience;

EXPSEW – They reported seeing subtle energies at work in themselves and in the world.

Otherworldliness: (EXPTR, EXPBGC, EXPDR, EXPDV, EXPHA, EXPMCH, EXPMM, EXPNTH, EXPRT, EXPSF, EXPSHC, EXPSMS, EXPSWD);

EXPTR – They reported having felt “transported” during their experience;

EXPBGC – One had the sense that we had only scratched the surface;

EXPDR – Either during or following the experience, life seemed to be a dream;

EXPDV – They reported an experience of déjà vu;

EXPHA – They reported an experience comparable to Castaneda’s “heightened awareness”;

EXPMCH – Their experience gave them the sense of either being like a machine or inside of a machine;

EXPMM – They reported feeling as if they had passed through a membrane between either parts of themselves or their states of awareness;

EXPNTH – They reported having felt “lost in the void”;

EXPRT – They reported receiving a message as if from a higher being that was not within themselves;

EXPSF – They reported that their experience had qualities like science-fiction;

EXPSHC – They reported meeting a dreamlike “shadow companion” in their experience;

EXPSMS – They reported that the particular states of another person in the room had a distinctive odor to it;

EXPSWD – They reported that the world seemed to stop, during their experience.

Transformational effects: (EXPRD, EXPRO, EXPSW, EXPTF).

EXPRD – They reported that their experience somehow prepared them for their death;

EXPRO – They reported feeling that their experience returned them to the origin of their existence;

EXPSW – Their experience seemed to flip a switch in them that changed their perspective;

EXPTF – They reported that they felt generally transformed by their experience.

Matching up the reported qualia from the interviews with those of the 5 referenced instruments, I added the following three categories (noting significant overlap with the above classes):

Benefits (BENAC, BENCL, BENDIE, BENJOY, EFFCR, EXPPF, EXPSDY);

BENAC – Willingness to accept oneself as one is;

BENCL – They reported an increased sense of clarity;

BENDIE – Recalling the experience gave them deep insights into themselves;

BENJOY – They reported or demonstrated joyfulness from their experience;

EFFCR – They felt complete from their experience, with a deep sense of relief;

EXPPF – Their experience seemed to resolve everything for them;

EXPSDY – They felt that they now knew their own destiny.

Conscious attributes (BENTHT, BENWT, EFFHA, EFFTP, EXPDAW, EXPES, EXPFCO, EXPHD, EXPMO, EXPNV, EXPPLF, EXPRO, EXPSLF, EXPSNS, EXPTL, EXPUNV);

BENTHT – They reported having benefit from increased awareness of how their thoughts have troubled them;

BENWT – Their experiences inculcated the “witness perspective” in them;

EFFHA – They reported having had a special state in which thoughts came easily;

EFFTP – They reported telepathically sharing thoughts and feelings with other people;

EXPDAW – The dual nature of reality became apparent to them; they referred to a state of “non-duality”;

EXPES – Ego shift – another way of saying transformed or “transcending the body”;

EXPFCO – They reported feeling as if their consciousness had been shattered;

EXPHD – They reported feeling as if they were in a higher dimension;

EXPMO – They experienced something ineffable that was not themselves; “mystical other”;

EXPNV – They attempted to describe nonverbal information;

EXPPLF – Their experiences gave them the impression of remembering past lives;

EXPRO – They reported feeling as if they were returning to the origin of their existence;

EXPSLF – They reported a heightened sense of self-awareness;

EXPSNS – They seemed to have experienced more than the normal five senses;

EXPTL – Their experience seemed to transcend the limits of language;

EXPUNV – Everything in themselves seemed to be connected.

Side effects (EFFFXN, EFFIR, EFFRS, EFFSOS, EFFTRP, EXPDG, EXPEB, EXPEMP, EXPFI, EXPOW, EXPSD, EXPTLS).

EFFFXN – They would find themselves fixated on some object;

EFFIR – They reported an increased interest in ritual and religion since their special experience;

EFFRS – Their experience seemed to involve a reality shift;

EFFSOS – They seemed to have lost their sense of self – overwhelmed;

EFFTRP – The ordinary senses seemed to have been switched with each other;

EXPDG – They reported feeling some sort of threat in their experience;

EXPEB – They reported feeling as if their consciousness had expanded beyond their body;

EXPEMP – They reported feeling empty and free;

EXPMFI – “Fractal infinity”: the world seemed to turn into an infinitely regressive set of patterns;

EXPOW – Their experience felt like the opening of a new world;

EXPSD – They felt a sense of the divine or of meeting with God;

EXPTLS – They lost their sense of time, or the passage of time became distorted.

In Table 5, I collected all of these qualia classes into various categories of consciousness as described by my participants and also by the relevant literature (e.g., Andersen, Schjoedt, Nielbo, & Sørensen, 2014; Barrett, 1979; Bonner & Friedman, 2011; Campbell, 2009; Dennett, 2001), except that most of the classifications in the literature are based on theory or tradition, whereas my new table is based on the data from this current research project, as well as my extensive personal experience (see Appendix C).

Table 5

Interview Qualia as Components of Consciousness Categories

REPORTED QUALIA	PROPOSED CATEGORY											
	ADDCTV-OBSESS HEALING	EMOT'L HEALING	THE BARDO	LUCID DREAMG	HEIGHT AWARE	INSIGHTFULNESS	SUPERNATURAL	DEVOTION/AWE	PSYCHIC EFFECTS	SPIRITUAL POWER	UNIVRSAL AWARENESS	DIVINE AWARENESS
Acceptance	√	√				√					√	
Compassion, Benevolence		√									√	√
Cured Addiction, Alcoholism	√	√										
Increased Clarity				√	√	√			√	√	√	
Deep Insight from Experience.	√	√			√	√				√		
Deep Insight from Interview	√	√				√						
Disobsession	√	√								√		
Emotional Healing from the Experience		√				√					√	
Emotional Healing From the Interview		√				√						
Gradual Integration	√	√				√			√	√	√	
Harmonizes with Others		√				√			√	√	√	
Acting for Highest Good		√				√					√	
Increased Awareness of Impact on Others	√	√			√	√			√	√	√	
Increased Intuition				√	√	√			√	√	√	
Joyfulness		√						√			√	
“Less is Enough”	√					√					√	
More Sociability		√									√	
Aware of Obsession	√	√		√		√				√		√
Songs, Dance Helped							√	√		√	√	
Passion, Enthusiasm		√			√			√		√		
Emotions Pivoted		√		√		√				√		
Physical Healing	√					√				√		

Being Present		√		√	√	√	√		√	√	√	√
Received a Helpful Push				√	√	√	√	√	√	√	√	√
Self-Betterment		√				√				√		
New Skillset				√	√	√			√	√		
Seeks Mastery												
Awareness of Self-Destructive Thoughts		√		√	√	√	√		√	√		
Witness Position				√	√	√				√	√	
Easier with Animals Than with People												
Awareness of Emotional Triggers	√	√				√				√		
Sees Auras				√	√		√		√	√		√
Bad Dreams			√	√			√					
Beauty Opened		√		√	√		√	√			√	√
Buddha Integration						√		√		√	√	
Channel Group Energy									√	√	√	
Feeling Complete, Relief		√				√					√	
Contact High									√			
Contact Sensitivity									√	√		
Saw Clear White Light					√							
Cycles Of Emotion		√				√		√				
Ego Surrender		√			√			√		√		
Filtered out External Noise												
Fluid Moods				√						√		
Awareness of Fixation							√	√				
Hyper-Awareness					√		√		√	√		
Heartbreak, Sobs		√										
Heart Racing								√				
Increased Empathy					√	√			√	√	√	√
Increased Spirituality							√	√			√	√
Kundalini Breath					√		√	√	√			
Kundalini Energy	√				√				√	√		
Distinguished “Keys” in Others					√	√			√	√	√	
“More Awake Than Awake”				√	√		√		√		√	
Sense of Mission	√							√		√		
Negative Response		√										
Openness, Flexibility		√				√				√	√	

Portal Recall, Otherworldly				√	√		√		√	√		
Pressure in Chest												
Premonition				√	√				√	√		
Receptivity		√			√	√	√		√			
Reaccessed Magic							√		√	√	√	
Recover Memories				√		√				√		
Reality Shift				√	√		√		√	√	√	√
Reaccessed States				√	√		√			√		
Self-Direct Energies									√	√		
Felt Shame		√						√				
Felt Small								√				
Smelled Flowers									√			
Lost Sense of Self							√	√			√	
“Split Down the Middle”		√		√								
Sense of Strength	√	√								√		
Increased Sense of Service								√		√	√	
Doing vs Thinking				√	√				√	√		
Tingling Hands												
Telepathic									√	√	√	
Synesthesia									√			
More Expressive		√								√		
Appreciation of Power								√				
Age Regression	√	√										
All Bigger, More Complex						√		√			√	
Slower, Deeper Breath	√				√			√				√
Felt “Current”					√		√	√	√			
Despair After		√	√									
(Non)Duality Awareness					√	√						√
Sense of Danger			√									
Direct Knowing				√	√	√	√		√	√	√	
Demonic Episode			√									
Deep Peace		√				√		√		√	√	√
Life as Dream			√	√		√	√				√	
Death Connection			√									
Déjà Vu			√						√			

Expand Beyond Body			√	√				√			√	
Ecstatic Energy					√		√	√	√	√		
Electrical Sense								√	√	√		
Empty, Free	√	√	√							√		
Ego Shift			√	√	√		√		√		√	
Fragmented Consciousness			√									
“Fractal Infinity”				√	√		√		√		√	
Felt Grief		√	√									
Heightened Awareness				√	√	√			√			
Higher Dimension			√		√		√	√			√	√
Illuminated Body				√	√		√		√			
Internal Battle		√	√									
Love	√	√						√		√	√	√
Machine Awareness			√		√		√		√	√		
Moving Through a Membrane			√	√	√		√					
Mystic Other			√	√			√	√	√			√
Message from “High Self”		√	√		√	√		√		√	√	
“Not-Doing”				√			√		√	√		
Nothingness, Felt Lost			√									
Non-Verbal			√	√	√		√		√		√	
Orgasmic Explosion	√											
New World				√		√	√				√	
See Patterns			√	√	√	√	√		√	√		
Perfection					√	√		√			√	√
Past Lives			√	√					√			
Psychokinesis				√	√		√		√	√		
Ready to Die		√	√					√				√
Reaccessed Feelings		√	√			√		√	√	√		
Return to Origin						√					√	
Reaccessed Physiology	√											
“Radiating Substance”				√			√		√			
Received a Transmission					√	√	√		√	√		
Ripples, Vibrations												
Sense of Divine							√	√		√	√	√
Sense of Destiny						√		√				
See Energy from Self-Work				√	√	√	√		√	√	√	

The categories I identified in Table 5 are intended as an intermediate step toward the integration I modeled in Table 2. The states and levels I addressed are as follows: addictive/obsessive healing, emotional healing, “the *bardo*” (purgatory or shadow area), lucid dreaming, insightfulness, heightened awareness, supernatural, devotion and awe, psychic, spiritual power, universal awareness, and divinity. In this table, I indicated which of the research qualia either support, or are components of, each example state or level.

Follow-up Survey

Table 6 illustrates how the participants responded when exposed to the entirety of responses from the entire sample group; the “1” marks predominate in showing what they were willing to add to their interview responses. In particular, the table reveals a disparity (“X” marks) between my determinations and the interviewees’ self-perceptions; within the limitations of this current study, it is not possible to determine whether this reveals flaws in my analysis methods or simply errors on the part of the interviewees. The relatively sparse “A” marks show agreement between the interview and the follow-up.

Ten participants completed the follow-up survey, one of whom (female, age > 50) had not taken a verbal interview due to time constraints. See Table 6 for a comparison between the survey results and those of the interviews. The table compares survey responses to the original interviews, except for the one marked with an asterisk (*) who had not interviewed. For those who had interviewed, a “1” represents a new response, an “A” signifies that the survey response agreed with the interview response, and an “X”

indicates that the respondent omitted a survey item which had been addressed in the interview.

In Table 6, the participants are identified by the arbitrary encodings I used for correlating analysis with the raw data.

Table 6

Interviews vs. Surveys

QUALIA	PARTICIPANT#										
	203	304	956	X13Z	WXY	ZYX	AX5T*	MNO	STL5	ABCD	801j
Acceptance	A	1	1	A	A	1	1		1	1	1
Compassion, Benevolence	1	1	1	1	A	1	1	1		1	1
Cured Addiction, Alcoholism		1		X	A	A				1	
Increased Clarity	1	1	1	1	A	1	1	A	1	1	1
Deep Insight from the Experience	A	A	1	1	A	1	1	A	1	A	1
Deep Insight from the Interview						X		A		1	
Disobsession		1						1	1	1	1
Emotional Healing from the Experience	1	1	A	1	A	X	1	1	1	1	1
Emotional Healing from the Interview		1	1	1	1			1		1	
Grateful for the Experience	1	A	A	1	A	1		A	1	1	
Grateful for the Interview	X	1	1	A				1		1	1
Gradual Integration	1	1	1			1	1	A	1		1
Happier	1	1	1		A	A	1	1	1	1	1
Harmonizes with Others	1		1			1	1	A		1	1
Highest Good	A	1	1	1		1	1	1		A	1
Increased Awareness of Impact on Others	1	A	1	1		1	1	A		1	
Increased Intuition	A	1	1	1	A	1	1	A	1	1	
Joyfulness	1		1		A	A	1	1		1	1
Lower Doses were Better		1	1					1	1	1	1
“Less Is Enough”	X	1							1	1	1
More Sociability	1	1	1	1	X		1			1	1

Aware of Obsession		1		1	1		1	A		1	1
Songs, Dance Helped	1				A	X	1	1	1	1	1
Passion, Enthusiasm	1	1	1		A	1	1	1		1	1
Emotions Pivoted	A	1			1	1	1	A		1	1
Physical Healing	1		1		A			1	1	1	1
Being Present	1	1	1	1	A	1	1	A		1	
Helpful Push	1	1	1		1	1		1	1	1	1
Self-Betterment	1	A	1	1	1			1	1	1	1
New Skillset	1		1	1	1		1	A	1	1	
Seeks Mastery	1	1	1		1			A		1	1
Aware of Self-Destructive Thoughts		A	1		A		1	1	1	1	1
Witness Position	1	1	1		1	1	1	A	1	1	
Easier with Animals than with People	1		1								1
Awareness of Triggers	1	1	1		A		1	A	1	1	1
Sees Auras								1			
Bad Dreams			1								
Beauty Opened		1	1	1	1			1	1	1	1
Buddha Integration	A					1		1			1
Channel Group Energy								1		1	
Felt Complete, Relief		1		1	A	1	1	1		A	1
Contact High	X	1	1	1	1	1		1	1		1
Contact Sensitivity		1		1	1		1	A	1	1	
Saw Clear White Light		1	1			1		1		1	1
Cycles of Emotion						A		1	1		1
Ego Surrender		1	1		1	A	1	A	1		1
Filtered out External Noise						1				1	
Effortless Vomit			1								
Fluid Moods					1			X	1		1
Fixation				1					1	1	1

Hyper-Awareness		1	1	1			1	A	1	1	1
Heartbreak, Sobs	1	1	1	1	A		1			1	1
Heart Racing		1					1		1	1	1
Increased Empathy	1	A	1		A		1	A		1	1
Increased Religiosity			1	X	X	1		1		1	1
Increased Spirituality	A	1	A	X	X	A		A	1	A	
Kundalini Breath	1	1	1		A	X		1	1	1	1
Kundalini Energy	1	1	1		A	1		1	1	1	
Distinguished “Keys” in Others	1	1		1			1	A		1	
“More Awake than Awake	1	1	1			X		A		1	1
Sense Of Mission	1	1	1		A		1			1	
Negative Response		1	A				1		1	1	1
Openness, Flexibility	1	1	1	1	1	1	1	A		1	1
Overwhelmed		1	1		A	A	1	1	1	A	1
Playfulness	1	1	1			1	1	A		1	1
Portal Recall, Otherworldly								A		1	1
Pressure in Chest					X				1	1	
Premonition	1	1	1			1		A		1	1
Receptivity	1	1	1	1	1	1	1	A	1	1	
Reaccessed Magic	1	1	1		1	1		A	1	1	
Recover Memories	A	1	A	1	A	X	1	A		1	
Reality Shift	1	1	1			1	1	A	1	1	1
Reaccessed States	1	1	1			X		A	1	1	1
Self-Directed Energies	1	1		1			1	A	1		
Felt Shame			1								1
Felt Small					1		1			1	1
Smelled Flowers	1									1	1
Lost Sense of Self		1	1	1	A	X			1	1	1
“Split Down the Middle”		1			X			A		X	1

Sense of Strength		1	1			1	1	1	1	1	1
Increased Service	1	A	A	X	A		1	A		1	1
Doing vs Thinking				1		X			1		1
Tingling Hands		1	1			X			1	1	1
Telepathic	1	1				X		A	1	1	
Synesthesia		1	1			1		A	1		1
More Expressive	1		1		A	X	1	A		1	
Appreciation of Power	1	1	1		1	1	1	1	1	1	1
Age Regression	X		A	1	X		1	1	1	1	
All Bigger, More Complex	1	1	1		1	1	1	1	1	1	1
Panting	1	A	1		1			1	1	1	1
Slower, Deeper Breath		A						1	1	1	1
Felt "Current"	1	X					1	A	1	1	1
Despair After		A	1		1		1			1	1
(Non)Duality Awareness	1	A		A		1	1	A		1	1
Sense of Danger			1			1			1	1	1
Direct Knowing	1	1	1	1		1	1	A	1	1	
Demonic Episode			1		X						1
Deep Peace	1	1	1		1	1	1	1	1	A	1
Life As Dream		1		1		A	1	A	1		1
Death Connection		1	1				1			X	1
Déjà Vu+		1	1			1		X	1	1	1
Expand Beyond Body	A	A	1	X	X	1		A	1		1
Ecstatic Energy	1	1	1					A	1	1	
Electricity		X						1	1	1	1
Empty, Free	1		1		1	1	1	1	1	1	1
Ego Shift	A	X	1	1		1	1	A	1		
Fragmented Consciousness					X			1			
"Fractal Infinity"	1	A						1	1		1
Felt Grief		1	1		A				1		1
Heightened	1		1		1	1		A	1	1	1

Awareness											
Higher Dimension			1			1	1	A	1	1	
Illuminated Body	1	1	1								1
Internal Battle						X		X	1		
Love	1	A	1	A	A	A	1	A	1	A	1
Machine Awareness			1					1			1
As if through a Membrane		X					1	1			1
Mystic Other	X	A	A	1		1	1	A	1	1	1
Message from High Self	A				X			A	1	A	1
“Not-Doing”								A		1	1
Nothingness, Lost		1									1
Non-Verbal	A	1	1			1	1	A	1		
Orgasmic Explosion	1		1	1				1	1		
New World	1		1	1		1	1	1	1	1	1
See Patterns	1	1	1				1	1	1	1	1
Perfection	1	1	1			1	1			A	
Past Lives		1				1	1	X	1		1
Posture Shift			1		X				1	1	1
Psychedelic	X	A	1	X	1	A	1	A	1	A	1
Psychokinesis								1	1	1	1
Ready To Die		X	1			1	1	1	1	1	
Reaccessed Feelings		A	1		A	X		a	1	1	1
Return To Origin	1	1		1		1	1	1	1	1	
Reaccessed Physiology	A	1		X	X	A		X		1	1
Radiating Substance									1	1	1
Received a Transmission			1		X			A	1	A	1
Ripples, Vibrations	1	X	1			X		1	1	1	1
Sense Of Divine	A	A	1	1	X	1	1	1	1	1	1
Sense Of Destiny		1					1			A	1
See Energy from Self-Work	1		1				1	X	1	1	1
Science Fiction Quality			1		1		1			1	1
Shadow			1			X					1

Companion											
Shared Phenomena						1			1		1
Sense of Self	1	1	1		X	A	1	A		1	1
Sense of Magic	1	1	1			1	1	1	1	A	1
Smelt Others' States									1		
Synchronicities	A	1	1			1		A	1	1	1
Other Senses	A	1	1			1		A	1		1
Spirit Possession			A					1	1		
Spirits Always Present	1		1		X		1	1	1		1
Switch Flipped	X		1		A	1	1	1		1	1
The World Stopped	1			X			1	1		1	1
Transformed	1	1	1	1	1	1	1	A	1	1	1
Transcend Language	1	1	1			A	1	A	1	1	
Timeless Quality	A	1	1		A	A	1	A	1		1
Transported	X	X	A				1	1	1		1
Terrifying Unreality			1			1					1
Universality	A	A	1	A	1	A	1	A	1	A	1
Untangling	A		1			1	1	1		1	1
Santo Daime Religion	A						1	A	1	X	1
Academic	1	1	1	X	A			1			1
Castaneda	A			X	1			1			
Controls Sleep		1	1					X	1		1
Comfort, Home, Protected	A	1	1			1	1	1	1	1	
Childhood Incest					A						
Disconnected Parent			1		A	A			1	1	
Competitive							1			1	
Used Cannabis		1	1	1	1	1	1			1	
Dreams		1	1			A	1	A	1		
Entrepreneurship			1								G
Eastern Traditions	1	1	1	X	1	A	1	A	1	A	M
Fear Of Loss							1				1
Fundamentalist Parent					X		1			1	1
Grof Breathwork	1	1			1	A	1			1	

Grief, Rage		1			A				1	1	1
Gives Sessions	1	1			X					1	1
Old Hippie				X	1	1	1			1	
Lives like Hermit		1								1	1
Seeks Intensity			1					X		1	1
Lucid Dreaming		1			1	1		A	1		
Music, Art Studies		1	1		1	1	1	A		1	
Music	1		1		1		1	A		1	1
Meditation, Visual, Mindfulness	A	A	1		A	A	1	A	1	A	1
Nature	A	1	1		A	1	1	A		1	1
Piercing, Tattoos											1
Pre-Psychedelic	A	X	1		X			A	1	X	1
Psychotic Parent						X					
Rave Culture		1	1				1				
Suicidal Depression					A	X	1			1	1
Sensory Deprivation	1				1		1	1			1
Siddhartha, Hesse influence	1			X			1			X	1
Taking Therapy		1	1		1		1				1
Tribal Shamanic	A	1	1	X	A	X	1	1		1	1
Willingness	1	1	1		1			A		1	1
Write Book, Blog	1		1		A		1		1	1	1
“All to be Revealed”	1					1	1		1	1	1
“This Is It!”	1	1	1			1	1	1	1	1	1
Let Go	1	1			1	1	1	A		1	
Life Illusion	1	1				X	1			A	1
Distinguish Levels						1		A			1
Moment-by-Moment Choice	1	1					1	1	1	A	
“Sin Eater”	1	1					1		1	1	1
Trust the Medicine	A	1	1		A		1	A	1	1	1
Temporariness	1	1				1	1		1	1	
Power of Words	1						1		1	1	1
“More Coming”						1	1		1	1	1
Controlling					X					1	

Academic Resistance					A			1			
Lost in Assumptions								1			1
Criticism									1	A	1
Fear of Awakening		1			1						
Failed Perfectionist									1	A	1
Frustrated with Self							1		1		1
Judgmental									1	A	
Fear Loss of Control					1				1		1
Obsessive								A	1	X	1
Body Disconnect									1	X	1
Self-Justify									1	A	
Stuck On Story					X					A	
Superior Belief					X					A	1
Self-Defeating Thoughts		1			A				1	A	1

30 – 50 ^b	G	L	1	G	1	G	G	L	G	1	G
Gender	M	M	F	M	F	F	F	M	F	M	M

Legend:

^a In the body of the table, an “A” indicates that the survey confirmed the interview response, “1” indicates a new survey response vs. the interview, and “X” = interview responses not reflected in the survey. Asterisks indicate survey-takers who had not taken an interview).

^b Age ranges: “1” = between 30 and 50, “L” = younger, “G” = older than 50.

I noticed several trends in examining Table 6:

1. 60% of the participants did not return the questionnaire, even after a reminder;
2. Follow-up conversations made participants seem suspiciously agreeable to adding qualia to their prior interviews;
3. The large number of “X”s indicates that people do not always remember what they revealed in the interview. This could be due

to the shift of attention between whatever states they went into in the interview versus the more intellectual state in which they are examining the questionnaire; this could also be due to a flaw in my follow-up method. Future research could sort this out.

Do the Data Support the Research Question?

From Chapter 3, we have the research question as: “Are there identifiable features that can reliably and validly distinguish among states of consciousness thought to be distinct from each other?” This breaks down into several component questions:

1. Are (extraordinary) conscious states significantly distinct from each other?
2. If so, what actually comprises their distinguishing features?
3. Did I collect sufficient data to establish sufficient vectors for making those distinctions? And
4. Are the resulting distinctions (if any) operationalizable?

From the example interview quotations given above, it seems clear that the answer to subquestion-1 is certainly yes – many of the states that the volunteers recalled were very different from each other. For subquestion-2, the 220 reported qualia suggest that a given state was comprised of:

- *Background* – formative relationships, religious/spiritual training, cultural influences, rehabilitation, and education;
- *Resistance factors* – psychological trauma, physical illness, disability, orphanhood, isolation, and any other condition which had to be overcome in order to make a breakthrough;

- *Setting* – an environment that made it safe or supportive to have their experiences; this consisted of rituals, raves, clinical settings, and peer groups;
- *Trusted guide* (even if internal) or tradition – this was sometimes a guru or even an “old hippy”; some followed yoga, Buddhist, or shamanic practices;
- *Induction method* – usually a psychedelic substance, but several participants were able to re-access childhood incidents; some volunteers described autohypnotic methods. See Table 7 for a breakdown of induction methods by participant. Note that most of the participants reported using multiple psychedelic substances even if the experience they described may have involved only one substance, or even none (e.g., a walk in the forest, withdrawal from an addiction, or a childhood recollection).
- *Energies* – my data indicate that the most extraordinary states derived from incorporating special energies, such as from fasting, vision quests, and tests of endurance, strength, and willpower. I also observed that many of those who reported extraordinary states had repeated their spiritual practices or rituals many times.
- *Breakthrough* - the data indicate that participants who had similar backgrounds influences, and other similarities, had very different qualities of experience. Those who had the most intense and insightful experiences

described or implied some sort of breakthrough that they had; these may have been fostered by synchronistic events, lucid dreams, or *bona fide* religious experiences.

In Table 7, the participants are identified by the arbitrary encodings I used for correlating analysis with the raw data.

Table 7

Induction Factors by Participant

PARTICIPANT#	INDUCTION METHODS OR SUBSTANCES
001a	LSD
102b	ayahuasca, DMT, LSD
203b	ayahuasca, regression
304c	ayahuasca, 5-MEO-DMT
504d	MDMA, LSD, rave
605e	ayahuasca, ritual
706g	LSD
807h	psilocybin mushrooms
956k	ayahuasca, ritual
19x34	MDMA, regression, Ketamine, psilocybin mushrooms, Salvia Divinorum, withdrawal
0863m	MDMA, psilocybin mushrooms
50xG	ibogaine, withdrawal
7734k	regression
X13Z	ayahuasca, LSD
6924t	LSD
WXYZ6	ayahuasca
ZYXW3	lucid dreaming, peyote, LSD
ABCD5	ayahuasca, DMT, ritual
T03Z	MDMA, ritual, psilocybin mushrooms, LSD
MNO7	ayahuasca, cannabis, DMT, regression, psilocybin mushrooms
T9876	Cannabis, regression, psilocybin mushrooms, LSD
STL5	ayahuasca, ritual
AX5T	ayahuasca, ritual, lucid dreaming

801j

ayahuasca, cannabis, ritual, regression, lucid dreaming, Ketamine, psilocibin mushrooms, Salvia Divinorum, LSD, psychotherapy

For subquestion-3, in order to have elicited data specific enough to be able to determine all of the necessary criteria, I would have had to structure the interviews in a more focused way, which would have undone the benefits of allowing participants to access their deep memories and feelings. As it is, I suggest that the data from this current study could usefully extend the utility of the referenced instruments as well as that of this research field in general.

Subquestion-4 assumes that we were able to make at least some significant distinctions among the various states elicited from the participants. From the cited testimonials transcribed above, it seems clear that the participants were distinguishing their recollections from their ordinary states as well as from each other, but we still lack a sufficiently specific taxonomy for identifying those states in an operationalizable manner. See the discussion in Chapter 5 for a potential solution to this problem by sidestepping the conundrum of describing the indescribable, by simply introducing an arbitrary taxonomy scheme.

Interview Praxes

In order to elicit responses that would yield fresh data rather than abstractions or preconceptions, I encouraged the interviewees to frame their experiences in terms of felt senses and relived events. Below, I explain how I constructed my interviews.

Process Questions

The following is a list of the questions which I found useful in eliciting experiential responses in the open-format interviews. These correspond generally with the questions I proposed in the Data-Gathering Procedures section of Chapter 3.

“What event or experience, at any time in your life, made a vivid and lasting impression on you?”

“Does your response come from empathy or obsession?”

“What resources did you retain since then?”

“What did you bring forward from your previous experience?”

“Was that effect spontaneous or controlled?”

“What does that statement actually mean?”

“What do you secretly know, inside yourself?”

“What really is that, without labels?”

“Can you walk me through that?”

“What does the unconscious want to tell us about itself?”

“What brought you here? What started you in your search?”

“Can you think of a time, since then, when that occurred?”

“What was the internal trigger for that?”

“What was it really, before you attached that label?”

“How did you know that was occurring?”

“When you walk around in your dreamscape, what do you sense?”

“Did you decide to feel or think that way?”

“Here you are, experiencing this – where are you in yourself?”

“What does your gut say about that?”

“What is your visceral experience of being awake in yourself?”

Setting/Context

I had given the interviewees no particular instructions as to where and how they should be during the session. Some were in their bedrooms; others in their offices, either at home or at work. Since I did not have a video recording for all of them, I could not always determine who was where, except for one woman who chose a noisy coffee shop and, of course, those I interviewed in person (my living room for four of them and the living room of one older, local female).

General Notes on my Interview Methods

As I noted in Appendix B, I was able to bring numerous subtle and powerful disciplines to my interview methods. These included numerous types of sensitivity training, intensive self-study disciplines, training and practice in psychic mediumship and lucid dreaming techniques, several spiritual lineages, and 20 years in an Amazonian-shamanic tradition. With the aid of these skills, I was able to induce in my participants conducive state for their recollecting their extraordinary experiences, adapted to be optimal for each one. At the same time, I actually induced myself into an optimal state for listening to them and observing them. Some of the participants offered initial resistance to my inductive approach, however only one (male) completely avoided the vulnerability that compliance with my induction would have entailed; all of the others at least eventually recollected data that would be useful to my research.

Chapter 5: Discussion and Conclusions

This study may lead to new theories, treatments, and research approaches by providing answers to my research question: “Are there identifiable features that can reliably and validly distinguish among states of consciousness thought to be distinct from each other?” By observing the functional taxonomies of the reported qualia, I saw ways in which particular sets of qualia could help in determining given states of consciousness.

Limitations

Having only myself as the coder, I was limited to my own perspectives, but additional coders might not have been looking for the subtleties I sought, which were for each volunteer to reveal their most sensitive and real experiences, rather than their favorite theories and abstractions. The participants’ responses might have meant something different to other coders than they did to me, but they may also have noted qualia that I may have missed. The small number (10) of follow-up survey responses limited conclusions which a larger response might have yielded; also, many respondents were confused by the intentional vagueness of the instructions (e.g., “Did you *ever* experience this?” and “*What* did you ever experience in special states?”). However, the data are interesting and revealing in terms of how respondents compared their current attitudes to what came up for them in the interviews, as well as to what degrees they agreed with others’ responses.

The Effect of my Discriminatory System

As seen in Tables 2 and 3, I modified my initial six categories to 12 major categories, and three subcategories under Phenomena, in order to fit the actual intent of

the responses according to my own perspective; however, another researcher might have ordered the qualia differently, according to different background and interests, as indicated by the five standard instruments I referenced. My own perspective leans toward spiritism and alternate realities, whereas other viewpoints (as with the five instruments) would likely favor cognitive, sociological, dysfunctional, or learning-oriented approaches, to name a few.

The Impact of Having Interviewed Acquaintances

The risks of interviewing acquaintances are that I might have altered my questions according to my previous knowledge of these people, thus creating an additional results-bias risk and risking loss of anonymity for them. However, in reviewing the transcripts, I often could not tell who my acquaintances were and, even when I could, the usable data was not of a significantly different quality from the others. Outweighing those risks was the benefit of my better understanding the background and significance of their responses.

Cultural Diversity

I would have liked to be able to address the impact of cultural diversity, but only a single participant was non-White, non-North American, and his responses were generally in line with the others. Due to the online recruitment method, I had no way to select for specific demographics.

The Role and Influence of the Researcher

It has become more acceptable for researchers to include themselves as informants or participants, particularly if they have valuable experience and insights

relevant to a study of the kind featured in this document (Berry & Patti, 2015; Mizzi, 2010); as shown in Appendix B, I endeavored to substantiate my qualifications in this respect. In reviewing the interviews, I am convinced that a untrained interviewer would not have been able to gain the trust of the volunteers, nor would that interviewer have had much success distinguishing specific qualia. In addition, the efficacy and beneficence of my interview technique is characterized by a message I received afterwards from one of the participants:

I want to thank you for letting me take part in your study. I have waited for months to tell you this. Something incredible happened while I talked on the phone with you. You asked me to go to a place where nothing bad had happened and just let myself feel whatever came up. What came up was love so pure it took my breath away. In that moment I found forgiveness that has not left me since. I had tried for years to let go of my resentment to no avail. As an alcoholic this was crucial to my recovery. I am now fourteen months sober and continue to grow on a spiritual path. I just wanted you to know, you helped me and I am grateful.

In this dissertation, I have identified a collection of features from a wide variety of nonordinary states, at least some of which have not been adequately described in the literature. I have attempted to organize those qualia into practical categories for further systemization, but I admit I may have imposed some of this organization onto the data, as well as having let the data speak. My interpretations of the results were both according to the sense I obtained from the participants and guided by my extensive experience with

nonordinary states of consciousness. I believe that I can at least take these results as a preliminary step towards creating a future comprehensive vocabulary of state qualia, and then, later, as a basis for mapping specific states. My prototype for such a tool can be found in Tables 2 and 3.

Categorization of Influences on Conscious States

Interesting advancements have been made in neuroscience (Back-Madruga et al., 2003; Boly et al., 2008; Cahn & Polich, 2013; Fink, Schwab, & Papousek, 2011; Halsband, Mueller, Hinterberger, & Strickner, 2009; and Picard & Craig, 2009) and observational methods (Barrett, 1979; Campbell, 2009; DuBois & Van Rullen, 2011; and Griffiths, Richards, McCann, & Jesse, 2006); however, I have had promising results of state-directing by ritual means, including drumming, chanting, dancing, meditation, and use of psychedelics. Unfortunately, such methods were unavailable for this particular study.

Of the functional categories I outlined in Table 3, those that directly impact my stated research question are the following:

- Awareness and Sensitivity – factors of heightened consciousness,
- Energies – special phenomena described by participants,
- Insightfulness – revelations and epiphanies described in the interviews,
- Passion and Obsession – positive and negative urges initiating in, and resulting from, the recalled experiences,
- Phenomena – general effects not falling into any of the other categories, and

- Spiritism, Mediumship, and Psychic Phenomena – reports normally described as metaphysical or supernatural.

The categories not included in Table 4 are of special interest, since they address features difficult to find in psychological literature, although often seen in Eastern and mystical sources (Andersen, Schjoedt, Nielbo, & Sørensen, 2014; James, 1901/2011; Lifintseva & Gasparyan, 2015; Melo, 2011). Admittedly, those qualia are difficult to recall or describe but, more likely, they do not conform easily to mainstream psychological paradigms. This is what made such qualia of particular interest to me in terms of this present study; they point to states of consciousness that have not been adequately recognized in modern psychology, although earlier authors showed interest (Dixon, 2005; Giannoni, 2003; James, 1901/2011). Those categories include

- Healing – participants experienced or imagined physical or emotional healing, either from the experience itself or from processing/therapy that followed;
- Insightfulness – participants reported clarity or special wisdom from their process;
- The role of ritual – this was not addressed in the five referenced instruments, but many recent papers report on ritual in connection with nonordinary states (de Rios, 2005; Hallowell, 2010; Melo, 2011; Polito, Langdon, & Brown, 2010). My data tends to show that phenomenological effects are stronger and more plentiful in ritual vs. lab settings, but a larger study would be needed to confirm that impression, and to what degree ritual expands the experience;

- Tendencies toward obsessiveness – I included positive tendencies such as sense of mission and wish to serve others, as well as, for example, self-destructive urges and inclinations to interfere with people or organizations;
- Special sensitivities and sensibilities – this category includes psychic phenomena, empathic sensibilities, and intuition;
- Opening of special energies – the volunteers described these as electricity, kundalini, rippling, tingling, and feeling possessed;
- Experiences of otherworldliness – science-fiction worlds, mystical places, non-human levels, and spiritual planes; and
- Transformational effects – insightful and life-changing inspirations and moments never to be forgotten, often accompanied by specific healings or changes in living situation or career.

My Model for Discriminating among States of Consciousness

Figure 1 illustrates the relationships that my data suggests among the indices listed above (induction and resistance factors, background, setting, guide/tradition, and breakthrough) and an encoding of conscious states; I assigned nomenclature to presumed resultant states, somewhat in the way that not-yet-discovered chemical elements are presumed to have qualities based on extrapolation from existing elements. Admittedly, such nomenclatures are fairly abundant in the literatures of *psychology* (Bonner & Friedman, 2011; Cahn & Polich, 2013; Cardeña & Pekala, 2014; Cortright, 1997; Dixon, 2005; James, 1901/2011; Pekala, Wenger, & Levine, 1985; Walsh, 1995), *philosophy* (Stace, 1960), *anthropology* (de Rios, 2005 ; Hallowell, 2010; Melo, 2011; Polito,

Langdon, & Brown, 2010), *other areas of science* (Freedman, 2010; Vaitl, 2005), and *Eastern traditions* (Kiesling, Sorell, Montgomery, & Colwell, 2008; Lifintseva & Gasparyan, 2015; Yamashiro, J., 2015), but I suggest that those are mainly based on preconceptions from religious and cultural traditions. Instead, I simply introduced abstract codes for indicating qualities and relationships.

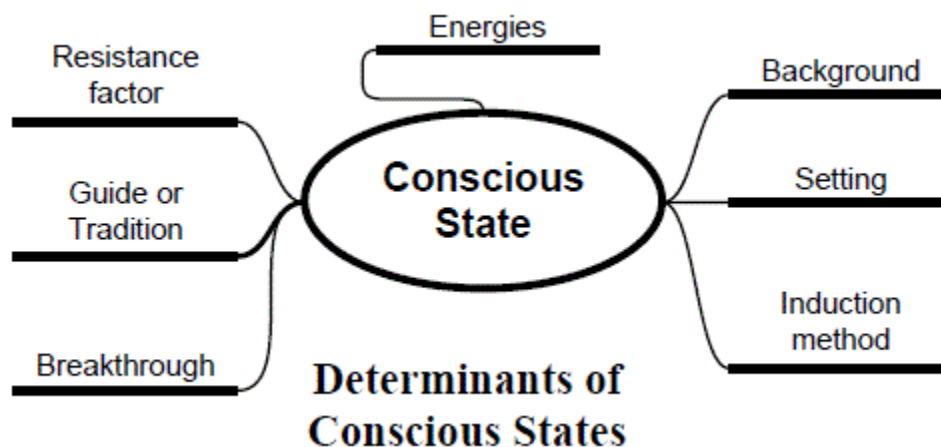


Figure 1: Determinants (variables) of conscious states.

Figure 2 illustrates an example of how, once the necessary data are assembled, a particular state of consciousness could be designated by encoding; this bypasses the usual question of how to describe the ineffable and could, additionally, allow designated states to be collected into catalogs, thus making them operationalizable. The given example assumes a resistance factor of alcoholism, arbitrarily assigned some lower-case Greek letter; the tradition of Buddhism, assigned as upper-case letter “B”; a cultural background with numeric designations of 3, 4, and 5; a setting designated by an upper-case Greek letter (Σ); an induction from a combination of Ketamine and MDMA (lower case “km”); special energies from a period of celibacy, fasting, and yoga; and some kind of *breakthrough*. I offer these discriminant variables as simply a convenient example of

how states can be designated by codes but, as this approach progresses in the future, other types of discriminants may show themselves to be useful. See Table 8 for a sample catalog of discriminants.

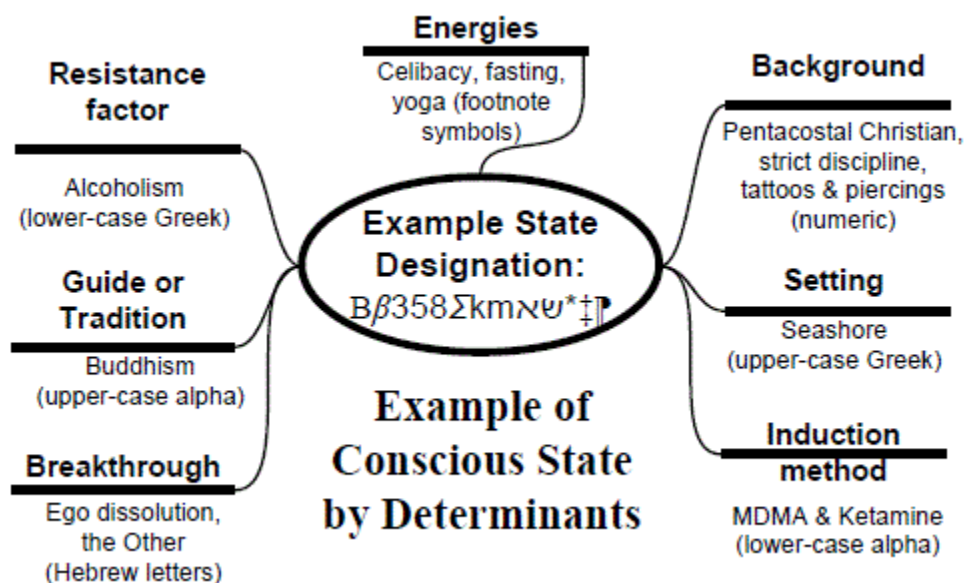


Figure 2: An example for some specific conscious state

Note: In order to make this model operationalizable, we assume the existence of catalogs:

- Guides/traditions, ordered by capital Roman letters;
- Resistance factors, ordered by lower-case Greek letters;
- Background conditions, ordered by Arabic numerals;
- Setting conditions, ordered by upper-case Greek letters;
- Induction methods, ordered by l.c. Roman letters;
- Breakthrough conditions, ordered by Hebrew letters; and
- Energies ordered by footnote symbols.

Note that this proposed system is only one suggestion for taxonomy method.

Sample Catalog of State Discriminants

Guides and Traditions (u.c. Roman)

- A. Theosophy;
- B. Buddhism;
- C. Mystical Christianity

- D. 4th-way disciplines;
- E. Essenes;
- F. Rosicrucianism;
- G. Gnosticism.

Resistance Factors (l.c. Greek)

- α . Alcoholism;
- β . Barbiturates;
- γ . Chronic illness;
- δ . Chronic depression or anxiety;
- ϵ . Excessive scholasticism.

Background Conditions (Arabic numerals)

- 1. Dysfunctional family;
- 2. Addiction or alcoholism;
- 3. Criminal record;
- 4. Special assistance;
- 5. Religious traditions;
- 6. Racial or gender discrimination.

Setting factors (u.c. Greek)

- Λ . Nature: forest, mountain, lake, etc.
- B . Home;
- Γ . Retreat center;
- Δ . Laboratory;
- E . Rave or party.

Induction Methods or Substances (l.c. Roman)

- a. Age regression;
- b. Conducive music;
- c. Hypnosis or trance induction;
- d. LSD;
- e. Psilocybin mushrooms;
- f. Ayahuasca;
- g. DMT;
- h. Salvia Divinorum;
- i. Peyote;
- j. MDMA;
- k. Cannabis;
- l. Street drugs.

Breakthrough conditions (Hebrew letters)

- \aleph . Vision quest or pilgrimage;
- \beth . Prolonged fasting or sleep deprivation;
- λ . Extensive use of flotation tank or other sensory-deprivation device;
- \daleth . Traumatic emergency;
- \hebrew{vav} . Act of sorcery.

Special Energies

- * Radiating through body;
- † Up through spine (kundalini);
- ‡ Down through head from above;
- § All-embracing (universal love);
- ¶ electrifying; “nailed to the wall.”

Possibilities in Future Studies on this Subject

If more coders were available, with a larger follow-up group for the surveys (e.g., $N = 100$), more standardized instruments for comparison, and at least one of the qualitative software packages for analysis (MAXQDA, n.d.; QSR International, n.d.; Researchware (n.d.)), it is possible that such a study could yield more understanding of what qualia comprise particular states of consciousness. Additional coders could expand insights into the data and alleviate bias due to my own experience, but could also introduce disparate perspectives unless I could make use of assistants whom I had trained for several years. With a larger budget, more time, and more resources, consistent video recordings of all interviews could improve the quality and consistency of observations, thus allowing for a larger and finer-grained data pool than I was able to obtain. Also, an expanded study could confirm the advantages of ritual in inducing specific states of attention and their inherent faculties and sensibilities.

In particular, with a larger pool of surveys and additional coders and resources, more could be understood about participants’ self-perceptions and what their experiences meant to them. Also, future research along these lines could reveal, more precisely, what qualia are functions of which particular conscious states and, more to the point of my research question, what qualia *determine* which particular states. This would hopefully

allow psychologists to develop new, more effective, treatments, theories, and approaches. My hypothesis is that specific resource states could be designed and operationalized for novel research approaches and treatments, once we know what such states comprise.

Table 5 does not pretend to be a comprehensive compendium of all possible conscious states (NDE's and OBE's could be included, for example), but rather outlines a model that can be expanded and filled in as additional relevant data is obtained in further studies; it serves as a foundation for my goal of achieving a relatively concise language for identifying and modeling target states of consciousness for novel and improved treatments and research approaches. I invite the reader to compare my examples with those of Grof and Jung (Cortright, 1997), Friedman (1983), Walsh (1995), Wilber (2000), and other theorists on this subject.

Regarding Figures 5–1 and Figure 5–2 (Determinants of Conscious States), further analysis can compare these abstractions to the traditional descriptions, but I propose that leaving them abstract for now will allow us to understand the states in new ways which may prove more operationalizable than hitherto. Besides, this model could be used as a template using other taxonomies, allowing research in various specific fields (e.g., learning and behavioral therapies, psychosis and autism treatment, and brain function) to construct appropriate assignments for their particular foci. In order to understand the diagram, we assume:

- Some catalog of Guides/traditions (Buddhism, 4th-way teachings, various gurus and shamans), ordered by capital Roman letters;

- Resistance factors (addictions, hubris, trauma, illness), ordered by lower-case Greek letters;
- Background conditions (religion, culture, environment), ordered by Arabic numerals;
- Setting conditions (ritual, laboratory, home, or nature), ordered by upper-case Greek letters;
- Induction methods (psychedelics, ordeals, self-hypnosis, crises, or spontaneous event), ordered by lower-case Roman letters;
- Breakthrough conditions (unusual intensity, usually brought on by prolonged disciplines, torments or shocks), ordered by Hebrew letters; and
- Energies (from either internal or external conditions – see *Setting* and *Breakthroughs*) ordered by footnote symbols.

Note that this proposed system is only one suggestion for a taxonomy method.

The point is that the conditions for setting up or identifying each particular conscious state can be enumerated and catalogued by various systems; I simply chose some arbitrary nomenclatures that allow the ordering of observable or reportable conditions.

Finally, future studies could arrange to question and examine volunteers during shared sessions: rituals, retreats, laboratory sessions with and without fMRI and other neuroscience facilities (Studerus, Gamma, & Vollenweider, 2010; Taylor, 2012), and various kinds of trance inductions. This would permit finer and more consistent taxonomies and insights. I would be especially interested in studies comprising novel

methodologies for uncovering and describing otherworldly states of consciousness, usually described as ineffable or numinous.

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Appendix A: Confidentiality Agreement

Name of Signer: Barry Klein

During the course of my activity in collecting data for this research: Developing Criteria for Distinguishing States of Consciousness, I will have access to information which is confidential and should not be disclosed. I acknowledge that the information must remain confidential, and that improper disclosure of confidential information can be damaging to the participant.

By signing this Confidentiality Agreement I acknowledge and agree that:

1. I will not disclose or discuss any confidential information with others, including friends or family.
2. I will not in any way divulge, copy, release, sell, loan, alter or destroy any confidential information except as properly authorized.
3. I will not discuss confidential information where others can overhear the conversation. I understand that it is not acceptable to discuss confidential information even if the participant's name is not used.
4. I will not make any unauthorized transmissions, inquiries, modification or purging of confidential information.
5. I agree that my obligations under this agreement will continue after termination of the job that I will perform.
6. I understand that violation of this agreement will have legal implications.

7. I will only access or use systems or devices I'm officially authorized to access and I will not demonstrate the operation or function of systems or devices to unauthorized individuals.

In signing this document, I acknowledge that I have read the agreement and I agree to comply with all the terms and conditions stated above.

Signature: _____ Date: _____

Appendix B: The Current Researcher's Qualifications According to the Stated Criteria of
Skills, Knowledge, and Sensitivities

I propose that I have all of these requisite qualities and skills due to my prior decades of
the following trainings, initiations, and experiences:

- Sensitivity trainings (e.g., Albert Freeman Institute, Sondra Ray workshops, Elysium institute),
- Neuro-Linguistic Programming and hypnosis certifications (Grinder-deLozier, Inc.),
- Initiations in Deer Tribe *meti-medicine* practices and Brazilian *Umbanda* spiritism,
- Three years of Davidow lucid-dreamwork training,
- 12 years in a Gurdjieff Foundation self-observation program,
- 15 years of mediumship training with a TIC (Teachings of the Inner Christ) affiliate,
- Continual practice in the meditation methods of Self-Realization Fellowship and the Shivananda Yoga Society, and
- 20 years undergoing the disciplines of the Santo Daime religion of the Amazon.