Synthesizing Satori: A Comparative Analysis of Zen and Psychedelic Mystical Experiences

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Abstract

This thesis investigates the acute phenomenology of altered states of consciousness induced through psychedelics and various Zen practices through the lens of comparative mysticism. Through inductive reasoning, tentative conclusions are drawn regarding how the acute phenomenological qualities of these states compare to one another. This topic had not been meaningfully studied, so the data from which these conclusions were drawn is limited. Though these findings are tentative, they have important implications for the study of comparative mysticism involving psychedelics, and for policy decisions regarding the credentialing of newly trained psychedelic therapists. Further research is required to draw more definitive conclusions on whether psychedelics users and Zen practitioners are having the same sorts of experiences, and this thesis identifies some of the theoretical challenges that can be expected with such research, particularly with regards to the reliability of qualitative data collection methods. To address these challenges, a novel theoretical approach to the study of comparative mysticism involving psychedelic and non-psychedelic altered states of consciousness has been developed.

Key words: psychedelics, Zen, Buddhism, mysticism, phenomenology, altered states of consciousness, contemplative science, perennialism, constructivism, philosophy of mind

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INTRODUCTION

Psychedelics (literally meaning "mind-manifesting") are a class of synthetic drugs and naturally occurring plant medicines which stimulate serotonin receptors in the brain to produce vivid visions and induce profound and transformational altered states of consciousness (ASCs) (Stenbæk et al., 2021). Often, descriptions of such states qualitatively resemble those seen in mystical literature (Smith, 1964), and formalized psychedelic use has been a key feature of many spiritual traditions throughout history and around the world.

In the wake of recent clinical trials demonstrating the therapeutic potential of psychedelic-assisted therapies for the treatment of depression, anxiety, and substance abuse disorders, psychedelics are now receiving increased attention from scholars around the world. Interestingly, desirable clinical outcomes have been positively correlated with the occurrence and intensity of psychedelic-induced mystical-type experiences, suggesting that these experiences themselves may convey a therapeutic effect (Yaden & Griffiths, 2021; Kangaslampi, 2023). This has posed unique challenges for mental health professionals in the global west, as their training has not traditionally cultivated the skills necessary to work with patients undergoing mystical experiences and the psychospiritual healing processes they occasion (Grof & Grof, 1989; Rochester et al., 2021).

Mainstream research is now sufficiently demonstrating the safety and efficacy of psychedelic-assisted therapies, and certain governments have begun making these treatments legally accessible (e.g., Australia and certain regions of the United States). With the imminent completion of phase III trials involving these substances (e.g., *ClinicalTrials.gov identifier:* ***NCT05624268***), psychedelic-assisted therapies are likely to be accessible in Canada and the United States within the next two to three years. Ensuring the competency of

professionals administering these substances needs to be a priority. To address this, Janis Phelps (2017) provides a list of six core competencies she believes all psychedelic therapists should exhibit, as well as twelve curricular domains of study aimed at developing them. These curricular domains include experiential training for new therapists. Ideally, this would involve the trainee undergoing supervised sessions with a therapist where they would be dosed with a psychedelic so they may become personally proficient in navigating ASCs which differ significantly from everyday waking consciousness. This training protocol is generally regarded as best practice in the psychedelic therapy community (Brennan et al., 2021; Nielson, 2021; Rochester et al., 2021).

In cases where experiential training with psychedelics is not possible (e.g., for legal, religious, or health reasons), Phelps suggests training equivalency could be reached through other practices known to induce altered states—e.g., holotropic breathwork; drumming and rattling inductions; solo wilderness journeys; isolation tank immersion; and prolonged meditation. Phelps then states that these non-psychedelic ASCs may serve as a sort of experiential training equivalency in that they can develop in the experiencer a "personal knowledge and attitude of appreciation for numinous qualities of the mystical realms of consciousness" and "a comfort with unexpected and difficult experiences in induced alternate states" in the same way psychedelics can (Phelps, 2017). While these other ASCs may help to cultivate these qualities to some degree, it is unclear if these supposedly equivalent states induce similar "numinous qualities of the mystical realms of consciousness" or that these non-psychedelic ASCs are challenging in the same ways psychedelic ASCs are.

This is an issue, as there is evidence suggesting not all ASCs are the same (Walsh, 1990), and establishing qualitative similarities between variously induced ASCs requires rigorous inquiry into the phenomenology of each. This needs to be considered when developing training

protocols for new psychedelic therapists, should ASC equivalencies be accepted as part of psychedelic therapist credentialing programs. The discourse of comparative mysticism may be our best resource in determining whether such equivalencies exist, but with the majority of popular contemporary psychedelic research being firmly grounded in the natural sciences, few take this approach.

This thesis analyzes psychedelic-induced ASCs through the lens of comparative mysticism to determine if certain non-psychedelic "equivalents" are indeed equivalent. There are, however, many methods for inducing ASCs, each of which are best understood in the specific cultural contexts in which they originate. Because of this, a comparative study of psychedelic-induced ASCs and all possible non psychedelically induced ASCs would require far more attention than is possible here. But investigating this question of mystical equivalency must start somewhere.

The scope of the present study has thus been narrowed to a comparison of psychedelic-induced ASCs and those commonly observed in the contemplative practices of Zen Buddhism, as potential convergences between the two have been suggested elsewhere (Huxley, 1954; van Dusen, 1961; Jordan, 1961; Smith, 1964; Badiner & Grey, 2015; Osto, 2016). Whether psychedelics induce states equivalent to ASCs described in Zen (e.g., *kensho*, *satori*) is very much an open and highly debated question (Coleman, 2001, p. 66), and arguments in favour of these states' equivalency has been largely derived from anecdotal evidence. To date, methodical research on the qualitative similarities of Zen and psychedelic ASCs has been extremely sparse, so the present study thus stands as a relatively novel undertaking.

Chapter 1 of the present study explicates the nature of mystical-type ASCs and how they are traditionally compared to one another. Chapters 2 and 3 analyze psychedelic and Zen ASCs

respectively and identify the core qualitative features of their acute phenomenology. In Chapter 4, a systematic comparative analysis of these states is carried out, and tentative conclusions are drawn regarding their potential equivalency. While some potential qualitative convergences are identified, the present study finds far more evidence suggesting that Zen and psychedelic ASCs differ substantially in their acute phenomenological qualities. This preliminary evidence suggests such states should not be regarded as equivalent, but further research is needed because of the limited data from which this conclusion is drawn. It must therefore be stressed that this study's findings are highly tentative and should not yet be mobilized as evidence for or against the likeness of these states. These findings may, however, prove valuable as testable hypotheses for future research comparing Zen and psychedelic ASCs.

Future research testing this study's conclusions must grapple with several theoretical challenges. To aid in this, Chapter 5 of the present study develops a novel theoretical framework for future studies investigating the acute phenomenology of Zen and psychedelic ASCs known as the *dual insight approach*. This approach not only informs how future research on Zen and psychedelic ASCs may be conducted more effectively, but it provides a theoretical framework for future research comparing psychedelic ASCs to non-psychedelic ASCs outside the Zen tradition.

CHAPTER 1: MYSTICAL EXPERIENCE

"Mystical experiences", sometimes called "*religious*" or "*peak"* experiences, refers to a special sort of subjective experience that deviates greatly from everyday waking consciousness and is often deemed religiously or spiritually significant. These experiences coincide with transient ASCs wherein one's cognitive processing and mode of perception change radically, usually free of a discrete sense of self. These experiences allegedly provide direct awareness of fundamental realities ungraspable by everyday waking consciousness and are regarded as deeply and enduringly meaningful. The vast majority of societies throughout history possess institutionalized means of achieving such states, which have been traditionally regarded as highly important or sacred (Bourguignon, 1973).

Mysticism (as opposed to *mystical experience*) is best understood as a cultural phenomenon primarily devoted to the recognition and cultivation of these states, usually involving teachings, practices, or texts, with varying degrees of institutionalization. A "mystic" is one whose mystical insights have led them to adopt a comprehensive way of life in direct pursuit of what they deem absolute truth or Ultimate Reality. A mystic is thus not merely someone who has had a mystical experience, but one for whom their mystical experience has proven existentially transformative. As Huston Smith (1992) explains, the mystic is tasked with stabilizing these flashes of mystical insight and turning them into an "abiding light" that defines their sense of reality, long after such insights occur (p. 113).

These ASCs come in many forms; in theistic traditions, mystics may describe a direct encounter with the Divine. Others may describe a merging with nature or gaining personal insights into the world *as it truly is*. For this reason, mystics often challenge the notion that our everyday waking consciousness is optimal, with some even describing it as "dreamlike and

illusory" (Walsh, 2015). While mystical experiences are often experienced as blissful or ecstatic, they can also be challenging (Ataria, 2016; Carbonaro et al., 2016). Such experiences may disturb one's ontological assumptions about the nature of reality, the world, or their place within it—an experience referred to as "ontological shock" (Carhart-Harris & Friston, 2019). Comprehensive discussions of mystical-type ASCs thus tend to include mentions of theology, metaphysics, and existential matters of the self.

It is perhaps unsurprising then, that mystical experiences have played a key role in the evolution of many religions and spiritual traditions throughout history, from the Abrahamic traditions of Sufism and Jewish Kabbalah to the Dharmic traditions of Buddhism and Hinduism, from the nature mysticism of Taoism and Shinto to the psychedelic shamanism of Amazonia. While practitioners of these traditions may sometimes reject the *mystical* label, they all possess formalized practices to uncover some form of absolute truth which cannot be captured through processes of the rational mind, and thus require other, more direct modes of learning (Oliver, 2009).

Categorizing the Mystical

Many authors have attempted to define the mystical as a distinct category of subjective experience. The sorts of experiences commonly deemed mystical, however, are highly varied, so definitions that are sufficiently inclusive of these experiences tend to be unhelpfully vague. Such experiences may be emotive, somatic, or cognitive. They may be all three. They may not be neatly captured by any.

In 2013, Steven Katz defined mysticism as "the quest for direct experience of God, Being, or Ultimate Reality, however these are understood, that is, theistically or non-theistically." But notions of "God, Being, or Ultimate Reality" vary considerably culture to

culture and person to person, so such a definition is likely to capture seemingly heterogeneous material—e.g., one may have the distinctly monotheistic experience of encountering the Abrahamic God in deep meditation, while another may deploy monistic terminology to describe their experience of a "sacred merging with Ultimate Reality". Another still may speak of ecological integration and avoid theistic language entirely. Notwithstanding, all these experiences may be labelled mystical due to their key shared characteristics.

Identifying these shared characteristics requires looking beyond some of the specific contents of these experiences and the heterogenous metaphysical affirmations they contain. I have thus found it helpful to not merely study *what* is experienced, but *how* it is experienced. One must look at broader themes, or the sorts of questions these experiences seem to answer, rather than the answers themselves. One of the most famous attempts to do so came in the Gifford Lectures at the University of Edinburgh in 1902, when American psychologist William James provided four criteria which he used to discern mystical experiences.

The first of these criteria is (1) ***ineffability***—mystical experiences defy linguistic expression and are thus impossible to impart to another. To fully grasp a mystical experience, one must therefore experience it themselves.

The second defining characteristic of mystical experiences is their (2) ***noetic quality***. By this, James means that they are not merely states of *feeling*, but states of *knowledge*. In this way, mystical experiences present as revelatory, shedding truth on matters beyond the purview of logic or intellect. He adds that such revelations are usually of great importance and remain authoritative long after the experience. Therefore, the perceived truth of that which one learns through a mystical experience does not hinge upon their ability to recreate the mystical state.

The third is (3) ***transiency***—mystical states are fleeting, lasting a maximum of only a couple hours before the mind returns to its everyday waking state. While we struggle to recreate these states in memory, they are recognized if experienced at a later date, and may compound in significance.

Finally, James describes a certain (4) ***passivity*** among those who undergo a mystical experience. While one may deliberately induce a mystical state through specialized practices, the mystic tends to have limited power or control of the experience when at its greatest depth. This is sometimes described as being "grasped and held by a superior power", but may also manifest in prophetic speech, automatic writing, or a "mediumistic trance" wherein the mystic's personal agency is suspended (James, 1917, p. 371). While the mystic may have little or no recollection of such acute states, some understanding of their significance persists.

Building on James's work, Walter Stace (1961) later observed the necessity of distinguishing ***extrovertive*** and ***introvertive*** mystical experiences, with the former looking outward through the senses, and the latter looking inward into the mind. Stace argued that both types of mystical experience ultimately lead to one realizing the unity of all things, but the *extrovertive* mystic does this by observing the multiplicity of worldly objects (including oneself) as various manifestations of a single entity or force: "the One". The *extrovertive* mystic thus comes to see the universe as a "single living presence" where nothing is "really dead". Conversely, the *introvertive* mystic deliberately shuts off the senses to plumb the depths of the ego. In doing this, the *introvertive* mystic may enter a non-spatial, non-temporal state where individuality dissolves and they can merge with, become, or otherwise recognize the self as an expression of "the One", devoid of plurality whatsoever. Introvertive mystical experiences in their purest expression are often conceived of as a form of *undifferentiated awareness* or as

"pure consciousness events" (Forman, 1997, p. 8). Though qualitatively distinct, these experiences converge in that they both result in a subjective experience of transcending a self which is otherwise interpreted as separate from "the One" (1961, pp. 61-62).

Stace argued that in addition to their convergent monistic quality, there were five universal common characteristics which underpin the introvertive and extrovertive mystical experiences of mystics across all cultures throughout history: (1) a ***sense of objectivity or reality***—the contents of the mystical experience are generated from outside one's mind and thus not merely a psychological process; (2) ***blessedness, peace, etc.***—the experiences are accompanied by an intensely positive emotional state; (3) ***feeling of the holy, sacred, or divine***—the quality that so often gives rise to the belief that one is experiencing "God"; (4) ***paradoxicality***—the experience defies logical interpretation; and (5) ***ineffability***—the experience is beyond expression.

Though dated, these two typologies have provided a basic interpretive framework for mystical experiences and have been used to study those of Iranian Muslims, Israeli Jews, Tibetan Buddhists, and Christians around the world (Chen et al., 2011). Stace's work in particular has led to the development of the Mystical Experience Questionnaire (Barrett et al., 2015), the Hood Mysticism Scale (Hood, 1975), and the 5D-ASC (Five Dimensional Altered States of Consciousness) (Dittrich, 1998), three validated psychometric questionnaires commonly used to measure the acute phenomenology of mystical experiences in studies involving psychedelics. Stace's interpretive frameworks are thus evident in much of today's psychedelic research, particularly with regards to his emphasis on self-transcendence and monistic ontology.

The Perennialist-Constructivist Debate

The criteria put forth by thinkers like James and Stace were not merely attempts at reaching some definitional consensus on what constitutes a mystical experience; many scholars of religion, particularly throughout the 20th century, argued that the ASCs reported by mystics across all cultures were in some sense the *same*, couched as they were in the language of different religions and philosophies. This position is commonly known as *perennialism*.

Perennialists generally hold that direct mystical experiences of what some call the Divine, the ground of all being, or Ultimate Reality, constitute the essence of religion, and that religious institutions and normative practices are built around these experiences. They also argue that the diversity of all mystical traditions is the result of culturally-rooted differences in interpretive schemas—i.e., mystical experiences are universal across cultures, but the language and concepts mystics use to describe their experiences are culturally bound.

Theoretically, this accounts for the diversity and heterogeneity of mystical reports from different cultures, but the perennialist is then tasked with demonstrating that mystics describing ostensibly different experiences are actually describing the *same* experience but deploying different concepts and language to do so. This proves challenging, as etic approaches to comparative mysticism tend to superimpose onto first-person reports language and concepts that mystics themselves do not use. This has sometimes resulted in crude interpretations of mystical phenomena that have been skewed or simplified to suit the investigator's hypothesis.

At their most sophisticated, perennialist theses make efforts to bracket their biases and account carefully for the cultural contexts of a mystic's experience, which requires considerable expertise in (and ideally, insider perspectives on) at least two mystical traditions. They will typically also argue that mystical experiences can be divided into a small class of types which

transcend culture and religion, and thereby speak of mystical experiences (plural—e.g., Divine entity encounters, encounters with Ultimate Reality, introvertive or extrovertive unity) rather than *the* mystical experience (singular).

There are, however, many who believe no degree of bracketing, expertise, or attention to detail could sufficiently demonstrate that the experiences of two mystics are in fact the same. This is the position held by *constructivists*, who take issue with the idea that mystical experiences could somehow be pre-cultural/unmediated. Contemporary constructivism has been championed by Steven Katz, and I largely draw on his work to illustrate the constructivist position.

Katz (1978) argues that there are no pure/unmediated mystical experiences because all human experiences—mystical or otherwise—are heavily influenced (or *constructed*) by complex and idiosyncratic epistemological processes as the result of psychological, cultural, and conceptual factors (p. 26). He adds that understanding mystical experience is not merely a question of studying the reports of mystics *after* their experiences, but of acknowledging the ways in which one's history will directly mediate their mystical experiences (prior to interpretation). The constructivist would thus describe the *Hindu mystic* as having a characteristically *Hindu experience*, not a *universal mystical experience* which they then describe through *Hindu language and concepts*. Put concisely: constructivists hold that mystics not only *interpret their experiences*, but they also *experience their interpretations* (Bernhardt, 1990, p. 227).

To Katz, this seems a more logical explanation for the varieties of mystical experience, as it avoids forcing multifarious mystical experiences into relatively rigid interpretative categories—a process which tends to excise fundamentally important differences between them.

For example, one ought to question whether the noetic experience of kensho in Zen Buddhism could possibly be the same noetic experience Christians have when they speak of divine revelation through a beatific experience of grace or communion with God. Considering the simple fact that the Christian concept of revelation necessitates a god wholly outside the Zen Buddhist's experience, constructivists opt for the straightforward conclusion that noetic experiences may simply be different for Christian mystics and Zen Buddhists, rather than attempting the semantic gymnastics necessary to conflate Zen experiences of kensho and Christian experiences of Divine revelation.

Such a line of reasoning is likely to be compelling for many readers. It's unexacting, pluralistic, and less prone to essentialist reductionism based on *a priori* assumptions. However, the constructivist position rests on the major epistemological assumption that humans are incapable of pure/unmediated experiences, and several perennialists have taken issue with this. For example, Robert Forman (1988) draws attention to the pure consciousness event (PCE), a well-documented phenomenon where one is conscious but with no objects for attention—i.e., no awareness of any external phenomena, nor internal sensations, thoughts, or emotions. If the "mediation" of experience is taken to mean differentiating awareness according to patterns, symbols, language, or concepts, then the PCE would necessarily be unmediated because it consists of no phenomenological material to be differentiated.

The fact that PCEs occur implies that some experiences are "purer" than others—i.e., if unmediated experience is possible, then the mediation of experience may happen in degrees. Forman (1988) argues that this fact is of central importance in many mystical traditions. He explains that many mystical states of consciousness are reached through the systematic suspension of the mystics pre-conditioning, a process he describes as similar to "forgetting".

Through prayer, mantra, and in particular, meditative practices, mystics from many traditions aim to "become aware of his/her automatized perceptual and cognitive habits and cease perceiving and behaving in their terms" (p. 262). This is a foundational teaching in many schools of Buddhism, including Zen (see: Chapter 3)—but Forman also provides examples from Sufi and Christian mystics, explaining that this process of "forgetting" is often necessary for the mystic to reach their goal. A key assumption here is that the more successfully one experiences consciousness or the world without interpretive frameworks, the closer they are to experiencing a variously termed *Ultimate Reality*—a central goal of the mystical enterprise.

Harold Roth (2008) has accused constructivists of "ethnocentric hubris" for dismissing the possibility that unhabituated states of consciousness are possible. He argues this in large part because imperial epistemologies have systematically excluded subjective experience from naturalist processes of scientific discovery. But first-person methods of investigation are the most obvious and reliable means by which we gather data on such experiences, so objectivist perspectives are of limited utility here. Roth argues that in order to study mysticism effectively, an expanded understanding of empiricism that incorporates subjective perspectives is necessary. By doing so, Roth argues we will come to see that "contemplative scientists" (e.g., highly trained Buddhist monks), armed with millennia of empirical data on the nature of consciousness, can make a far more convincing case for unhabituated states of consciousness than constructivists (beholden to rigid epistemologies and dogmatic philosophical commitments) can for the impossibility of such states. This is an important point, as the belief that "contemplative scientists" are uniquely qualified to aid in comparative mysticism research underpins many of the arguments made in Chapter 5 of the present study.

Finally, it is worth stating very clearly that several contemplative wisdom traditions—though most clearly in Buddhism—do not require adherents to take on faith a belief in unhabituated states. Through practice, students of Buddhism can experience such states for themselves.[1] Authors like Steven Katz could thus be regarded as speaking on matters for which they are not qualified, because they possess no first-person knowledge of unhabituated states.

The major issue with mobilizing such data in the broader study of comparative mysticism is that even if unconditioned (or largely dishabituated) experiences are possible, their relative "purity" will inherently be compromised in the process of being studied. This is due to the many degrees of culturally mediated interpretation required to compare mystical experiences. Katz (1978) describes four degrees of interpretation: (1) the mystic's first-person report of their experience; (2) the mystic's interpretation of their experience at some later and more reflective stage, where the experience has been 'digested' or 'integrated'; (3) the third-person interpretation of a mystic's experience from within the same tradition (e.g., a Kabbalist interpretation of a Kabbalist's mystical experience); and (4) the third-person interpretation of a mystic's experience from outside the mystic's tradition (e.g., a Buddhist interpretation of a Kabbalist's mystical experience). As these interpretations become more distant from the mystical experience (across time, persons, and traditions), they become increasingly mediated by language, culture, and ideologies, distorting the relative 'purity' of the experience itself. This issue cannot necessarily be solved—that is, language may be fundamentally ill-suited to capturing the phenomenology of mystical experiences—but it can be somewhat mitigated through the use of certain theoretical approaches, as will be shown in Chapter 5.

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[1] The Buddha's "charter of free inquiry" (i.e., the Kalama Sutta) clearly dissuades students from blindly following dogmatic teachings (Thera, 1994; Tori & Nauriyal, 2006, P. 504).

A Functional Approach to Comparative Mysticism

A comparative analysis of mystical-type Zen and psychedelic ASCs is greatly aided by avoiding certain philosophical quagmires. I have thus devoted this section to discussing the parameters within which I have structured the present study, as well as the key assumptions I have made in order to make it feasible.

First and foremost, this study will treat mystical insights as non-veridical and will not mobilize phenomenological data to speculate on the tenability of metaphysical truth claims. Here, I am concerned specifically with the nature and practical implications of a unique realm of human experience—how these experiences arise in subjective awareness, and how they impact those who have them.

Second, the present study does identify several potential convergences in the acute phenomenology of Zen and psychedelic ASCs. At no point does it assert that Zen practitioners and psychedelics users are having *identical* experiences. With the possible exception of pure consciousness events, two human experiences being perfectly qualitatively identical seems logically impossible. While the degree to which culture conditions mystical experiences is debated, they are undoubtedly conditioned by one's biology and they happen to definite persons at certain times and places. Two mystical experiences will therefore have at least *some* qualitative differences.

Where then would the threshold of sufficient similarity lie? How do we quantify mystical experiences and at what point is an experience "mystical enough" to warrant specialized inquiry? After all, these experiences happen on a spectrum. Some studies (e.g., Pahnke, 1963; Griffiths et al., 2006; 2011; Garcia-Romeu et al., 2019; Smigielski et al., 2019b) have (somewhat arbitrarily) set the *a priori* criteria for what is commonly considered a "strong" or "complete" mystical

experience at 6/10 on a subjective scale of intensity for experiences like “unity” and “sacredness”. While this is helpful in empirical clinical studies, it fails to capture certain hard-to-quantify nuances of mystical experiences (see Bouso et al., 2016 for a fuller explanation of the challenges inherent to the quantification of mystical experiences).

In order to determine the potential equivalency of certain ASCs, one does not need to demonstrate that Zen practitioners are having the *same* experiences as psychedelics users. One simply needs to determine whether Zen ASCs are phenomenologically similar enough to those of psychedelics users to suggest that familiarity with the former would *functionally* prepare a therapist to help a client through the experience of the latter. This functional approach avoids the theoretical issues associated with trying to reduce mystical experiences to a single type of universally identical experience.

Third, the present study advocates for an *ascriptive* approach to mysticism, as described by Ann Taves (2009). This means that when I speak of “mystical experiences”, it should be interpreted as “experiences deemed mystical”, not “experiences which meet the objective criteria for mysticality.” I do not posit the existence of such criteria, nor is the potential existence of such criteria necessary to answer the present study’s central research question.

This approach allows for many types of experiences to be mystical; it tacitly asserts that no experience is inherently mystical; and it allows for mystical experiences to be easily compared with non-mystical experiences, or for mystical experiences to be compared with experiences deemed mystical under different criteria. This is because unlike the *sui generis* approach, which regards mystical experiences as “self-generated and belonging to no wider class” (Smith, 1990, p. 34), the *ascriptive* approach does not lend itself to the assumption that

mystical experiences are of a specific ontological nature that prohibits them from being meaningfully compared with non-mystical experiences (Taves, 2009, p. 19).

This approach allows one to more easily investigate experiences which involve contentious truth-claims—e.g., "I touched the face of God". While the existence of such a God is contentious, we are far less likely to take issue with the fact that someone had a subjective experience of touching the face of God.[2]

"Experiences deemed mystical" captures many types of experiences irrelevant to the present study, so an *a priori* mystical typology has been deployed to streamline my comparative analysis of Zen and psychedelic ASCs. This typology defines mystical-type ASCs as ones which exhibit (1) **ineffability**; (2) **a felt sense of sacredness**[3]; (3) **transcendence of time and space**; (4) **deeply felt positive mood**; (5) **a noetic quality**; and (6) **feelings of unity**, be they introvertive (i.e., inward directed with little-to-no sensory input; undifferentiated awareness; pure consciousness events) or extrovertive (i.e., directed outward with a multiplicity of sensory

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[2] By taking an approach which treats mystical insights as non-veridical, I do not wish to imply that the findings of "contemplative scientists" are inherently non-veridical—this is still an open question (Roth, 2008)—but this is not taken up here as the epistemological value of mystical insights is beyond the scope of the present study.

[3] For the purposes of this study, "sacredness" should not be interpreted as an inherently theistic or religious term. As Ann Taves (2009) explains, terms like "sacred" and "religious" are often used to describe objects or experiences which, from an outside researcher's perspective, needn't necessarily assert some sort of objective criteria for such qualities (e.g., the existence of a metaphysically real entity or force imbuing these objects or experiences with these qualities). "A felt sense of sacredness" should thus be thought of as signifying a unique sort of "specialness" ascribed to the ASCs to which it refers—a quality which sets it apart from other sorts of experiences in significant ways. For the present study, the quality of "sacredness" thus signifies that the ASC in question is experienced as deserving of special consideration and respect, above and beyond other sorts of experiences.

inputs; unity of all things/all things are alive/all is one). As suggested above, the loss of one's sense of self tends to be regarded as a central feature of mystical experiences, however, self-loss has not been considered a stand-alone domain of this typology, as it typically arises as a feature of *space-time transcendence* and feelings of *unity*.

This typology will be used throughout the present study. Importantly, non-mystical features of these ASCs, such as visual/auditory hallucinations, synesthesia, and cognitive impairment will also be analysed, as familiarity with these states may also be regarded as valuable in the training of psychedelic therapists.

Secular Mysticism

I hope the above discussion of mysticism has provided an adequate foundation upon which to discuss psychedelic and Zen ASCs. Before moving on, however, it is worth discussing how our ontological and epistemic assumptions shape the study of mysticism.

Ontological naturalism (the belief that all existent phenomena can be explained through the natural sciences) is commonly taken as a basic metaphysical assumption of contemporary secular Western society, and indeed, by university religious studies departments and mainstream psychedelic researchers. While many naturalists describe themselves as agnostic to non-natural realities, secular society generally operates on the assumption that non-natural realities have no bearing on the *real world* beyond the private and subjective lives of individuals. This can put mystics in contemporary secular society in an awkward position because the mystical enterprise hinges on mystical insights meaningfully pertaining to a *real world* beyond one's private life, and mysticism has traditionally taken on a distinctly non-naturalist metaphysical flavour.

Descriptions of the afterlife, Gods, discarnate beings, a "cosmic consciousness", or otherwise supernatural phenomena feature prominently in mystical literature. In some cases, this

may be the result of mystics deploying culturally conditioned non-naturalistic language to interpret natural phenomena, but naturalists and self-identified atheists commonly deploy religious or non-naturalist language to describe their mystical experiences (Griffiths et al., 2019), so cultural conditioning may not be the only reason for deploying non-naturalist language and concepts. Could it be that certain mystical insights provide meaningful information on matters beyond the purview of the natural sciences? If so, naturalists are unlikely to be convinced, because the tools they use to determine truth rely on observations of natural phenomena.

The basic assumption that there is no truth beyond that which can be empirically observed seems to relegate many mystical insights to a class of 'delusional flights of fancy', making a truly naturalistic mysticism hard to imagine. Nevertheless, some argue that a naturalistic view of the mind has sufficient resources to account for the striking phenomena of mystical experiences. For example, Richard Jones (2022) argues that mystical experiences of self-transcendence can be sufficiently explained through naturalistic accounts—e.g., as strictly cognitive processes which awaken one to the radical interconnectedness of the natural world. Such experiences may be deeply transformative, ripe with feelings of unity, sacredness, and positive affect. These experiences can be appropriately labelled spiritual or mystical without asserting the existence of non-natural forces (e.g., Divine beings or a "cosmic consciousness").

Naturalists therefore need not dismiss mystical insights *prima facie* on the grounds of metaphysical irreconcilability. Nowhere is this truer than with mystical experiences chiefly characterised by feelings of unity and self-transcendence, especially because scientific evidence suggests that despite having distinct neural correlates (Gusnard et al., 2001; Carhart-Harris et al., 2014; Lebedev et al., 2015; Davey et al., 2016), what we generally call a "self" is nothing more than a helpful interpretive tool used to distinguish between the functions of distinct organisms

(Dennett, 1991, pp. 412-30; Letheby & Gerrans, 2017; Davey & Harrison, 2018)—i.e., what we commonly refer to as "the self" does not appear to be an ontologically distinct or metaphysically real entity.

Experiences of unity and self-transcendence are central to many psychedelic and Zen mystical-type ASCs, and as will be shown in the present study, they can often be captured within a "secular mysticism" framework—i.e., one which integrates mystical experiences into one's life without contradicting naturalistic metaphysical assumptions. When discussing mystical experiences which *do* contradict naturalistic metaphysical assumptions, we may do well to take the aforementioned ascriptive approach and append an implied "*according to my experience…*" to mystical experience reports.

I do, however, advocate combining this ascriptive approach with an epistemological humility that recognizes the limitations of naturalistic explanations of subjective experiences—particularly ineffable ones. A large body of philosophical research demonstrates an epistemic gap between subjective experiences and the natural sciences—that is, many of the qualitative features of our subjective experiences cannot be fully captured through naturalistic explanations (Chalmers, 2010; Jylkkä, 2021). The sound of a trumpet, the taste of pinot grigio, the colour of a stop light—we routinely experience such things, and they make sense to us, but no amount of information about the natural world seems to account for why they *feel* the way they do. If this weren't the case, a colour-blind researcher's in-depth study of light-physics and human biology could conceivably reveal to them what it's like to see *red*. This, however, seems unlikely (Jackson, 1982). So much of our lives—and indeed, much of what the present study is concerned with—occurs beyond the purview of the natural sciences. Accordingly, I find it reasonable to approach the scientifically inexplicable with more curiosity than skepticism. And if non-natural

realities exist (as our subjective experiences of the world might suggest), I believe the assumption that humans are incapable of accessing them is a considerable one.

CHAPTER 2: PSYCHEDELICS

What are Psychedelics?

As previously mentioned, psychedelics are a family of synthetic and naturally occurring substances which produce powerful subjective effects primarily through the antagonism of serotonin receptors in the brain. While there are many similarities in the chemical composition of various psychedelics, what chiefly binds them together as a distinct class of drugs is their shared capacity to induce a unique set of experiences in humans (Nichols, 2016), most notably visual and auditory distortions (hallucinations), profound changes in cognition and mood, and at higher doses, dramatic disruptions to normal ego-functioning (Millière et al., 2018).

Lysergic acid diethylamide (LSD) and psilocybin-containing ("magic") mushrooms are the most widely researched and commonly consumed psychedelic substances, but other important examples are seen in 3,4,5-trimethoxyphenethylamine (mescaline) which occurs naturally in various cacti, and dimethlytryptamine (DMT) which occurs in various plants and animals but must be ingested alongside a monoamine oxidase inhibitor (MAOI) to render substantial and prolonged psychotropic effects (Strassman, 2001, p. 53). DMT is the main psychedelic agent of the Amazonian brew ayahuasca, which is often consumed in ceremonial settings.

In addition to their shared effects on the brain's serotonin receptors (most notably the 5-HT_{2A} receptor), each of these substances presents remarkably low toxicity (Gable, 2004). Psychedelics also have a low abuse potential as they do not directly affect the brain's dopaminergic systems, a pharmacology that appears essential for nearly all dependence-producing drugs (Nichols, 2016). Apart from DMT, repeated administration of any of the classic psychedelics will result in rapidly developing tolerance to the drug so pronounced that repeated

administration will have negligible effects (Strassman et al., 1996). Importantly, however, this tolerance is generally not accompanied with cravings or any sort of physical dependence (Nichols, 2016).

Phenomenology of Psychedelic ASCs

Psychedelics have a wide array of effects on perception, cognition, and mood. While the acute effects of these substances last a maximum of only a few hours, the impacts of even a single psychedelic experience can last a lifetime.

Perception

> *Time lost all meaning. Hours were telescoped into minutes; seconds stretched into hours. The room I was in changed with every breath I drew. Mysterious flashes of multicolored light came and went. The dimensions of the room, elasticlike, stretched and shrank. Pictures, chairs, curtains and lamps flew endlessly about, like planets in their orbits. (Katz, 1953)*

Psychedelics alter experiences of vision, audition, tactile processing, and time-perception. With eyes open, one may experience distortions to the visual field including an intensification of colours and textures, the rhythmic movement or pulsating of objects, micropsia and macropsia, and illusions of objects that are not actually present—though these are rarely if ever mistaken for real-world phenomena (Watts, 2013; Preller & Vollenweider, 2018). With the eyes closed, visual imagination tends to intensify, commonly producing geometric shapes and kaleidoscopic patterns of light and colour with rhythmic and automatic movements (Díaz, 2010), as well as vivid and narrative-rich scenarios involving distinct places, people, and objects (Kometer & Vollenweider, 2018). These visions may resemble snapshot-like tableaus or progressively developing scenarios that the subject is either immersed in or viewing from the outside. It also

appears common for psychedelics users to report visiting other realms or "microworlds" unrelated to humanity's shared space-time continuum that are interpreted as metaphysically real (Grof, 1975, p. 11; Strassman, 2001, pp. 176-184; Belser, 2017), or interacting with autonomous noncorporeal life forms (Strassman, 2001, p. 301; Heuser, 2006; Griffiths et al., 2019). Occasionally, introvertive experiences will produce pure consciousness events where all sensory inputs seem to go offline, and conscious experiencing is functionally undifferentiated. These sorts of experiences, however, appear to be very rare with most psychedelics (Austin, 2015, pp. 582-583; Osto, 2016, p. 98; Millière et al., 2018).

The content of introvertive psychedelic visions varies greatly subject to subject, but certain visionary "form constants" are extremely common among users, particularly elementary geometric patterns like spirals, honeycombs, cobwebs, lattices, funnels, and tunnels. The ubiquity of such visionary experiences is likely the result of the intrinsic circuitry of the brain's visual cortex (Klüver, 1928; Ermentrout & Cowan, 1979; Butler et al., 2012). Inexplicable convergences in complex visionary experiences have also been observed among diverse users. For example, Benny Shanon (2002) reported that certain animals (e.g., serpents and felines) were commonly observed in the visionary ayahuasca experiences of individuals from around the world, even when they had little cultural affinity for such symbolic imagery (p. 117). These dramatic changes to visual perception and imagination are collectively referred to as "visionary restructuralization" (Dittrich, 1998).

To date, psychedelic-induced alterations to audition have received relatively little attention in psychedelic research, but the available data suggests that altered auditory perception is notably less pronounced than alterations to vision. For example, several studies have demonstrated that true auditory hallucinations (e.g., hearing voices) were very rare with

psilocybin (Studerus et al., 2010; Smigielski et al., 2019b), with LSD (Liechti et al., 2017; Gasser, 2021), and DMT (Vogt et al., 2023; Luan et al., 2023). More often, psychedelic-induced alterations to audition seem to cause an intensification of music and sounds, or misperceptions of real auditory stimuli.

Alterations to tactile processing are commonly mentioned in psychedelic literature but are rarely the primary focus of any given study. Tactile changes such as tingling sensations, numbness, and shifts in one's perception of their bodily temperature are relatively common. The perceived size and weight of one's body can also vary drastically, and often, one can struggle to identify where the outside world ends and where their body begins (self/environment boundaries are discussed below) (Aday et al., 2021).

One's *relationship* to touch can also shift with the psychedelic experience, where previously unwelcome or unpleasant physical sensations are reinterpreted as welcome or enjoyable (Watts et al., 2017), though this may have more to do with concurrent positive affect or the relaxation of one's beliefs about specific experiences than it does direct effects on one's sensory faculties themselves (Carhart-Harris & Friston, 2019; Wolff et al., 2020). This aligns with at least one dated study which found that LSD has very potent analgesic properties—but these were novel in that they didn't seem to eliminate sensations of pain, but rather, they (1) disrupted attentional focus, giving rise to a globalized attentional state where pain was contextualized within a broader range of sensations and (2) through the disruption of normal ego-processing, helped sufferers cease identifying with *that which suffers* (Kast, 1967).

One's perception of time and space may also be temporarily distorted with psychedelic use. Time may seem to accelerate, or seconds may seem to last minutes or hours (though the latter is more common)—a phenomenon known as time dilation. One's capacity for 'mental time

travel' can also be disrupted—that is, a disinterest in (or inability to cognize) the past or future may give way to a complete preoccupation with the here and now (Watts, 1968). At high doses, this can lead to a complete transcendence of time and space, where experiences are not perceived linearly or from one singular point of view (Griffiths et al., 2008; 2016; Liechti et al., 2017; Smigielski et al., 2019a; Luan et al., 2023; Vogt et al., 2023).

Finally, psychedelics have for many years been recognized as a key cause of acquired synesthesia—a perceptual phenomenon whereby stimulation of one sensory pathway leads to the involuntary experience of a seemingly unrelated second sensory pathway—e.g., where seeing the number 8 elicits the experience of lime green (grapheme–colour synesthesia) or hearing the name "Jeremy" causes the taste of saltines in the mouth (lexical–gustatory synesthesia). Experiences of 'coloured music', however, appear to be particularly common forms of psychedelic-induced synesthesia (Preller & Vollenweider, 2018). In some cases, distinction between various sensory inputs will fail completely, and light, sound, touch, taste, and smell will meld into a fluid mode of all-encompassing sensory experience (Watts, 2013, pp. 30-31). Though drug-induced synesthesia is usually transient (occurring only at the height of one's psychedelic experience), instances of prolonged synesthesia have been reported for weeks or months after the acute effects of psychedelic agents have worn off (Brogaard, 2013).

Cognition

Psychedelics have pronounced effects on human cognition, fundamentally changing for hours at a time the ways in which experiences are processed. This is because these substances promote highly creative divergent thinking through the dysregulation of global brain function (Petri et al., 2014). In this transient state, brain systems communicate with one another in ways they usually wouldn't, creating a state of chaotic or "entropic brain" activity (Carhart-Harris,

2019; Ort et al., 2023), which is often experienced as an increased capacity for "loose, freely associative and non-logical thought", combined with a decreased capacity for both analytical thinking and evaluative reflection (Gandy et al., 2022).

During this time, one's capacity for predictive processing is diminished, and their subjective experience is less likely to be mediated by pre-established beliefs and habituated patterns of thought. One is thus temporarily capable of re-evaluating and permanently shifting even their most fundamental beliefs, such as those concerned with ontology and personal identity (Carhart-Harris & Friston, 2019). High-dose psychedelic experiences have also been shown to have a lasting positive impact on users' *openness*—characterized by imagination and fantasy, appreciation for aesthetics, and broad-minded tolerance of others' viewpoints and values (Maclean et al., 2011).

Psychedelic-induced cognitive dishabituation is observable at the behavioural level, but a growing body of research is uncovering the ways in which psychedelics impact the brain's plasticity mechanisms on a molecular, neuronal, synaptic, and dendritic level after just a single dosing session. Repeated administration also causes neurogenesis, which has been correlated with increased learning behaviour (de Vos et al., 2021; Lukasiewicz et al. 2021). Growing evidence suggests these psychoplastogenic effects may partially mediate the short- and long-term therapeutic effects of psychedelic use (Lukasiewicz et al. 2021; Aleksandrova & Phillips, 2021; Calder & Hasler, 2023; Knudsen, 2023).

While this cognitive dishabituation can be highly beneficial, it is often accompanied by the impairment of cognitive control, characterised by disruptions in attentiveness and memory function, a decreased capacity for decision making, and a general reduction in one's agentic capacities (Studerus et al., 2011; Smigielski et al., 2019b; Fortier-Davy & Millière, 2020; Gasser,

2021). Accordingly, psychedelics also tend to reduce vigilance, producing "dreamy" states where one is not fully alert to their environment (Grinspoon & Bakalar, 1997, p. 253; Studerus, 2012, p. 45; Liechti et al., 2017; Griffiths et al., 2018; Gandy et al., 2022).

Perhaps the most puzzling and important cognitive shift that commonly occurs during the psychedelic experience is the variously termed *dissolution of self*, *ego-death, self-loss*, or *self-transcendence* where one's sense of self, ego, or 'I' feels as though it is disintegrating, or that the border between one's self and the external world is dissolving (Letheby & Gerrans, 2017; Millière et al., 2018). This breakdown of subject/object distinctions can have major implications for one's understanding of who and what they are. If experienced positively, this disruption of normal ego-functioning can produce a profound or cosmic sense of belonging and trust, precipitating increased nature-relatedness (Kettner et al., 2019; Forstmann et al., 2023) and reduced death-anxiety (Grof & Halifax, 1978, pp. 51-52; Griffiths et al., 2016; Barrett et al., 2016).

If experienced negatively, however, this disruption to normal ego-functioning can cause severe agitation and anxiety, commonly referred to as "dread of ego dissolution" in the scientific literature (Dittrich, 1998; Studerus, 2012; Hermle & Kraehenmann, 2016). The ubiquity of "self" in everyday waking consciousness invites the assumption that it is an inherent feature of human consciousness, so psychedelic disruptions to one's ego-functioning can give rise to a strong panicked conviction that one is losing their sanity or dying. The "crucible of panic" that accompanies these virtual death experiences can, however, still lead to positive outcomes if one is able to overcome their fear of death (Barret et al., 2016; Bourzat & Hunter, 2019, p. 164). Because one isn't *actually* dying, this usually entails surrendering to the experience and letting

oneself "die". A great deal has been written on the therapeutic and spiritual value of psychedelic death/rebirth experiences (e.g., Grof & Halifax, 1978; Papaspyrou et al., 2019).

Psychedelic disruptions to regular ego-functioning can thus affect far more than one's self-esteem or personal values; they can fundamentally alter the way one sees the world, as many metaphysical and ontological beliefs can be affected by experiences of self-loss (Taylor, 2018). Of course, one must remain mindful that psychedelics often foster new ways of understanding the self or the world without changing one's metaphysical beliefs about the ultimate nature of reality (Letheby, 2021).

If language is to be considered a cognitive capacity, then it would be appropriate to state here that many psychedelic ASCs defy linguistic interpretation (Letheby & Gerrans, 2017). While the intensity or richness of psychedelic ASCs can make them difficult to describe, their ineffability may have more to do with psychedelic-induced experiences of self-loss, and the ways in which the breakdown of subject/object distinctions violates basic syntactical principles.

As Paul Griffiths (1990) explains, the event-attribute-content structure of sentential language tacitly asserts a mode of subjective experiencing where subject and object can be differentiated (pp. 75-78). For example, "I saw a radiant light" implies an "I" which did the seeing, and an object: "the radiant light". But if one's capacity to distinguish subject and object ceases, this sentence would be rendered "seeing a radiant light", or given that seeing requires a seer, perhaps just "radiant light." Even then, the statement "radiant light" suggests it is a noun, an object distinct from other objects, and this may not be how one experienced it during their psychedelic ASC. Perhaps, since the experience of the radiant light was experienced as one with the subject, the radiant light was less a noun and more a verb—a thing which consciousness was

being/doing rather than *seeing*. Language may thus be ill-suited to the task of describing experiences absent a discrete sense of self.

Mood

In addition to their perceptual and cognitive effects, psychedelics significantly affect mood as they dramatically enhance affectivity, causing one to feel a range of emotions more intensely. While this can lead to experiences of rapturous and unbridled joy, it can just as easily propel one into a state of intense sadness or fear (the proverbial "bad trip"). It is commonly argued that if prepared and guided skillfully however, those who face challenging psychedelic experiences (i.e., confusion, dysphoria, and acute anxiety) can almost always navigate them and this can lead to a transformative and ultimately beneficial cathartic release (Bender & Hellerstein, 2022).

When taken in sufficient dosage and under conducive circumstances, however, psychedelics reliably induce acute blissful states and pronounced positive affect (Liechti et al., 2017; Griffiths et al., 2018; Preller & Vollenweider, 2018, p. 232; Smigielski et al., 2019b; Gasser, 2021; Pontual et al., 2022; Holze et al., 2023). Deeply felt positive mood is almost always among the top two most pronounced mystical qualities of psychedelic ASCs (alongside altered space-time perception).

In addition to the acute experiences of deeply felt positive mood associated with psychedelic ASCs, improved mood is often observed for weeks, months, or even years afterwards. For example, 1-2 moderate-to-high dose psilocybin experiences produced significant increases to life satisfaction and feelings of inner peace/harmony at 14-month follow-up in a study involving 36 healthy participants (Griffiths et al., 2006, 2008), and terminally ill participants in two psilocybin studies displayed significant reductions in depressed mood and

anxiety at six-month follow-up (Grob et al., 2011; Griffiths et al., 2016). Reductions in depression and anxiety were observed among terminally ill participants in similar studies with LSD, many of whom also described feeling more relaxed and patient with themselves and others (Gasser et al., 2015). A single high-dose psilocybin experience can produce sustained decreases in negative affective states and traits and increase positive affective states and traits for up to four weeks post-administration (Barrett et al., 2020), and lower rates of suicidality are observed among individuals who use psychedelics outside clinical settings (Hendricks et al., 2015; Zeifman et al., 2020). Finally, one study involving a series of five therapeutic sessions with psilocybin showed significant increases to positive attitudes about self, increased positive mood, and increased life satisfaction at 14-month follow-up (Griffiths et al., 2011).

Generalizability of Psychedelic Experiences

Can we appropriately speak in broad strokes about "psychedelic experiences" when they're induced by different chemicals? While it has been argued that the psychoactive properties of the four classic psychedelics are sufficiently close to allow some degree of generalization (Bache, 1991, pp. 233-234), anecdotal reports also suggest that different psychedelics tend to evoke unique subjective experiences (e.g., Watts, 1968; Dass et al., 1996). This is particularly true in the context of ceremonial use where the psychedelic agents are regarded as plant teachers with their own character and agency beyond the user's exposure to them (Badiner, 2015). Empirical research has shown psilocybin to increase feelings of unity and transcendence of time and space, while producing vivid visual hallucinations and synesthesia (Kelmendi et al., 2022). Ayahuasca (DMT) also does this but may be more likely to foster heightened abstract thinking (Hase et al., 2022) and visionary encounters with trans-dimensional

beings that are interpreted as intelligent (Strassman, 2001; Shanon, 2002; Heuser, 2006), though this may be the result of expectancy effects (Griffiths et al., 2019).

No modern and methodologically rigorous studies have systematically compared the phenomenology of the different classic psychedelics in humans, but a Phase I trial investigating this question (Clinicaltrials.gov ID: BASEC 2019-02023) began in 2020 and is expected to be completed in 2023. There are likely some phenomenological nuances to the experiences induced by different psychedelics—especially when considering the complex and unique chemical makeup of different psychedelics in their organic form (Ribeiro, 2018)—but early research involving a combination of psilocybin, LSD, and mescaline found the effects of each to be similar—sometimes indistinguishable (Rinkell et al., 1960; Unger, 1963; Hoffer & Osmond, 1967, pp. 138-139). Psychedelic experiences are profoundly shaped by one's setting and mindset (see section: *Set and Setting*), so the subjective effects associated with specific psychedelics can be difficult to reliably reproduce. It generally seems that what is reliably true about the acute phenomenological quality of one person's psychedelic experiences (e.g., mescaline) could theoretically be very closely reproduced at a later date or in another person using different psychedelics (e.g., psilocybin, DMT, or LSD).

To some extent, the DMT-containing psychedelic ayahuasca may be an exception here, as it was not included in these historical studies and contains non-psychedelic psychotropic agents (MAOIs) that could measurably alter its phenomenology as to distinguish it from other psychedelic experiences. Ayahuasca also tends to cause shaking, sweating, diarrhea, and vomiting far more than other psychedelics, and these experiences are known to bring to the ayahuasca experience a "purge and relief" narrative (Coyote, 2015; Frecska et al., 2016), further distinguishing it from other psychedelics. Furthermore, one dated study suggested that because

DMT differs from other psychedelics in that it is far less tolerance-producing with repeated administration, it may possess "unique pharmacodynamic properties"—i.e., distinct subjective effects (Strassman et al., 1996). The chemical makeup of pure DMT and 5-MeO-DMT does, however, closely resemble psilocin (for which psilocybin is a prodrug), and the subjective effects of pure DMT routinely induce mystical experiences similar to those induced by other classic psychedelics (Kelmendi et al 2022; Pallavicini et al., 2021; Strassman, 2001, p. 246; Michael et al., 2023), so it's not clear DMT should be regarded as substantially pharmacodynamically different from the other classic psychedelics.

On the whole, research on the comparative phenomenology of different psychedelic drugs remains scant. Evidence for the generalizability of psychedelic experiences is thus inconclusive, but all the classic psychedelics *do* exhibit a shared capacity to induce mystical-type ASCs. Because the mystical quality of psychedelic experiences is the main context in which psychedelics are discussed in the present study, assuming a moderate level of generalizability is likely unproblematic. I will thus treat all four of the classic psychedelics as a homogeneous group that cause a sufficiently coherent set of subjective effects we may call "the psychedelic experience". Research more narrowly focussed on the effects of individual psychedelics may become necessary as new research uncovers the pharmacodynamic differences of each of these substances.

Set and Setting

During the 1940s and 50s, researchers in Europe and North America began experimenting with LSD, which had been recently discovered and distributed by Swiss pharmaceutical company Sandoz Laboratories in hopes of finding some profitable clinical application for its pronounced psychotropic effects. This proved an uphill battle, as researchers

of this era tended toward methodological approaches designed to test the effectiveness of anti-psychotic drugs which were ill-suited to studies investigating the therapeutic potential of psychedelics (Healy, 2002).

Nevertheless, by 1960, LSD was found to be helpful in the treatment of depressive, anxious, obsessive, and addictive disorders when used as adjuncts to psychotherapy (Rucker et al., 2018). This form of treatment, however, proved characteristically different from other pharmacological interventions in that psychedelics did not convey a therapeutic effect through direct chemical changes to the brain, but rather, through their capacity to induce altered states of consciousness that allowed for emotional breakthroughs, idiosyncratic and subjective processes of meaning making, and improved cognitive flexibility. Under the influence of psychedelics, study participants were able to radically re-evaluate their behaviours, values, beliefs, and relationships (both intra- and interpersonal). And while the acute state of heightened cognitive flexibility lasted only a few hours, the insights gleaned therein could have a lasting positive impact on participants' mental health. Importantly, these lasting impacts were contingent upon participants' ability to identify and internalize their psychedelic insights and participate in an ongoing process of meaning-making related to the experience. This process, known as *integration*, is effectively aided through the help of a therapist in the weeks or months following a psychedelic experience, or through practices such as journaling, artistic expression, contemplation, and group discussion (Ortigo, 2021).

Early experimental therapies with psychedelics, however, proved somewhat volatile when insufficient efforts were made to ensure study participants felt safe, secure, and comfortable (Hartogsohn, 2020). Early researchers thus saw a high degree of variability in clinical research outcomes. Neil Agnew and Abram Hoffer (researchers at the Regina General

Hospital during the 1950s) even found that the therapeutic potential of these substances could be correlated more easily with extra-pharmacological factors than they could drug dosage levels. These factors included the participant's emotional predisposition, the comfort of the clinical atmosphere, and the rapport established between participant and therapist (Barber, 2007, pp. 46-47). This observation later manifested concretely in the concept of "*set and setting*" (popularized by the controversial Harvard psychologist Timothy Leary in 1961) (Horowitz et al., 1988).

Set refers to the mindset of the study participant: their mood, expectations, fears, and wishes. *Setting* refers to the tangible space they are in and the people who occupy it, as well as the cultural environment which has provided the participant a set of ideas and beliefs which mediate their subjective reality (Hartogsohn, 2017). Today, psychedelic researchers generally concur that *set* and *setting* are the most significant predictive factors of therapeutic success, and the community as a whole is working diligently to optimize this therapeutic modality through careful consideration of these factors.

Psychedelic ASCs as Mystical Experiences

From Psychotomimetics to Mysticomimetics: Psychedelic Mysticism in the West

Through self-experimentation and observing study participant behaviour, early researchers hypothesized that psychedelics induce ASCs akin to schizophrenic or manic states. This is known as the 'psychotomimetic model', and it was the predominant interpretive framework for these experiences for the first decade of mid-century psychedelic research (Hoffer & Osmond, 1967; Hermle & Kraehenmann, 2016). At this time, LSD, psilocybin, and mescaline were commonly referred to as "hallucinogens" or "psychotomimetics", reflecting widespread pathologization of the ASCs they induced (Ruck et al., 1979).

In 1954, Aldous Huxley published *The Doors of Perception* where he interpreted his psychedelic experiences through a mystical lens, becoming the first major proponent of using psychedelics to intentionally produce mystical states—a practice sometimes called "chemical mysticism" (Sargant, 1954; Bache, 1991). It was around this time that experimental studies discovered therapeutic applications for psychedelics, and researchers observed that participants who had spiritually significant psychedelic experiences tended to have better treatment outcomes (Hartogsohn, 2020, p. 85). This challenged the psychotomimetic model, which downplayed these substance's healing potential as well as their unique psychospiritual mechanisms of action. Nevertheless, the belief that these substances mimicked psychotic states lingered in certain corners of psychedelic scholarship. This led some to question the mystical validity of the experiences they induced, which noticeably impacted the discourse of comparative mysticism involving psychedelic ASCs.

For example, in *Mysticism: Sacred and Profane* (1961), Robert Zaehner argued that psychedelics "produce artificially a state akin to schizophrenia", and therefore, likening psychedelic mysticism to that of "mystical saints" would imply that "the vision of God of the mystical saint is 'one in the same' as the hallucination of the lunatic" (pp. x-xi)—a conclusion he is unwilling to entertain. While Zaehner's psychotomimetic premise would eventually be rejected by most psychedelic scholars, scholars of religion continued to debate whether psychedelic mysticism was somehow *lesser than* that of "mystical saints".

Shortly after the publication of *Mysticism: Sacred and Profane*, several developments gave rise to a new interpretive framework: the *mysticomimetic model*—which recognized the similarities between high-dose psychedelic ASCs and traditional mystical-type ASCs. While psychedelic spirituality had begun entering popular religious discourse through the writings of

Aldous Huxley (1954), Gordon Wasson (1957), and Alan Watts (1958/1973), and certain clinical researchers during the 1950s had begun investigating the spiritual dimensions of psychedelic experiences (Dyck, 2008), explicit scientific investigations into psychedelics' mystical properties only began in 1962 with the Good Friday Experiment (Hartogsohn, 2020, p. 259). This was a controlled double-blind study involving 20 psychedelic-naïve Christian theological students, the "middle-class, protestant backgrounds" of which "were rather non-mystical" (Pahnke, 1963, p. 235). The group (half of which received a substantial 30mg dose of psilocybin) attended a Good Friday service in the basement of a Boston church to see if psychedelics could induce mystical-type ASCs similar to those reported by Christian visionaries.

Using Stace's typology of mystical experiences, the investigators found that in an overtly religious setting, psilocybin reliably induced subjective phenomena descriptively indistinguishable from spontaneously occurring mystical states in several respects. Almost all participants not part of the control group experienced to a relatively "complete degree" internal and (to a slightly lesser extent) external unity, transcendence of time and space, ineffability and paradoxicality, deeply felt positive mood, and "objectivity and reality" which can be regarded as somewhat synonymous with the *noetic quality* previously described. A felt sense of sacredness was widely observed as well, but not significantly more than in the control group (Pahnke, 1963).

In addition to the apparent phenomenological similarities of psychedelic and traditional mystical experiences, the study found that participants who had received psilocybin had been deeply and positively affected by the experience. At six-month follow-up, these participants

described increased emotional sensitivity, authenticity toward others, and a belief that they had learned something very valuable (Pahnke, 1963, p. 226).[4]

Regardless of how one felt about the authenticity of psychedelic mystical experiences, denying their phenomenological similarity to traditional mystical experiences was becoming a contentious matter in the discourse of comparative mysticism. By 1964, scholars of religion were increasingly regarding mystical experiences as psychological phenomena analyzable from non-theological perspectives (Smith, 1964), and psychologists (particularly those participating in the humanistic psychology movement) were eager to explore these experiences' healing potential (Davidson, 2017, p. 53). For example, American psychologist Abraham Maslow (1964) posited that a psychedelic-induced "glimpse of heaven" could potentially prevent suicide, violence, addiction, and existential meaninglessness through a reorganization of values and beliefs akin to religious conversion.

It was around this time that LSD "leaped the laboratory walls" in the United States and became a drug of choice among a growing countercultural movement which promoted spiritual exploration and an "absolute sense of togetherness" while opposing the consumeristic and pro-military ethos of the 1950s (Shipley, 2013; Pollan, 2018). Alan Watts (1968) described this "'hip' subculture, however misguided in some of its manifestations, [as] the earnest and responsible effort of young people to correct the self-destroying course of industrial civilization" (p. 82). LSD's association with this politically unpopular movement eventually led to the international prohibition of psychedelic drugs through the United Nations' 1971 Convention on

[4] Sixteen of the study participants were interviewed between 1986 and 1989, and those who had received psilocybin unanimously reported that the experience "had elements of a genuinely mystical nature and characterized it as one of the highpoints of their spiritual life" (Doblin, 1991).

Psychotropic Substances, and virtually all experimental research on the mysticomimetic and therapeutic potential of psychedelics was suspended (Pollan, 2018; Letcher, 2007; Haden et al., 2016; LoBianco, 2016).

It wasn't until the mid 2000s that such investigations resumed, with a study on the acute and longer-term psychological effects of a high dose psilocybin experience on religious/spiritual individuals. This study (Griffiths et al., 2006) corroborated many of the Good Friday Experiment's findings, including positive changes in attitudes and behaviour, and the phenomenological similarity of spontaneously occurring mystical-type ASCs and those induced through psilocybin. Significantly, 33% of study participants rated the psilocybin experience as being the single most spiritually significant experience of their life, with an additional 38% rating it among their top five most spiritually significant experiences.

Maslow's (1964) hypothesis that psychedelic-induced mystical states could have positive effects on mental health has also been corroborated to a great extent; studies have found significant positive correlations between the intensity of psychedelic-induced mystical-type ASCs and positive outcomes in the treatment of cigarette addiction (Garcia-Romeu et al., 2014), alcohol dependence (Bogenschutz et al. 2015; Bogenschutz et al., 2022), depressive disorders (Roseman et al., 2018; Davis et al., 2021; Holze et al., 2023), and depression and anxiety associated with life threatening cancer (Griffiths et al., 2016; Ross et al., 2016). Feelings of introvertive and extrovertive unity, transcendence of time and space, ineffability and paradoxicality, deeply felt positive mood, a sense of sacredness, and a noetic quality featured prominently in all these studies, and qualitative follow-up studies suggest that mystical experiences are not merely correlative with positive outcomes, but often a causal factor in

psychedelic healing processes (Watts et al., 2017; Belser et al., 2017; Noorani et al., 2018; Nielson et al., 2018; Renelli et al., 2020; Podrebarac et al., 2021).

Such qualitative studies are important because psychological insights and emotional breakthroughs appear to similarly mediate health outcomes, and the sample sizes in these studies were sometimes quite low, limiting the confidence with which one could conclude that mystical experiences mediated treatment outcomes (Kangaslampi, 2023). It is worth noting here that certain features of psychedelic-induced mystical experiences may convey a greater therapeutic effect than others in specific populations—e.g., one study involving healthy participants found that positive outcomes were correlated with *deeply felt positive mood* more than *transcendence of time and space* or *ineffability* (McCulloch et al., 2022).

Due to their unique mysticomimetic healing potential, psychedelics have become widely regarded as legitimate mystical agents in mainstream scientific discourse (Strassman, 2018), however, researchers disagree on how to best mobilize mysticism in a largely secularized scientific landscape. Some mainstream psychedelic researchers believe lacing psychedelic therapies with explicitly non-naturalistic beliefs is ill-advised because: "tenuous magical explanations" for mystical phenomena lack the reliability and robustness of scientifically testable naturalistic explanations (Carhart-Harris & Friston, 2019); naturalism can purportedly account for most (or all) mystical phenomena (Letheby, 2021; Jones, 2022); and clinicians/therapists introducing non-empirically supported beliefs in a therapeutic setting does not align with best practice in modern clinical psychology (Johnson, 2021).

Rigid naturalism, however, appears fairly unpopular among practicing psychedelic therapists, for whom the cultivation of a "spiritual" worldview encompassing transcendent realities is often considered a core competency (Phelps, 2017; Rochester et al., 2021; Brennan et

al., 2021). This competency is necessitated by the fact that individuals commonly abandon materialist metaphysical beliefs in the wake of their psychedelic experiences, and this unique process can be psychologically taxing enough to warrant specialized psychotherapeutic support (Timmerman et al., 2021).

Entheogens: Psychedelic Mysticism Outside Western Medicine

In a discursive landscape where materialist ontologies reign supreme, it is unsurprising that secular psychedelic mysticism has gained such traction. But for all its popularity in Western medicine, it's important to recognize that secular psychedelic mysticism is, across cultures and in the grand scheme of history, an aberration. These substances have been used by cultures around the world for millennia and are the principal sacrament of several religious groups. For a fuller understanding of psychedelic mysticism, it is worth discussing the traditions which have used these substances in religious, spiritual, and shamanic contexts, historically and today.

The Native American Church (NAC), for example, is a north American syncretic tradition which draws on both indigenous wisdom and Christian doctrine, largely grounded in the sacramental and religious use of the mescaline-containing peyote cactus, which has traditionally been revered by peyotists as a deity with great healing potential (Feeney, 2014; Jay, 2019). While expressly Christian in some ways, the NAC is a modern permutation of a tradition which significantly predates Christianity; archeological evidence suggests peyotism has been practiced in North America for at least 5,700 years (Díaz, 1977; El-Seedi et al., 2005; Terry et al. 2006). While this pan-Indigenous tradition manifests differently in the many groups that have adopted it, certain distinctly mystical aims appear central to NAC peyotism—e.g., the pursuit of direct awareness of the Divine and enhanced self-understanding and acceptance through some form of

transcendental experience (Osmond, 1963/2016, p. 81; Blewett, 1963/2016, p. 92; Slotkin, 1975, p. 75).

Several religious movements which take the DMT-containing brew Ayahuasca as their sacrament emerged from Brazil in the 20th century: the União do Vegetal, the Barquinha, and the Santo Daime Church, all of which possess Christian elements and draw heavily on the Indigenous wisdom of traditional ayahuasca shamanism, as seen in Indigenous groups like the Shipibo and Urarina peoples of the Peruvian Amazon (Cappo, 2018; Dean, 2009). Taken in ritual settings, this psychedelic brew is believed to help one contact ancestors and deities, connect with spirit worlds through visionary experiences, and transcend the limitations of time and space (Wright, 2006). In such settings, ayahuasca serves as powerful catalysts of social affiliation, enculturation, and belief transmission (Dupuis, 2021).

Ayahuasca shamans or *curanderas*/*curanderos* used the brew to heal physical, spiritual, and emotional illnesses (Kaufman, 2015), and ayahuasca itself is commonly regarded as a wise teacher and healer from a higher spiritual dimension (Harris & Gurel, 2012). Understood in their cultural contexts, interactions with plant teachers are treated not as visionary experiences limited to the subjective awareness of ayahuasca ceremony participants, but rather, as a collaborative dialogue between human and non-human entities (Dev, 2018; Brabec de Mori, 2021). The shamanic use of Ayahuasca thus appears to produce distinctly noetic psychedelic ASCs, but it may not be appropriate to conceive of them as "mystical" (in the sense I have used the term thus far) because the goal of these traditions is not to achieve some form of cosmic unity, but rather to meaningfully engage non-human entities/spirits within a specific shamanistic worldview.

The origins of sacramental ayahuasca use in the Amazon are debated. Some estimate that ayahuasca has been used by Amazonian shamans for 5,000+ years, while others estimate a mere

300 years of use (Brown, 2012, pp. 31-33). Recent chemical analysis of archeological findings, however, suggest that ayahuasca (and psilocybin-containing mushrooms) were likely used in the Amazon by pre-Columbian shamans at least 1,000 years ago (Miller et al., 2019).

In Mesoamerica, the ceremonial use of Psilocybin-containing mushrooms predates written history. Reference to this practice is seen in some of the earliest written documents of Spanish conquistadors in 16th Century Mexico (Guzmán, 2008), and the writings of Dominican friar Diego Durán describe psychedelic mushrooms being served at the coronation of the Aztec emperor in 1486 (Sheldrake, 2020, p. 100). But the ceremonial use of psilocybin mushrooms almost certainly predates these findings; mushroom statues found in ritual contexts have been dated to 3,000 BC, suggesting that psychedelic mushrooms have been regarded as sacred for thousands of years, most likely due to their mysticomimetic potential (Carod-Artal, 2015). Today, several Indigenous communities in Mexico use psilocybin mushrooms sacramentally, including the Nahuatls, Matlazincs, Totonacs, Mazatecs, Mixes, Zapotecs, and Chatins (Guzmán, 2008).

Across the Atlantic, archeologists have also found evidence of millennia old traditions of mushroom shamanism. For example, cave paintings dating from 5,000 to 7,000 BCE in the Tassili-n-Ajjer Plateau of Southern Algeria depict scenes of mushroom use commonly interpreted as evidence of psychedelic shamanism (McKenna, 1993; Johnson, 2018; Strassman, 2001, p. 21). Today, psilocybin-containing mushrooms are still routinely used by Nepali shamans, or *Jhankris*, to consult the wisdom of animals, plants, and minerals as part of healing rituals (Müller-Eberling & Rätsch, 2015).

Sacramental psychedelic use may also have been present in ancient India. The venerated Hindu guru Neem Karoli Baba (1900-1973) purportedly described medicines akin to LSD being

used in ancient India by the yogis of the Kullu Valley (Dass, 1979, p. 231), though he may have been referring to *soma*, a hallucinogenic sacrament taken during ancient Vedic rituals, most likely derived from *Amanita muscaria* (which has markedly different psychotropic effects from the classic psychedelics) (Watkins, 1978; Fields, 2015; Hancock, 2022, pp. 446-448).

During the 1970s, classicists and ethnobotanists also theorized that the Eleusinian Mysteries (a poorly understood annual initiation rite held in ancient Greece for the cult of Demeter and Persephone) was in fact a tradition rooted in psychedelic mysticism (Wasson et al., 1978). Though met with derision by mainstream classicists for decades, chemical analysis of archeological findings has shown that *ergot sclerotia* (from which LSD is derived) was used by ancient Greek mystery cults, lending much support to the theory that the sacramental brew known as *kukeon* disseminated at the Eleusinian Mysteries was indeed a psychedelic (Muraresku, 2020).

In recognition of this long and rich history of global psychedelics use for explicitly spiritual ends, Ruck et al. (1979) proposed a term for this class of substances which recognized their legitimacy as spiritual tools: *entheogens* (derived from the Greek words ἔνθεος: entheos, and γενέσθαι: genesthai)—literally meaning "becoming the god within". Unlike "drug" or "hallucinogen", this neologism possessed positive cultural/religious associations which do not pathologize or otherwise diminish the value of the ASCs these substances induce. It also distanced itself from some of the frivolous 1960s counter-culture connotations of "psychedelic". While *psychedelic* remains the most popular term for this class of substances, they are now commonly called *entheogens* in spaces which emphasize their potential as authentic and legitimate spiritual tools/mystical agents. Entheogenic models of psychedelic research and therapy generally support the belief that psychedelic ASCs are their most beneficial and valuable

when experienced within a ritualized, ceremonial, or sacramental context, and tend to discourage "recreational" use of these substances.

The Mysticality of Psychedelic ASCs

From this chapter, it is clear psychedelics are capable of producing experiences which our mystical typology from Chapter 1 aims to describe. Psychedelic ASCs are often experienced as **ineffable,** and this is likely due in part to the breakdown in subject/object distinctions that occurs with psychedelic experiences of self-loss. **A felt sense of sacredness** is also commonly used to describe psychedelic ASCs; it is the feature which has led to the formation of psychedelic cults and religions, as well as the deification of naturally occurring psychedelics in art and ceremony. It likely also accounts for the spiritual significance of psychedelic experiences described by clinical psychedelic study participants. For experiences described as "revelatory", the **noetic quality** of these ASCs may go hand in hand with a felt sense of sacredness, but psychedelic-induced abandonment of beliefs rooted in cognitive inflexibility may also have a noetic quality. **Feelings of unity** are perhaps the most transformative feature of high-dose psychedelic experiences. They appear similarly capable of inducing introvertive or extrovertive unity depending on the setting in which they are used, but psychedelic induced pure consciousness events appear rare. **Space/time transcendence** and **deeply felt positive mood** are the two most commonly reported mystical features of psychedelic ASCs and may be closely associated with experiences of self-loss.

Many recent clinical studies measuring mysticality demonstrate how reliably *all* these qualities present themselves in psychedelic ASCs (Kangaslampi, 2023). Notably, however, the mysticality of these ASCs appears heavily influenced by set and setting. For example, the mysticality of a psychedelic experience can potentially be enhanced with music (Strickland et al.,

2021) or ceremonial/overtly spiritual settings (Pahnke, 1963; Bohn et al., 2022; Smigilski et al., 2019b). Likewise, studies with participants primed for mystical psychedelic experiences tend to have them far more reliably than those unconcerned with mysticism (Pallavicini et al., 2021).

Importantly, the fact that psychedelic ASCs reliably exhibit the qualities which make up the present study's mystical typology doesn't mean all these experiences are of precisely the same sort, or that they are necessarily similar or identical to other, non-psychedelic ASCs which exhibit the same qualitative features. Much of the qualitative data available on psychedelic ASCs has been collected through psychometric questionnaires, which may be highly reductive in their cataloguing of these experiences. This potential reductionism is very important and is discussed in Chapter 5.

Conclusion

Psychedelics are a class of synthetic drugs and naturally occurring plant medicines which significantly alter perception, cognition, and mood. Psychedelic experiences have been used as mystical agents throughout history and around the world, and modern experimental research has suggested the phenomenological similarity of certain psychedelic ASCs and "genuine" mystical experiences. This has given rise to "chemical mysticism" and entheogenic perspectives in the West, which regard these substances as spiritually significant and legitimate means of inducing mystical experiences. These experiences appear to mediate therapeutic outcomes in clinical settings, prompting questions of how to mobilize mysticism within the largely secularized scientific landscape of Western healthcare. Because the effects of psychedelics are highly varied and mediated by extra-pharmacological factors (set and setting), psychedelics should be conceived of as highly complex and dynamic potentiators of experience.

CHAPTER 3: ZEN

A Brief Introduction to Zen

History of Zen

This chapter is dedicated to an exposition of the practices of Zen Buddhism and the altered states of consciousness associated with them. An in-depth exposition of Zen as a historical or cultural phenomenon is thus unnecessary, but a few basic points are worth making here, as they will provide the necessary context for topics discussed later on.

Zen is a school of Mahayana Buddhism that originated in China during the Tang dynasty, where it was known as *Ch'an*. An Indian monk and meditation master named Bodhidharma is commonly credited with having brought this lineage of the Buddha's teachings to China around 470 CE, where he taught a novel form of open-eyed meditation known as "wall-gazing Zen" which is still practiced today (Coleman, 2001, p. 47). Through a process known as "Dharma Transmission",[5] Bodhidharma passed on the teachings of Shakyamuni Buddha to his Chinese successors who established the tradition there. Ch'an eventually saw a "Golden Age", which roughly lasted from 618 to 907 (Coleman, 2001, p. 47). The tradition was eventually brought from China to Japan by the son of an aristocrat known as Eihei Dogen Zenji (1200–1253), who founded the Soto Zen school. Several hundred years later, the Rinzai school was founded by a

[5] "Dharma Transmission" refers to the way the Buddha's teaching, or *Dharma*, is passed from Zen master to disciple. After many years of training, the procedure establishes the disciple as a Teacher in their own right, and as a successor in an unbroken line of Teachers/Dharma ancestors—a "spiritual bloodline" that can be traced back to Shakyamuni Buddha himself (Haskel, 2001, p. 2). A teacher may have several successors, so characteristically distinct lineages are formed after several generations.

monk named Hakuin (1685–1768). Today, Zen is practiced all around the globe, and it is one of the most popular forms of Buddhism practiced in North America (Coleman, 2001).

Soto and Rinzai are the two major schools of Zen Buddhism practiced today. Though they differ in some of their pedagogical approaches, both schools share many Dharma ancestors and core principles (e.g., both emphasize the importance of practice over sutra study, uphold similar ethical principles, reject dogmatic teachings, and stress the importance of learning in the company of a *sangha*[6] under the direct supervision of a Zen Master) (Shimano & Douglas, 1975; Coleman, 2001, p. 47).

Limitations

When studying Zen, one must remain cognizant of the fact that it is a decentralized practice—that is, there is no single institution standardizing the transmission of Zen teachings around the world. Different lineages thus present different nuances to the teachings, especially as their language and pedagogical strategies adapt to the various cultures into which they spread. This poses inherent limitations to the generalizability of any single researcher's findings, and I would thus discourage my readers from considering what is written here to be universally applicable to all forms of Zen. I have, however, made my best efforts to speak in the most general and commonly accepted terms to ensure my writing can be contextualized within the broader discourse on Zen practices.

With that said, the present study has relied heavily on the writings of Philip Kapleau, whose book *The Three Pillars of Zen* (1965/1993) documents Zen as it is taught in the Sanbo Kyodan lineage, with particular focus on the teachings of Hakuun Yasutani roshi (1885-1973). This was a deliberate choice, as Hakuun Yasutani roshi expertly blended elements of both Rinzai

[6] A community of fellow Zen practitioners.

and Soto Zen. My hope is that this presents a sort of *median-Zen*, a Zen which captures the essential nature of this dynamic practice as it arises in different lineages. Both Kapleau and I are North America-born and writing for a Western audience, so this *median-Zen* likely skews toward a distinctly Western perspective.

Finally, it must be noted that generally, Zen practitioners are deeply skeptical that researchers who take etic approaches to the study of Zen ASCs (i.e., who do not themselves practice Zen) can gain true understanding of the experiences they are concerned with (Shimano & Douglas, 1975). I must here disclose that while I am most certainly still a novice, I practice Zen quite actively. Since 2020, I have been a student at a well-established monastery in Ontario, Canada practicing Eihei Dogen's lineage of Zen. While I hope this provides me the rudimentary understanding of Zen necessary to meaningfully study it, I admit that my understanding of the Dharma is still quite crude. I also admit that due to my limited instruction in a single lineage, my interpretative frameworks are likely skewed towards the specific language and practices I have learned there. Once again, I have done my best to be mindful of these limitations and deploy concepts as they are commonly used outside my own Zen training.

Practices of Zen

There are many formalized practices in Zen, such as chanting, *oryoki* (meal ritual), *Daruma-kata aiki* (physical exercise) and *dokusan* (practice interviews with a Dharma Teacher)—all of which have specific choreographies and protocols for engagement, known as *forms* (Coleman, 2001; Loori, 2004). In Zen Monasteries, even the simple acts of bowing or entering and leaving a room have specific forms (Coleman, 2001, p. 97). To outsiders, such behaviours may seem performative or arbitrarily ritualistic, but the ubiquity and specificity of these forms are best thought of as devices for pushing students to exercise constant mindfulness

of their behaviour, and thus engage with their experience more fully (Coleman, 2001, pp. 71-72). An extensive discussion of the many formal practices in Zen is neither possible nor necessary here. I have thus chosen to focus on the two formal Zen practices which are most associated with Zen ASCs: *zazen* and *koan* practice.

Zazen

Zazen (literally "seated meditation") is the central practice of Zen. In mainstream scientific literature, zazen is usually classified as an "open monitoring" (OM) mindfulness practice—a style of "meditation" which brings attention to the present moment and allows one to openly observe mental contents and bodily sensations without getting caught up in any of them (Dahl et al., 2015; Tang et al., 2015; Fox et al., 2016; Millière et al., 2018). OM de-emphasizes subjectivity and self-related interpretations of experiencing in favour of "objective perception" (experiencing stimuli without self-related interpretation or evaluation) (Josipovic, 2014)[7], and this gradually cultivates a relaxed and flexible state of attention characterized by decreased reactivity and increased clarity of experiencing (Velasco, 2017).

Rounds of zazen usually last 30 minutes, and during this time, practitioners sit on a *zafu* (meditation cushion) with eyes open and mouth closed.[8] Attention should be open and relaxed, one's gaze should not focus on anything in particular, and anything that is felt, heard, smelled, or tasted should neither be ignored, nor become the object of directed concentration. Unlike

[7] In Zen, enlightened individuals are said to experience the world as "pure objectivity" (Kapleau, 1993, p. 16).

[8] In the Soto school of Zen Buddhism, practitioners sit zazen facing a wall. In the Rinzai school, practitioners sit with their backs to the wall, facing into the room (Kapleau, 1993, p. 9). While zazen can be practiced at home, it is best done in a dedicated practice space known as a *zendo* (meditation hall) or *hatto* (Dharma hall), an essential room in all Zen monasteries.

mindfulness techniques which deploy focussed attention or ‘body scans’, the full range of bodily sensations are to be experienced simultaneously during zazen—e.g., the breath, the blades of the hands against the abdomen, the tongue against the teeth, and a pain in the knee are to be experienced indiscriminately and together with all other physical sensations that arise (Kapleau, 1993, p. 31).

As one sits zazen, the head, neck, back, and hips should be perfectly aligned—spine perpendicular to the floor. Because it allows for a wide and solid base upon which to align one’s form, sitting in the full-lotus posture is ideal, but the half-lotus, quarter-lotus, or Burmese postures are acceptable if flexibility is an issue, so long as the knees are grounded. For those unable to sit comfortably with the legs folded, they may kneel with a *seiza* (kneeling) bench or sit on the edge of a chair. One’s hands are placed in the lap, with one hand in the palm of the other and the tips of the thumbs lightly touching to form the shape of a flattened circle (*mudra)* (Kapleau, 1993, pp. 30-31). Perfecting one’s sitting posture is greatly stressed in Zen (students will have their posture routinely corrected by instructors in monasterial settings). This is because in Zen, it is understood that one’s mental state is played out in the body—e.g., mind-wandering or dozing off will cause the spine to slump, the head to droop, or the thumbs to lose contact. By closely attending to one’s own posture, the body becomes a sort of “biofeedback device” that helps one recognize changes in their mental state (Pagnoni, 2019).

Naturally, thoughts and feelings arise during zazen. This is not a problem. However, if these thoughts or feelings (e.g., mental imagery, storylines, moods, emotions) are grasped at and propagated, attention will become fragmented and closed off to the full range of experiencing. Upon realizing this fragmentation of attention, Zen practitioners release their engagement of the thought or feeling and it is allowed to pass of its own accord. One should not try to avoid

thinking or feeling, but rather, allow all of experiencing to arise and fall away naturally, as "thinking about non-thinking still involves thinking" (Valesco, 2017).

When one does this and attends to their life without feeding into habitual patterns of *liking*, *disliking,* and *ignoring*[9] aspects of their experience, they experience the world more intimately. They discover that seeing, hearing, tasting, smelling, touching, and feeling can be experienced immediately—i.e., without picking and choosing which aspects of reality conform to the preferences of the 'self'. This mode of engagement with the world is known in Zen as "suchness" (Austin, 2015, pp. 549-553), and it is understood that one can experience this suchness to such a degree that they glimpse the true nature of reality (see discussion of *Kensho* in section: *Zen ASCs*).

This "Open Monitoring" mindfulness practice is not limited to time spent atop a zafu. For dedicated Zen practitioners, zazen is a practice which continues into all aspects of life. For example, practitioners will practice *kinhin* ("walking meditation") or do *samu* (physical work—e.g., gardening, cleaning, maintenance), all while practicing the same open and mindful state they cultivate during zazen. These practices can be thought of as "zazen in motion" (Kapleau, 1993, p. 33), and eventually the way one cooks, eats, talks, reads, or uses the bathroom (etc.) becomes zazen in motion. These latter examples can be thought of as "informal" practice (Hoshin, 2022, p. 37).

The term "meditation" is not commonly used by Zen Buddhists to describe the practice of zazen. Meditation practices tend to involve fixing one's mind on an idea, feeling, or object (real

[9] In Buddhism, these are known as the "three poisons" (or *"kleshas"* in Sanskrit), and are more commonly referred to as "passion, aggression, and stupidity." In Zen, these three ways of relating to our experience are understood to give rise to our illusory sense of self (Hoshin, 2022, p. 11).

or imagined) to induce a specific altered state of consciousness to the exclusion of everything else (e.g., an ecstatic, relaxed, or trance state). This, Kapleau (1993) claims, is not the aim of zazen. He writes:

> *The uniqueness of zazen lies in this: that the mind is freed from bondage to all thought-forms, visions, objects, and imaginings, however sacred or elevating, and brought to a state of absolute emptiness, from which alone it may one day perceive its own true nature, or the nature of the universe. (p. 13)*

This "emptiness" here refers to an experience of capital "O" Oneness—a transcendent state beyond mere self-forgetfulness, completely free of self and discriminating thoughts (Kapleau, 1993, pp. 11, 341). And one's "own true nature, or the nature of the universe" are in fact one in the same, as consistent zazen practice reveals to the practitioner that "the universe and oneself are not remote and apart but an intimate, palpitating Whole" (Kapleau, 1993, pp. 203-204).

Koan

Koan practice is another central practice in Zen, though not common in all lineages. *Koans* (literally, "public cases") are scenarios or stories (sometimes historical, sometimes fictive) assigned to students by Teachers. For example, a Teacher may instruct a student to ponder "what was my face before my parents were born?" or "what is the sound of one hand clapping?" (Kapleau, 1993, p. 65).

The student would be expected to contemplate their assigned koan as continuously as possible—throughout the day, during zazen, during formal and informal practice, and when falling asleep (Kapleau, 1993, p. 12). The student would routinely meet with the Teacher in dokusan to demonstrate their understanding of the koan. If their understanding is deemed

sufficient (i.e., because they have experienced a glimpse of Self-realization), the Teacher would "pass" the student, and they would be assigned another koan. Zen students may be assigned hundreds of koans throughout their training (Kapleau, 1993, pp. xvii, 86).

These stories will often seem nonsensical or paradoxical, but at their core they are understood to embody the profound insights of the ancestral Zen masters (Coleman, 2001, p. 50). Koans usually pose a theoretically answerable question, but they cannot be "solved" using logical reasoning. The objective is not some intellectual or verbal understanding but rather, a direct experience of the true nature of things—an experience of "absolute, undifferentiated Reality"—a world where no distinction can be made between "I" and "not-I" (Coleman, 2001, p. 31; Kapleau, 1993, pp. 45, 65). This tends to happen only once one realizes the futility of trying to see the world as it is through language and reason (Kapleau, 1993, p. 64).

Koan practice involves rigorous and sustained concentration on the koan, and thus appears different from the open monitoring techniques deployed in zazen (Kapleau, 1993, p. 12). Unlike with zazen, which when done properly exhibits a sort of effortlessness, koan practice is extremely effortful—Part V of Kapleau's *The Three Pillars of Zen* (1993, pp. 189-254) describes several koan-induced kensho experiences, and they tend to arise in spectacular fashion once the practitioner reaches a sort of psychological and emotional *breaking point*. To effectively practice zazen, however, one must understand that their notions of selfhood are illusory, and to this end, koan practice is especially useful. This is in no small part due to the ways in which language, logic, and reason prop up one's sense of self (Kapleau, 1993, pp. 64-65).

Five Styles of Zen

In his lectures on the foundations of Zen practice, Yasutani roshi presented the five styles of zen as described by Keiho Shumitsu Zenji (780-841CE), the Fifth Ancestor of the Hua Yen

tradition in the Chinese Tang dynasty (Kapleau, 1993, pp. 41-46). These were: *bompu* zen, *gedo* zen, *shojo* zen, *daijo* zen, and *saijojo* zen.[10] These distinctions are still used today, and reviewing these here will elucidate the ways in which the practices of Zen Buddhists differ from one another and from non-Zen contemplative practices.

Bompu zen or "usual zen" is a style of practice grounded exclusively in the belief that it can improve both physical and mental health by cultivating one's capacity for concentration and the ability to restrain one's thoughts. It is universally approachable, as it is free from any philosophical or religious content. Generally, bompu zen can help practitioners resist temptations and sever attachments, as well as strengthen one's character and cultivate a sense of calm (Kapleau, 1993, p. 42). Anzan Hoshin roshi (2022) describes bompu zen as a sort of therapeutic intervention akin to analgesia, allowing one to temporarily dissociate from "the grinding of the wheels of society and work" (p. 26).

Gedo zen or " outside way zen" is philosophical in nature and imbedded within a non-Buddhist religious tradition—e.g., Hindu Yoga or certain contemplative practices in Christianity and Confucianism. Often, these are practiced in hopes of cultivating supernatural powers or to accomplish certain feats beyond the capacities of common people—e.g., enduring great pain with dignity and equanimity. Gedo zen may also be oriented towards accomplishing specific soteriological goals—e.g., attaining a favourable reincarnation through good deeds or winning the favour of a Divine entity (Kapleau, 1993, p. 43). Gedo zen has also been described as a means of intoxication akin to drugs or alcohol—a tool for exploiting the central nervous system in pursuit of ecstasies that will transport one out of their own experience and make them feel

[10] "Zen" with a capital 'Z' commonly refers to Zen Buddhism, while "zen" with a lowercase 'z' is often used to mean "practice".

divine, “spiritual”, or otherwise special (Hoshin, 2022, pp. 27-29). Through gedo zen, one may experience moments of insight into their true nature, but, as Anzan Hoshin roshi (2022) explains, gedo zen practitioners try to fit those experiences into a preconceived cosmology, which may only distort the insight (p. 28).

Shojo zen or "Hinayana practice" mobilizes the Buddha’s teachings to take one from a state of delusion to a state of enlightenment. *Hinayana*, meaning “small vehicle”, is a Buddhist zen which is chiefly concerned with the salvation of oneself—achieving Buddhahood so one can be liberated from the cycle of samsara. Hinayana Buddhism stands in contrast to *Mahayana* Buddhism, meaning “great vehicle”, which is concerned with the liberation of *all beings*. For this reason, Mahayana Buddhism is also sometimes referred to as “Bodhisattva Buddhism”[11], and is regarded by many Zen practitioners as being in accordance with the Buddha’s highest teaching (Kapleau, 1993, p. 44). As Yasutani roshi explains, to deploy the Buddha’s teachings in the hopes of achieving personal liberation is to fundamentally misunderstand the Dharma; it is to fabricate a dualistic existence within a unified cosmos, propagate indifference to the welfare of others, and hold that life is in some sense inherently evil and something to be avoided. This avoidance, he continues, leads practitioners of Shojo zen to pursue *pure-consciousness* states called *mushin-jo* (discussed below) rather than true insight (Kapleau, 1993, pp. 44-45). Importantly, the approaches of shojo zen also imply that Buddhahood is something to be achieved, rather than one’s inherent nature (Hoshin, 2022, p. 30).

[11] A Bodhisattva is one who dedicates themself to helping others attain liberation. They are understood to have attained a great degree of self-mastery, wisdom, and compassion, but are not yet *fully* enlightened (Kapleau, 1993, p. 324).

Daijo zen or "Great Practice zen" is the fourth of the five styles of zen. One's central aim in daijo zen is to awaken to their true nature and experience the universe as absolute and undifferentiated through the experiences of *kensho* or *satori* (discussed below). Much of daijo zen can thus be thought of as concerned with what would commonly be described as *mystical experiences*—disrupting regular ego-functioning in order to experience the world more directly and glimpse some form of Ultimate Truth. Inherent to daijo zen is a sense of struggle—a relentless and desperate desire to "wake up". Nowhere is this pursuit more clearly exemplified than in koan practice. Practitioners of this zen uphold the universal-liberation principles of Mahayana Buddhism and thus see their practice as being in accordance with the Buddha's highest teachings. They understand that the liberation of all beings is inseparable from one's own because the separation of all beings is an illusion. One's liberation thus inherently works for the liberation of all beings (Hoshin, 2022, pp. 30-32).

Saijojo zen or "easy and perfect zen" is the zen that was practiced by Shakyamuni Buddha and is understood as the highest vehicle of the five styles discussed here—the culmination of Zen Buddhism (Kapleau, 1993, p. 46). Unlike daijo zen, saijojo zen does not aim to realize anything. It regards zazen not as a means to an end, but rather, as an expression of the end itself (Kapleau, 1993, p. 46). Anzan Hoshin roshi (2022) described this practice as "not looking for Buddha in any way but simply realizing one's own looking to be Buddha" (p. 34). The core practice of saijojo zen is *shikan-taza* or "just sitting"—a very subtle form of zazen practice where one "drops" the body-mind[12] and experiences experiencing itself, free from time, space, and all forms of grasping. Shikan-taza is not shutting out any or all aspects of

[12] In Zen, the distinction between body and mind is generally regarded as a false dichotomy, so the term "body-mind" is commonly used to convey the radically intertwined nature of mental and physical states.

experiencing, but rather, it is the activity of experiencing itself, arising through and as all thoughts, impressions, and sensations (Hoshin, 2022, p. 35). This form of experiencing is thus distinct from pure consciousness events (see section on *Mushin-jo* for further discussion).

Major Schools

There is a long-standing debate among Buddhists as to whether enlightenment arises suddenly or gradually, and opposing answers to this question are in large part responsible for the division between the two major schools of Zen today: *Rinzai* and *Soto* Zen (Smith, 2015). Rinzai practitioners generally hold that enlightenment arises suddenly, and this is reflected in their practices, which "launch a frontal assault on the barriers to liberation and demand the highest levels of discipline and commitment" (Coleman, 2001, p. 94). Rinzai practitioners are thus more concerned with achieving acute moments of profound insight—awakening in a flash to the true nature of the self and the ultimate nature of the universe (Kapleau, 1993, pp. 46-47). The Rinzai school is traditionally associated with daijo zen, concentrating largely on koan practice as a means of attaining acute moments of awakening.

Soto practitioners generally hold that enlightenment arises gradually, placing relatively little importance on mystical-type ASCs. James Coleman (2001) described Soto Zen as "softer in tone" than Rinzai, placing more emphasis on ritual, ceremony, and zazen (p. 94) with the goal of cultivating a one's power of concentration and integration of the Buddha's teachings into everyday life (Kapleau, 1993, pp. 46-47). Both schools demand extreme dedication, but in Rinzai the rigor reaches "samurai proportions", with physical exertion and sleep deprivation often being major factors in ongoing practice (Smith, 2015). While Soto practitioners generally regard kensho and satori as legitimate fruits of Zen practice, their practice is not chiefly aimed at achieving them, because achievement, grasping, and desire are seen as indicative of a

fundamental misunderstanding: that Buddhahood is something beyond one's current experience—that it is something that can be grasped, acquired, or earned. In Soto Zen, one must hold an "unshakable faith that sitting as the Buddha sat, with the mind void of all conceptions, of all beliefs and points of view, is the actualization or unfoldment of the inherently enlightened Bodhi-mind with which all are endowed" (Kapleau, 1993, p. 7).

It must be said here that daijo zen and saijojo zen (i.e., the Rinzai and Soto schools) are not diametrically opposed; they exist within very similar belief structures but propose different progressions along the path towards enlightenment. For Rinzai practitioners, daijo zen and the mystical-type ASCs one has through Zen practice reveal to the practitioner the true nature of the self and the ultimate nature of the universe and in this way, exhibit a distinct *noetic quality*. Such experiences (usually attained through koan practice) directly reveal to the practitioner their inherent Buddha-nature (Kapleau, 1993, p. 7). In effect, Rinzai practitioners seek to experience for themselves what Soto practitioners (at least initially) take on faith or only understand intuitively or intellectually: that one is *already* Buddha, and that forgetting this gives rise to an illusory *self* which is superimposed on a seamless and undifferentiated universe (Hoshin, 2022, p. 35). Soto practitioners, taking shikan-taza as their starting point, regard experiences of kensho and satori as unnecessary pre-requisites for the authentic practice of shikan-taza. By taking the merit of Zen practices on faith in the early stages, they can avoid becoming ensnared by the clinging to mystical experiences or the desire to "get enlightened", which often serves as a barrier more than an impetus for practice among Rinzai practitioners (Kapleau, 1993, p. 7).

Hakuun Yasutani roshi was trained in both Rinzai and Soto Zen, and believed these two schools of Zen as they were being practiced during his lifetime were respectively incomplete and complimentary (Kapleau, 1993, pp. 44-46). He argued that without experiencing kensho

firsthand, Soto Zen practitioners cannot comprehend the purpose of their practice and thus reduce shikan-taza to mere bompu zen, while Rinzai Zen practitioners often mistake satori as the ultimate ends of practice, and thus fail to integrate their insights into their daily activities (Kapleau, 1993, pp. 47-48). He thus promoted an attitude which saw daijo zen and saijojo zen on a continuum of practice, where effective practice of daijo zen would provide the mystical insights necessary to imbue the practice of saijojo zen with appropriate meaning and direction. Shikan-taza, Yasutani roshi argued, was the highest aim of Zen practice, but it was inherently misguided without practitioners understanding their inherent Buddhahood *firsthand*.

Investigating whether or not shikan-taza can be practiced authentically without first having experienced kensho is beyond the scope of this study, but it is important to recognize the different contexts in which ASCs are understood in the various schools of Zen Buddhism. For the current study, we are concerned primarily with the fourth and fifth styles of zen (daijo and saijojo) as they arise in Rinzai and Soto Zen respectively.

Zen ASCs

The practices of Zen give rise to several altered states, especially as one's practice deepens over time. Among these are unusual perceptions and sensory experiences. Hearing phantom noises, experiencing alterations to colour perception, or the skewing of one's sense of the body's weight or orientation in space are especially common. Other altered states may exhibit qualities reminiscent of the mystical experiences described by Walter Stace and William James in Chapter 1. Great care is taken among Zen instructors to ensure meaning is not ascribed to altered states which do not constitute Self-realization. Depending on their quality and how they are understood, altered states may be interpreted as *makyo*, *kensho*, or *satori*. This section will explore these terms and what constitutes an experience of each.

Makyo

To see a beautiful vision of Bodhisattvas does not mean that you are any nearer becoming one yourself. (Yasutani, 2010)

"Makyo" is a Japanese term for a specific class of altered states and perceptions observed among Zen practitioners during zazen. In his 1959 lectures on the fundamentals of Zen practice, Hakuun Yasutani roshi described makyo as the visions, hallucinations, and illusory sensations which arise during zazen. These dream-like experiences thus arise in subjective awareness as a blending of the real and the unreal. Despite being regarded as hallucinations, Makyo are transient and widely observed among Zen practitioners, and are thus generally not pathologized. Shakyamuni Buddha himself is said to have experienced innumerable makyo immediately preceding his awakening (Kapleau, 1993, p. 41).

In his discussion of makyo, Yasutani roshi provides specific examples of visual hallucinations—e.g., solid objects becoming transparent or appearing as if they are breathing; the entire visual field suddenly going white or black; or the appearance of complex symbolic imagery like Buddhas and bodhisattvas, masks, demons, or angelic beings. One may see "strange shapes" (Hakuun, 2010) similar, perhaps, to the "form constants" discussed in Chapter 2. One may experience phantom sounds and smells as well (Kapleau, 1993, p. 39). Yasutani roshi specifically mentions students who would repeatedly hallucinate the sounds of bamboo pipes being played, or Buddhas reciting sutras. The Roshi also mentions distortions to bodily perception—e.g., feeling hot, cold, or like one is floating or sinking (Yasutani, 2010). One might also experience involuntary movements, or speech/writing without conscious awareness, ostensibly reminiscent of the "mediumistic trance" discussed by William James in Chapter 1 (Kapleau, 1993, p. 39). In his commentary on the Satipatthana sutta, Anzan Hoshin roshi (2018)

also discusses the bliss, equanimity, tranquility, and exalted states of rapture that can arise through practice, all of which amount to makyo should the experiencer lack the insight and the understanding of these experiences' radical impermanence and emptiness[13] (p. 93).

These are only a few examples of makyo; in truth, zazen practice can give rise to an unlimited variety of illusory experiences, varying in accordance with the personality and temperament of the practitioner (Kapleau, 1993, p. 39). Makyo may be subtle, or they may arise with great intensity. No matter the content or clarity of such experiences, however, Zen practitioners ought never to think these phenomena real or that the visions themselves have any meaning (Kapleau, 1993, p. 40).

Ma means "devil" and *kyo* "the objective world". This connotes the disturbing or "diabolical" nature of these phenomena. Such experiences, however, are not always unpleasant. On the contrary, they will often be experienced as blissful or entertaining, and sometimes be misinterpreted as a sort of mystical revelation. The negative connotation thus comes not from the phenomenological quality of these experiences, but from their potential to ensnare those ignorant to their illusory nature. If a practitioner attaches some sort of special and unwarranted meaning to makyo experiences, they can pose considerable obstacles to one's practice (Kapleau, 1993, pp. 38, 99). Generally, practitioners will therefore be instructed not to place any importance on these experiences and regard them as nothing more than "pseudo-enlightenments" or mere "side effects" of zazen (Hoshin, 2018, pp. 93-94; Austin, 2015, p. 373; Loori, 2004). Makyo experiences can thus be understood as inherently lacking a noetic quality.

[13] In Mahayana Buddhism, "emptiness" (śūnyatā) generally refers to the absence of 'self' or intrinsic nature (Williams, 2009, p. 50).

Kensho and Satori

> *[W]hen you hear a bell ringing you think, consciously or unconsciously, 'I am hearing a bell, three things are involved: I, a bell, and hearing. But when the mind is ripe… there is just the sound of the bell ringing. This is kensho.*
>
> *(Hakuun Yasutani roshi in Kapleau, 1993, p. 154)*

"Kensho", literally meaning "seeing into one's own nature", is a Zen term which refers to enlightenment experiences. Semantically, kensho and satori have virtually the same meaning, and in western discourse, they are often used interchangeably (Kapleau, 1993, p. 336). Some scholars differentiate the two, describing satori as a more intense and enduring sort of kensho (e.g., Smith, 2015), but they do not appear substantially different in content. Kensho is understood to occur in varying levels of intensity (Kapleau, 1993, p. 47), so it is unclear how one should differentiate between satori and a "big kensho". Kensho and satori are thus used synonymously in the present study.

In Zen, the term *kensho* generally refers to a powerful experience of awakening. Specifically, kensho is used to describe the acute recognition of the radical unity or *Oneness* of all things (Coleman, 2001, p. 123). The self, which our ordinary waking consciousness takes to be an entity ontologically distinct from the surrounding universe, is directly apprehended as illusory and "dropped", allowing one to experience conscious awareness unfettered by the distorting influence of self (namely, passion, aggression, and stupidity) (Kapleau, 1993, p. 137). Yasutani roshi described kensho as simply perceiving in a flash that "The tall bamboo is tall, the short bamboo is short" (Kapleau, 1993, p. 144), or as shown with the quote opening this section, kensho occurs when sensory experiences arise, unmediated by distinctions between self and non-

self, completely free of liking, disliking, and ignorance. In this way, kensho more readily present extrovertive qualities of unity than introvertive ones.

With that said, descriptions of certain kensho experiences appear to exhibit some introvertive qualities. For example, Philip Kapleau (1993) described his first kensho experience as:

> *All at once the roshi, the room, every single thing disappeared in a dazzling stream of illumination and I felt myself bathed in a delicious, unspeakable delight… For a fleeting eternity I was alone—I alone was… Then the roshi swam into view. Our eyes met and flowed into each other, and we burst out laughing... "I have it! I know! There is nothing, absolutely nothing. I am everything and everything is nothing!"* (p. 228)

One cannot carry out thematic analysis on qualitative descriptions like these with reliable precision—the metaphorical language is simply too ambiguous—but if Kapleau's experience of everything in the room disappearing and being bathed in a dazzling stream of illumination is taken literally, then a degree of undifferentiated awareness seems present here, albeit fleeting. Kensho may thus exhibit elements of both introvertive and extrovertive unity. This example also exhibits the mystical qualities of timelessness/spacelessness, deeply felt positive mood, and a noetic quality.

Kensho may arise spontaneously,[14] during zazen, or once one hits a breaking point during koan practice, but regardless of how it is experienced, the content is always the same—whether it

[14] Hakuun Yasutani roshi argued that spontaneous kensho experiences do occur, but almost never to individuals without Zen training (Kapleau, 1993, p. 69).

is experienced by the Buddha or the Zen novice (Kapleau, 1993, pp. 47, 228). The degree to which one experiences this content, however, varies dramatically in intensity, depth, and completeness (Kapleau, 1993, p. 47). Through ongoing practice in the wake of kensho experiences, Zen practitioners work to broaden their practice and integrate this realization into everyday life. This is the project of saijojo Zen, and it eventually allows one to see that the clarity of kensho is all that is ever going on—available everywhere and in every moment (Hoshin, 2022, p. 35).

Time perception may be distorted for one experiencing Kensho, but it is ultimately transient (Coleman, 2001, p. 123; Kapleau, 1993, p. 228), and unless fortified with dedication, concentration, and ongoing practice, a single kensho experience will not necessarily have an appreciable, lasting impact (Kapleau, 1993, p. 20, 190; Villalba, 2015). If one is able to integrate their self-transcendent kensho experience into everyday waking life, it does not prolong the acute effects of the experience. As James Coleman (2001) explains, “It is not that the self-concept and the personality just disappear but that they are understood so completely that they are recognized as transitory and unimportant” (p. 123).

At its core, kensho is a conscious experience free of a discreet sense of self. Consciousness persists and sensory phenomena may still occur, though radically different from everyday waking consciousness due to the clarity of experiencing and dissolution of subject/object distinctions. It is not clear from my research whether this clarity manifests qualitative differences in perceptual processes (e.g., heightened definition and colour perception for sight, the amplification of hearing, or sensitivity in tactile processing).

Mushin-jo

Even among Japanese who have been studying and practicing Zen for five years or more there are many who misunderstand Zen practice to be a

> *stopping of consciousness. There is indeed a kind of zazen that aims at doing just this, but it is not the traditional zazen of Zen Buddhism.*
>
> (Hakuun Yasutani roshi in Kapleau, 1993, p. 32)

Kensho should not be mistaken for a pure consciousness event. In Zen, PCEs are known as "mushin-jo" (literally "no-mind practice" or "a meditative state without mind") and are not sought after in daijo or saijojo zen. Anzan Hoshin roshi (2022) describes mushin-jo as a state in which one is freed from their confusion, not because they've come to understand anything about their experience, but because they've effectively "closed the door" on it (p. 31). One does this by cultivating an extreme capacity for concentration and closing oneself off to all of experiencing to induce an equanimous meditative state devoid of phenomenological content (Kapleau, 1993, p. 47). While this may result in some form of self-transcendence, it is markedly different from that of kensho.

Self-transcendence which results from the elimination of all subjects and objects is quite different from experiencing subject and object indiscriminately and thus transcending the dichotomy (a central feature of kensho) (Josipovic, 2014). The former is contingent upon one remaining in controlled states and environments and is phenomenologically very sparse; the latter allows one to move through the world unfettered by the distorting effects of self and may vary in phenomenological richness. Mushin-jo thus temporarily frees one from confusion, but it's a very conditional sort of freedom, as one's experience of the world as "I" and "not-I" returns immediately with the discontinuation of the practice (even more forcefully for having been suppressed) (Hoshin, 2022, p. 31). By contrast, subject/object distinctions reassert themselves in the wake of a kensho experience, but they are recognized as illusory, and hold less importance as one's Zen practice deepens (Coleman, 2001, p. 123).

Mushin-jo can thus be thought of as a strictly introvertive unitive experience, where kensho may exhibit elements of introvertive and extrovertive unity. If this ASC is experienced as noetic, Zen Teachers are likely to identify the experiencer as mistaken.

Phenomenology of Zen ASCs

Like psychedelics, the various mind-altering practices of Zen do not reliably induce a single sort of experience. While rigorous and sustained practice can lead one to the experience of kensho (which is understood to be the same across time, space, and individuals), the incidental ASCs one experiences along the path towards enlightenment are highly varied. This section explores how the ASCs induced through Zen practices affect one's perception, cognition, and mood.

Perception

Zazen and koan practice can induce dramatic alterations to perception. Most of these are properly regarded as *makyo* in Zen literature. To review: makyo are the visions, hallucinations, and illusory sensations that arise during formal practice. They are dream-like and extrovertive, blending elements of the real and unreal (full dissociation from reality appears uncommon).

Mild or major alterations to visual perception may occur, including changes to colour and depth perception, and hallucinations of light and both complex imagery and elementary shapes (though a recent study suggests complex imagery may be more common than elementary imagery—see: Smigielski et al., 2019b). One may also experience phantom sounds and smells. Alterations to bodily awareness is also quite common, as is hallucinating physical sensations. One's experience of balance and gravity may be affected, and they are likely to experience involuntary movements.

In addition to these illusory perceptions, one may experience an unrivalled richness and clarity to their experience, especially as they attain deeper degrees of self-realization (kensho) (Hoshin, 2022; Osto, 2016, pp. 102-103). This clarity may be due to the ways in which rigorous zazen practice disrupts predictive processing—the psychological process through which our deeply engrained expectations of reality distort our perceptions through automatized associations[15] (Velasco, 2017).

This clarity may also be due to the de-emphasis of subjectivity and the amplification of "objective perception" or "suchness"—i.e., heightened immediacy of perception that occurs when conscious experiencing arises absent a discreet sense of self (as seen with the bell example given at the beginning of the above section on Kensho and Satori). In *Before Thinking* (2022), Anzan Hoshin roshi also illustrates this point when he says, "perhaps there is pain, and we cannot even feel what the pain is like because we are so involved in our suffering, so involved in our images of the pain, that we can't actually feel what it feels like. We can only feel our reactivity" (p. 161). This reactivity (characterized by passion, aggression, and stupidity) ultimately clouds perception, causing experiences like pain (e.g., sensations of stiffness, pulsing, warmth, tingling, etc.) to be experienced as suffering, which superimposes self-concerned evaluative judgements over what is objectively happening. Interestingly, this may in part account for why Zen adepts exhibit heightened pain tolerance (Grant et al., 2010).

[15] A famous example of predictive processing's reality-distorting effects is the hollow-mask illusion. When one looks at the inside of a plastic mask, they are likely to perceive the face (which is concave) as convex, due to deeply internalized expectation that human faces present as convex (Clark, 2016, pp. 49-51).

Cognition

If you give rise to even a flicker of like and dislike, you lose your mind in delusion. (Eihei Dōgen Zenji, *1227*/1986)

Cultivating an attentive and non-reactive state of awareness is a central goal for all OM practices, including Zen (Valesco, 2017). This manifests a deep clarity of perception among Zen adepts, but it also manifests a clarity of cognition, most obviously through the cessation of discursive thinking. During zazen, Zen adepts are able to attend to their experience so fully that the mind becomes devoid of all conceptions, beliefs, and points of view (Kapleau, 1993, p. 7). Their experience may be phenomenologically rich but lacking any sort of autobiographical narrative ascribing richness to their experience. This abandonment of subjectivity results in major reductions to spontaneous cognition, daydreaming, fantasizing, and involuntary mind-wandering (Josipovic, 2014; Pagnoni, 2019; Cárdenas-Egúsquiza & Berntsen, 2023).[16]

This non-reactive state of awareness has also been shown to decrease startle responses among Zen adepts (Antonova et al., 2015). If observing a room full of Zen practitioners during a retreat, this phenomenon can clearly be seen; as part of practice, many abrupt and loud sounds are heard throughout a Zen monastery (e.g., gongs, bells, wooden clappers), and one can easily see novice practitioners flinching or being physically jolted out of their mental stupor/mind-wandering in response to the sound, while attentive practitioners will not (Pagnoni, 2019).

[16] This is likely because the brain's default mode network (DMN) mediates both ego-functioning and task-unrelated cognitive processes like mind-wandering and self-projection (Pagnoni, 2019), and mindfulness practices like zazen have been shown to disrupt the functional connectivity of the DMN (Brewer & Garrison, 2014), both during and following practice (Taylor et al., 2013).

There is also theoretical evidence suggesting that zazen may increase cognitive flexibility among Zen adepts. As Pagnoni (2019) explains, it is reasonable to expect that the non-reactive state of awareness cultivated through Zen practice frees one from "inveterate mental schemata" or habituated patterns of thought and behaviour, allowing Zen adepts to make novel connections and think creatively more easily. This hypothesis is somewhat supported by studies which have found that Zen practitioners generally outperform control groups in Stroop test performance (Greenburg et al., 2012; Osaka, 2023)[17], but further research into Zen's impact on practitioners' cognitive flexibility is needed.

Finally, Zen alters practitioners' cognitive processes by demanding a more intuitive and embodied mode of experiential processing, rather than a logical, linguistic, or cerebral mode. The futility of a cerebral approach to genuine self-realization is commonly discussed among Zen masters (Kapleau, 1993, p. 84), and nowhere is this made clearer than in koan practice, the paradoxicality of which renders such an approach useless.

Mood

> *Once you are enlightened you can descend to the deepest hell or rise to the highest heaven with freedom and rapture.*
>
> (Hakuun Yasutani roshi in Kapleau, 1993, p. 82)

[17] The Stroop test requires participants to name the ink colour in which non-corresponding colour words are written—e.g., the word "blue" written in yellow ink. "Stroop interference" refers to the phenomenon of participant error—e.g., answering "yellow" for the "blue" prompt because the ink colour is yellow. This inability to flexibly adapt to novel and non-habitual task requirements is sometimes taken as evidence for inflexibility (Greenburg et al., 2012).

As practitioners cultivate an attentive and non-reactive state of awareness, their ability to clearly experience interoceptive stimuli increases significantly. This includes one's emotional states. Zen adepts thus tend to experience their emotions with increased sensitivity and clarity, but because they are experienced non-reactively, they do not cloud one's judgment (Kapleau, 1993, p. 14). And indeed, pronounced affective states commonly arise during Zen practice; a series of transcribed dokusan between Hakuun Yasutani roshi and his students reveal how often fear, sadness, and desperation arise during *sesshin* (intensive monasterial retreat typically lasting 5-7 days), especially during koan practice (Kapleau, 1993, pp. 83-154). Of course, there are also moments of rapture, tranquility, and bliss (as shown in a recent study—see Smigielski et al., 2019b), but experiencing these are not the goals of Zen practice; if attention contracts around these states, they are just as obstructive as dwelling on one's pain or self-pity (Hoshin, 2018, p. 85). Such contraction is so tempting that rapture, tranquility, and bliss are described as "Imperfections of Insight" in the Satipatthana Sutta (Hoshin, 2018, pp. 93-94).

Notwithstanding, anecdotal reports suggest these sorts of exalted states are characteristic of kensho experiences reported by Zen novices. For example, Hakuun Yasutani roshi claims "the rapture of kensho" can easily keep one awake for two or three nights following an initial awakening, but returning from this "delirium of delight" and realizing there is truly nothing queer about the state of kensho is key (Kapleau, 1993, p. 55). In truth, it is difficult to say whether kensho experiences are inherently highly affective because this "delirium of delight" may be result of a cathartic release caused by the dramatic cessation of intensive practice, or of the sudden radical shift kensho has on one's ontological beliefs, sometimes called "ontological shock" or a "spiritual emergency" (Carhart-Harris & Friston, 2019; Grof & Grof, 1989). Despite these confounding factors, the complete breakdown of subject/object distinctions *is* commonly

described as a profoundly and inherently joyous experience. Take for example, Philip Kapleau's (1993) own initial kensho experience:

> *[T]he room, every single thing disappeared in a dazzling stream of illumination and I felt myself bathed in a delicious, unspeakable delight… For a fleeting eternity I was alone—I alone was.* (p. 228).

Theoretically, subsequent kensho experiences would be less de-stabilizing for Zen adepts, not because the quality of kensho necessarily changes for them, but because the practitioners are not experiencing radical shifts to their ontological frameworks. Further research into kensho experiences among Zen adepts is needed to draw stronger conclusions about any sort of inherent affective quality of these experiences.

Zen ASCs as Mystical Experiences

In this chapter, we have seen examples of Zen ASCs which exhibit **transcendence of time and space**, (primarily extrovertive) **feelings of unity**, and **deeply felt positive** mood, arising within both genuine mystical experiences (e.g., kensho) and illusory ASCs (e.g., makyo). The **ineffability** of Zen ASCs also appears common. This is clearly seen in the *suchness* of kensho experiences and explains why Kapleau (1993) describes language as a "strait jacket" which fits over experience (p. 64). Keeping in mind that the whole of Zen practice aims to uncover the "essential Truth of the universe" through practices which bring one's experience beyond the narrow lens of the self, there certainly appears to be a **noetic quality** baked into Zen ASCs which constitute genuine Self-realization (kensho) (Kapleau, 1993, p. 17). Importantly, however, not all Zen ASCs possess this quality; many of these ASCs are regarded as makyo and are thus systematically regarded as illusory. As Zen is a non-theistic tradition, **a felt sense of sacredness** cannot be said to characterize mystical-type Zen ASCs unless we adopt a broader

understanding of sacredness to include the "specialness" described in Chapter 1. On this interpretation, the specialness of Zen ASCs as they have been presented in this chapter cannot be denied, as they underpin the entire practice of daijo zen and are upheld by the Rinzai school as an essential feature of Buddhist Enlightenment.

Additionally, three Zen practitioners who experienced pronounced Zen ASCs during a recent study scored relatively high (75% of the scale maximum or above) on all six of these domains when responding to the Hood Mysticism Scale, a psychometric questionnaire which measures the phenomenological qualities of mystical-type ASCs (Smigielski et al., 2019b).

It would thus appear that mystical typologies can potentially be used to describe, at least crudely, some essential features of Zen ASCs (especially kensho). However, it would be unwise to label Zen an essentially "mystical" tradition in light of this.

Many Zen Teachers reject the *mystical* label when describing ASCs associated with Zen practice, perhaps because psychometric questionnaires like the Hood Mysticism Scale or the etic language and typologies developed by thinkers like James and Stace sometimes lack the semantic precision to satisfactorily describe states like kensho/satori. Or perhaps the term is rejected because it will suggest to some that Zen is an "alien" and "bizarre cultural study" relying on occult forces and speculation, when in fact, it is a straightforward and empirically testable practice (Kapleau, 1993, p. 85). While the first of these two possibilities is a genuine concern (addressed in chapter 5), the second can be largely remedied through a nuanced understanding of mysticism which acknowledges its own limitations.

So, while the present study's mystical typology may appear to track many aspects of certain Zen ASCs, it does not necessarily mean that Zen ASCs are phenomenologically similar or identical to other ASCs which seemingly exhibit these qualities. Mystical typologies are here

being deployed simply to help distinguish certain Zen ASCs (e.g., kensho) from characteristically different ones (e.g., mushin-jo, makyo) and to frame a conversation about the phenomenology of these states. Doing so should not be regarded as an attempt to reduce these states to a special sort of perennial/universally identical ASC (the dangers of which are discussed in Chapter 5).

Conclusion

The various practices of Zen can significantly alter perception, cognition, and mood. While these effects are sometimes regarded as *makyo* (and thus illusory and inconsequential), skilled Zen practitioners may also have "genuine mystical experiences" called *kensho* or *satori*, characterized chiefly by the breakdown of subject/object distinctions. Within Zen literature, these experiences are understood to be the same across time, space, and individuals though they arise with varying degrees of intensity. Though powerful and potentially transformative, these self-transcendent experiences are not typically regarded as ends in themselves, and Zen practitioners work diligently to integrate the mystical insights afforded by these experiences into their everyday lives.

CHAPTER 4: COMPARING ZEN AND PSYCHEDELICS

Comparative Analysis: A Major Gap in the Literature

The question of whether psychedelic ASCs could in some sense be equivalent to those induced through Zen practices like zazen and koan lurks in the shadows of both psychedelic and Zen discourse. On a few occasions, researchers have ventured into these shadows and returned with insights that have proven helpful to the present study, but extensive comparative analyses of these states' acute phenomenologies are scarce. Drawing even preliminary conclusions about how Zen and psychedelic ASCs qualitatively compare to one another thus relies heavily on inductive reasoning and thematic analysis of 'grey literature' on the topic.

The cultural interplay of psychedelics and Zen can be traced back to the 1960s, but it wasn't until the publication of the 1996 special issue of the popular Buddhist magazine *Tricycle: The Buddhist Review* devoted to Buddhism and psychedelics that the discourse on Zen/psychedelic ASC equivalency started taking its current shape. Prior to this, several publications had suggested such equivalency, but they usually came from authors steeped in perennialist bias who had limited experience with Zen ASCs. Much of the pre-1996 literature has thus been analyzed with a critical awareness that many authors assumed *a priori* that all mystical states were phenomenologically indistinguishable. As this section will show, such an assumption is not always reflected in the data. Admittedly, the available data is limited and largely anecdotal. It is, however, sufficient to draw preliminary conclusions which may serve as testable hypotheses for future research (discussed in Chapter 5).

Historically, researchers, Zen practitioners, and psychedelic pundits who write on both psychedelic and Zen ASCs have not engaged in a rigorous investigation into the shared qualities of these states. They have instead been much more preoccupied with questions like, "is

psychedelic mysticism less genuine than Zen mysticism?" and "do psychedelics help or hinder one's Zen practice?". These sorts of questions have been at the centre of this comparative literature largely because of the historical context in which the need for comparison arose. Briefly exploring this historical context will thus prove helpful before discussing the comparative literature.

History of Zen and Psychedelics

The overlap of Zen and psychedelics can be traced back to the American "Zen Boom" of the 1960s. Zen had been growing in popularity throughout the 1950s thanks to beat writers like Jack Kerouac, Allen Ginsberg, and Gary Snyder, who popularized Zen as a foil to the shallow, overly rational, consumerist mainstream culture of mid-century America. By the mid 60s, the practice of Zen was taking off, and accomplished teachers had arrived from Japan and begun teaching American students, many of whom had found their way to the zendo spurred by their ego-shattering psychedelic experiences (Osto, 2016, pp. 62-67). Some sought Zen communities in the wake of their psychedelic experiences hoping to find in meditation a more intense, real, or sustainable ASC than they were able to achieve with psychedelics. Others hoped that through Zen practice, they could "extend, comprehend, and deepen their insights" (Coleman, 2001, p. 202; Davis, 2015). This latter hope could be considered an attempt at mobilizing Zen teachings to aid in *psychedelic integration*.

The trend of psychedelically initiated hippies seeking mystical training from Zen teachers eventually became so widespread that a public discourse around whether psychedelics were a help or hindrance to one's Zen practice became an unavoidable concern of American Zen communities (Fields, 2015). Several Zen communities during this time even reported students showing up to monasteries for Zazen practice under the influence of psychedelics, and not

without incident (Fields, 2015). Perhaps unsurprisingly then, during the 60s and 70s most Zen teachers discouraged (or outright prohibited) the use of psychedelics in the sangha, but many American convert Buddhists were slow to dismiss the spiritual value of these substances. Many (if not most) American Buddhists at this time had used psychedelics, and often, they found that their psychedelic experiences meaningfully informed their Buddhist practice (Walsh, 1982; Osto, 2016; Coleman, 2001; Tart, 1991; Tricycle, 1996; Kornfield, 1996; Strassman, 2001, pp. 233-234).

As Douglas Osto (2016) demonstrates, advocating for psychedelics as "door openers" (i.e., a means of legitimately initiating one's practice) is a relatively common position held by American Buddhists, but others hold more radical and counter-hegemonic views—e.g., that psychedelics are the "true dharma", or that ongoing psychedelic use can enhance one's Buddhist practice. Debates for and against the legitimacy of such claims make up the majority of the available literature discussing Zen and psychedelic ASCs.

Major Sources

Investigating the qualitative similarities and differences of Zen and psychedelic ASCs has yet to be the primary focus of any major research project. Three important texts obliquely touch on this topic: James Austin's *Zen and the Brain* (1998/2015), Allan Badiner and Alex Gray's *Zig Zag Zen* (2002/2015), and Douglas Osto's *Altered States* (2016), but the acute phenomenologies of both Zen and psychedelic ASCs are minimally discussed in all three of these books, and systematic comparative analysis is scant.

Tricycle's 1996 special issue on psychedelics and Buddhism contained several articles comparing psychedelics and Zen, and they mark some of the first of their kind, but because much of *Zig Zag Zen* is comprised of these articles, it will not be discussed at length here. *Zig Zag*

Zen—a collection of essays from Buddhists familiar with psychedelics—is essentially an elaboration of *Tricycle*'s 1996 special issue, and much of *Altered States* is a sort of commentary on *Zig Zag Zen*. Taken together, these three publications form a coherent and progressive discourse around psychedelic use among American Buddhists, one which has gradually come to include perspectives both *for* and *against* the claim that psychedelics have any place in Buddhist communities. *Zig Zag Zen* and *Altered States* both discuss psychedelics and many schools of Buddhism and are only partially concerned with ASCs specifically associated with Zen.[18] The initial 2002 publication of *Zig Zag Zen* was highly biased, focussing heavily on the equivocation of Zen and psychedelic insights while minimizing anti-perennialist perspectives which firmly distinguished the quality and function of Zen and psychedelic ASCs. The 2015 edition (used for the present study) addressed this issue by adding several new chapters which balanced these perspectives.

Zen and the Brain is dedicated primarily to Zen meditative practices and how they can be understood through the neurological workings of the human brain. It only discusses psychedelics in passing, but it provides some meaningful analysis on how psychedelic and Zen ASCs relate to one another. It is important to note that Austin's understanding of psychedelics is somewhat rudimentary[19] and seemingly coloured by Reagan era anti-drug biases—issues which persisted

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[18] Considerably more has been written on the relationship between psychedelics and non-Zen schools of Buddhism. For example, Mike Crowley's *Secret Drugs of Buddhism* (2019) investigates potential psychedelic use among early Vajrayana Buddhists, and Leary, Alpert, and Metzner's *The Psychedelic Experience* (1964) attempts to create a practical guide to psychedelic use by re-interpreting the Tibetan Book of the Dead.

[19] For example, Austin (2015) demonstrates a clear misunderstanding of psychedelics' abuse potential (p. 427) and lack of awareness around processes of psychedelic integration (p. 430). Furthermore, when challenging the

even in later editions published after a flurry of psychedelic research demonstrated the safety and therapeutic potential of these substances. This should be considered when reviewing his analysis.

Two other books obliquely yet meaningfully discuss the relationship between psychedelics and Zen ASCs: Rick Strassman's *DMT: The Spirit Molecule* (2001) and James Coleman's *The New Buddhism* (2001). While neither of these provide comparative analysis, the insights provided by both these authors proved to be helpful supplemental material to the comparative analyses in *Zen and the Brain, Zig Zag Zen,* and *Altered States*. Though psychedelic-focussed and distinctly perennialist in its philosophical assumptions, Alan Watts's *The Joyous Cosmology* (1962/2013), has also served as a somewhat helpful supplement here. A scattering of journal articles published in *Psychologia*, the *Journal of Humanistic Psychology*, and *The Eastern Buddhist* also provided worthwhile insights.

In the past decade, a flurry of clinical studies comparing meditative and psychedelic ASCs have been carried out, and where appropriate, these studies have been included to supplement the claims made in the comparative literature. The most relevant of these studies has been that of Smigielski et al. (2019a, 2019b). In this randomized, double-blind, placebo-controlled study, psilocybin was administered to 20 of 39 advanced meditators[20] (group mean experience of ~5000 hours of meditation and 30 retreats) during a 5-day sesshin (hereafter referred to as the "psychedelic sesshin study"). Qualitative psychometric data were gathered

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"mystical authenticity" of psychedelic experiences, Austin focusses myopically on how psychedelic mysticism has been studied in mainstream scientific research, failing to acknowledge the plethora of mystical traditions which use these substances religiously and ceremonially (see: Chapter 2).

[20] 32/38 study participants were Zen practitioners, 6 were practitioners of Vipassana meditation with a history of Zen practice.

from both the placebo and psilocybin subjects using the 5D-ASC (Dittrich, 1998) and Hood Mysticism Scale (Hood, 1975), then contrasted (see: *Figure 1*). The findings have provided some of the most valuable empirical data contained in the present study.

Importantly, the a priori criterion of 60% of scale maximum for a "strong" mystical-type experience was met by 19 of 20 participants (95%) in the psilocybin group but only 3 of 19 participants (15.8%) in the placebo group (who induced ASCs through Zen practices alone) (Smigielski et al., 2019b).[21] This drastically reduces the dataset for comparing Zen and psychedelic ASCs with this study's findings, and should be considered when drawing conclusions based on this data.

Cognition

Ultimately, Buddhism and psychedelics share a concern with the same problem: the attainment of liberation for the mind. (Allan Badiner, 2015)

Dishabituation of Mind

Both Zen practice and psychedelics impact cognition in ostensibly similar ways. First and foremost, both allow individuals to overcome habituated patterns of thought. But how similar are these dishabituated states? In a 2012 public dialogue with James Fadiman, Zen Buddhist priest Kokyo Henkel claims both psychedelics and Buddhist practice "dissolve mindsets", stating "Any kind of fixed mind set, cultural and societal assumptions—a lot of things we just take for granted—one can see through, with both of these technologies" (Badiner & Grey, 2015).

[21] This also indicates that mystical-type ASCs may be induced significantly more reliably with psychedelics like psilocybin than with Zen practices, or that reliably inducing mystical-type ASCs through Zen practices requires far more training than one gets through ~5000 hours of meditation and 30 retreats).

As discussed in Chapter 3, Zen practitioners do this through "open monitoring" techniques which cultivate a non-reactive/non-judgemental and globalized state of attention. This interrupts habituated patterns of thought, particularly autobiographical and discursive thinking which reify the illusion of selfhood. Conversely, psychedelics dishabituate thought by inducing largely involuntary states of "entropic brain" activity (see: Chapter 2). Shizuteru (1971) described this difference as psychedelics giving rise to an "overwhelming abnormality of things that appear in the consciousness", where true Zen awakening occurs "with a breakthrough beyond the conceptual consciousness" (p. 151). Austin (2015) similarly claims that the Zen subject "learns gradually to empty the mind. In contrast, the subject driven by psychedelics is self-propelled into a sustained roller coaster ride, exposed to a heavy barrage of pressing perceptual, affective, and other mental phenomena" (p. 430).

Two major phenomenological differences between Zen and psychedelic ASCs immediately present themselves. The first is that psychedelic forms of unhabituated mind may be more "anarchic" (Carhart-Harris & Friston, 2019), characterized by discursive, 'busy', or even chaotic thought processes.[22] Zen ASCs like kensho also exhibit dishabituated cognition, but they do so primarily in that they lack discursiveness entirely. Zen ASCs can thus be thought of as necessarily free of conceptual categories, while psychedelics allow for new and novel deployment of conceptual categories (e.g., making connections, creative divergent thinking, changed meaning of percepts). As Zen teacher Joan Halifax states, "Meditation and [psychedelics] are both powerful contexts for shifting our assemblage point out of the habitual mind of culture and into a new frame of reference", but meditative practices do so with

[22] Such states of chaotic discursiveness are usually transient—i.e., entire psychedelic journeys are rarely (if ever) characterized by such states.

"stability" and "clarity" while "psychedelics don't necessarily cultivate those qualities" (Dass et al., 1996). This notion is echoed by one of Osto's (2016) interviewees, who found psychedelics "dampened [his] experience of awareness although they did offer [him] the experience of alternative states of mind beyond the habitual mind" (p. 128). This difference may indicate that psychedelic ASCs are less reliably noetic than Zen ASCs, but this requires further investigation.

The second major phenomenological difference between these unhabituated states is the degree of agency one has in either state. A Zen practitioner's agency is a key factor in their ability to reach and maintain a state of unhabituated awareness. If they abandon their practice by propagating the thoughts and feelings that arise during zazen or koan, they will naturally slip into habituated patterns of thought (e.g., daydreaming, rumination). Zazen and koan are engaged and voluntary acts, and Zen practitioners seem to maintain an ability to enter and leave the ASC at will (Walsh, 1990, p. 230; Smigielski et al., 2019b). The same cannot be said for those experiencing psychedelic states which arise automatically. One can mitigate to a considerable extent the confusing and chaotic quality of psychedelic experiences by releasing their attachment to pre-psychedelic modes of cognition (Masters & Huston, 1966/2000), but the psychotropic effects of a psychedelic will only subside with pharmacological intervention or the metabolization of the psychedelic substance (Johnson et al., 2008).

The psychedelic sesshin study (Smigielski et al., 2019b) tested both placebo and psilocybin participants for experiences of impaired cognition using the 5D-ASC with questionnaire items like "I had difficulty making even the smallest decision", "I was not able to complete a thought", or "I had difficulty in distinguishing important from unimportant things" (Studerus, 2012, p. 79). The study found that while rates of cognitive impairment were relatively low for all participants who reported having a 'complete' or 'strong' mystical experience,

placebo participants scored at approximately one third the rate of psilocybin participants in this domain (Smigielski et al., 2019b). This is based on a very small dataset, but it suggests that Zen ASCs may be less disorienting or disruptive to one's agentic capacities than psychedelic ASCs.

Self-Loss and Unity

Perhaps the most recurrent parallel commonly drawn between Zen and psychedelic ASCs is their shared capacity to induce ASCs with no discrete sense of self. As described in the previous chapter, experientially comprehending the illusory nature of self is a central goal in Zen, and the capacity of psychedelics to disrupt regular ego-functioning is considered one of their defining characteristics. *Self-transcendence* or *self-loss* experiences have thus been described at great length in both psychedelic and Zen literature.

In his (1961) article, *LSD and the Enlightenment of Zen*, Wilson van Dusen equates the phenomenology of satori to that of LSD-induced self-loss, stating that his "impression is that satori comes after symbolic death or a letting go of the personal identity". While van Dusen does not provide an explicit definition of satori as he understands it, he provides experiential reports from his clinical subjects, whose psychedelic ASCs he describes as "recognizably Zen-like in quality". For example, one of his subjects reported the following:

> *After the ingestion of 150 mcg of LSD, I experienced many walls that would crumble only to reveal a wall. This continued about seven times, then there was an experience of vast nothing[…] It was as if I had been torn apart; as if I were on the other side of this torn apartness. Concreteness disintegrated into nothingness. If I'd grasp at this nothingness it would slip away in many directions. There was an awareness of many directions—but all at once. When I did not try to grasp anything in this—there everything was, but all at once.*

> *Gradually there was no longer an "I" or a ''me." There was no them. There was just vast, total nothing. There was no sound but there was the hearing of no sound. There was nothing to see but there was seeing of this nothing to see. Dualities ceased, there was just a wonderful moving in nothing—empty, still and quite nothing. There was hearing of the sound of no sound.*

While this ASC exhibits elements of self-transcendence, this seems in many ways more reminiscent of mushin-jo than it does kensho/satori. As discussed in Chapter 3, such pure consciousness events are not traditionally associated with Zen. This form of self-loss appears far more introvertive than kensho/satori experiences—almost a denial of experiencing rather than an opening to it (opening fully to experience is a core feature of mystical-type Zen ASCs).

Another example of the potential conflation of kensho/satori and mushin-jo is seen in the work of Rick Strassman who administered several hundred doses of DMT to approximately 60 volunteers between 1990 and 1995 as part of an FDA-approved study investigating the human psychobiology of "DMT abuse". In an interview with Douglas Osto (2016), Strassman remarked that to his surprise:

> *[O]f the almost sixty people we gave DMT to, only one of them had a classic kensho. Being absorbed into a beatific white light where there was no self, no other, no shadow, no time, no anything other than this beatific white, unified, ego-dissolving experience. There was only one person who had that kind of experience. The rest were interactive, dynamic, highly relational kinds of experiences. (p. 98)*

Like van Dusen, Strassman fails to explicitly define what he means by "kensho". He insinuates that kensho experiences are highly affective, timeless, spaceless, and unitive, but in

describing a “classic kensho” as non-interactive and non-dynamic and devoid of “anything other than this “beatific white, unified, ego-dissolving experience”, he seems to be suggesting that kensho is a deeply introvertive experience, perhaps even a pure consciousness event akin to mushin-jo. As described in Chapter 3, kensho experiences may exhibit introvertive qualities, but Strassman here seems to suggest that a “classic kensho” is by definition not extrovertive, contradicting conclusions drawn in Chapter 3.

A lack of definitional consensus on what entails a kensho/satori experience thus poses challenges for the current study: if researchers fail to clearly state what is meant by these terms, then distinct ASCs may be conflated, simply because they both exhibit some form of self-transcendence. Unstructured and offhand comparative analyses like these thus tend to be of limited utility. If we are to produce research which can be effectively pooled to form a meaningful discourse on Zen and psychedelic comparative mysticism, we will need a consistent understanding of what kensho is and be able to distinguish between different forms of self-transcendence.

With that said, Strassman’s comments do support the findings described in Chapter 2: that psychedelic-induced disruptions to ego-functioning only rarely arise in the form of pure consciousness events. While this seemingly never happens with kensho, it suggests a potential convergence in the ways self-transcendence and unity are experienced with Zen ASCs and *most* psychedelic ASCs: they can both be phenomenologically rich while blending elements of introvertive and extrovertive unity. Findings from the psychedelic sesshin study may support this potential qualitative convergence, as placebo participants who attained a “strong” or “complete” mystical experience reported very high and very similar scores to psilocybin participants in both the *Unity* and *Ego-Loss* domains of the Hood Mysticism Scale (Smigielski et al., 2019b).

It is worth noting here that Zen ASCs tend to occur with the eyes open, and psychedelic ASCs may occur with eyes open or closed. This is important, because as Grof (1975) identified through years of experimental LSD research, the introvertive and extrovertive qualities of unitive psychedelic experiences can be positively correlated with whether subjects had their eyes open or closed respectively (pp. 106-107). This may in part account for why mystical-type psychedelic ASCs produce a broader range of unitive experiences than those induced through Zen practice.

Finally, psychedelic-induced experiences of self-loss often require a conscious sort of engagement—an active "letting go" of one's personal identity—while the self tends to drop off spontaneously with kensho experiences (Austin, 2015, p. 583).

Ineffability and Paradoxicality

One of the most recurrent themes identified among Zen and psychedelic ASCs is their shared capacity to transcend the limits of logic. As Badiner (2015) claims, both psychedelics and Zen serve to liberate individuals from a dominantly cognitive and linear view which steers us away from objective reality, rather than toward it. This claim rests on the central belief that there are teachings/truths that cannot be meaningfully conveyed through language or logical study.

The belief that psychedelics are capable of liberating us in this way is echoed by Soto Zen master Dokushô Villalba Roshi (2015) when he says psychedelics allow users to "free themselves momentarily from the perception of reality created by the logico-rational mind". This claim has been evidenced by studies demonstrating the capacity of psychedelics to dramatically increase "primary process thinking", characterized by contradictory or illogical actions, feelings, or thoughts (Kraehenmann et al., 2017). This openness to non-logical ideas has been shown to facilitate mystical experiences among meditators (Russ & Elliot, 2017). It thus seems possible that this cognitive mode may also play a mediating role in the effectiveness of Zen Koan

practice. To the best of my knowledge, no studies have analyzed Zen koan practice through the lens of primary process thinking but given the futility of achieving Zen ASCs via logic-bound processes, this may be worth investigating.

According to the present study's mystical typology, ineffability is one of the six primary features of mystical experiences, and indeed, both psychedelic and mystical-type Zen ASCs exhibit high degrees of ineffability; both psilocybin and control group participants who had "strong" mystical experiences in the psychedelic sesshin study scored ~7.5/10 in this domain (Smigielski et al., 2019b). This may be due to the ways in which the breakdown of subject/object distinctions violates the basic syntactical principles of language (see: Chapter 2).

Perception

Visionary Restructuralization

The findings of Smigielski et al. (2019a, 2019b) suggest that one of the most pronounced phenomenological differences between psychedelic and Zen ASCs is the fact that psychedelics reliably produce dramatic instances of visionary restructuralization, where this is far less common with Zen ASCs. Participants in the psychedelic sesshin study completed the *Five-Dimensional Altered States of Consciousness* questionnaire (5D-ASC) at 360 minutes post-psilocybin or placebo administration as a retrospective measure of subjective effects. The visionary restructuralization domain of this questionnaire was rated significantly higher among the psilocybin subjects than the placebo subjects. Specifically, psilocybin participants reported significantly higher rates of elementary imagery (e.g., kaleidoscopic shapes and form constants) and audio-visual synesthesia than placebo participants. While psilocybin participants also experienced higher rates of complex imagery (e.g., extremely vivid imagination, visions) this difference was less pronounced when compared to placebo (Smigielski et al., 2019b). So while

Zen-induced mystical-type ASCs may also produce visionary experiences, they appear to be of a different and less intense sort. No data was provided on whether these Zen-induced visions were understood as makyo, or if they were qualitatively similar to those induced through psilocybin.

Vigilance

Results from the 5D-ASC in the psychedelic sesshin study (Smigielski et al., 2019b) suggest that psychedelic states may differ from Zen ASCs in their respective effects on vigilance. Of the participants who had "complete" or "strong" mystical experiences, psilocybin participants scored significantly higher than the placebo group in the *vigilance reduction* domain. This domain aims to capture experiences of "clouded consciousness", reduced alertness, or sleepiness/drowsiness associated with sedatives like ketamine, N_2O, and scopolamine, but may also describe the "dreaminess" or "contemplativeness" more traditionally associated with psychedelic ASCs (Studerus et al., 2011).

This is consistent with Walsh's (2015) claim that psychedelics are more likely to induce forms of *nature* mysticism than *nirvanic* mysticism. As shown in *The Spirit of Shamanism*, *nature* mysticism is characterized by reduced environmental awareness (i.e., cognisance of one's immediate surroundings), while *nirvanic* mysticism is characterized by increased environmental awareness (Walsh, 1990, p. 230). Decreased environmental awareness here appears somewhat analogous to the *vigilance reduction* domain of the 5D-ASC questionnaire.

Space-time Perception

Van Dusen (1961) states that through Zen practice, "the present here and now becomes the whole of meaning", and claims LSD induces a state of being radically grounded in the present moment. In this way, he is claiming that LSD induces an acute phenomenological state of time-perception typically associated with Zen ASCs. Similar claims were made by Watts

(1968), who described the slowing down of time and "concentration in the present" as a core feature of both psychedelic and Zen mystical experiences. The psychedelic sesshin study supports these claims.

The psychedelic sesshin study tested for experiences in which time and space seemed non-existent or meaningless, and both the psilocybin participants and placebo group participants who had mystical-type Zen ASCs scored high in this domain, indicating potential phenomenological convergences (Smigielski et al., 2019b).

Mood

The 1996 special issue of *Tricycle* presented a transcript of a roundtable with Ram Dass, Zen masters Robert Aitken and Richard Baker, and Zen Teacher Joan Halifax. Here, Aitken claims "there is a qualitative difference between the ecstasy that some people report from their drug experiences and the understanding, the realization, that comes with Zen practice. [Zen practitioners] seek understanding, not ecstasy" (Dass et al., 1996). This not only reflects the fact that Zen practitioners are trained to relate to ecstatic ASCs differently (e.g., to move beyond/not cling to them) (Shizuteru, 1971), but it suggests that the ecstatic experiences themselves may be of a different phenomenological sort. The findings of the psychedelic sesshin study (Smigielski et al., 2019b) support this claim.

Of those who experienced "strong" mystical experiences, the psilocybin participants reported significantly higher rates of oceanic boundlessness (the deeply felt positive mood/bliss-state associated with experiences of self-loss) when compared to placebo participants. Conversely and somewhat confusingly, however, placebo participants scored slightly higher than psilocybin participants on the *positive affect* domain of the Mystical Scale questionnaire (which tests for experiences of "profound joy", states of "perfect peace", and a "sense of wonder"). It is

thus clear that mystical states induced through psychedelics and Zen practices can induce high degrees of positive affect, but this positive affect may be characteristically distinct in key phenomenological ways (e.g., psychedelic ASCs are more likely to be described as exhibiting "boundless pleasure", "profound peace", and "all-embracing love") (Studerus, 2012, p. 79; Smigielski et al., 2019b). More detailed qualitative data is required.

It is worth noting here that scores on the 5D-ASC questionnaire's *dread of ego-dissolution* domain (characterized by loss of self-control, thought disorder, arousal, and anxiety) were very low (under 10%) for both psilocybin and placebo participants, with no statistically significant difference between the two (Smigielski et al., 2019a). This is contrary to previous studies which found that moderate-to-high dose psychedelic experiences produce significantly higher rates of *dread of ego-dissolution* when compared to placebo (Studerus et al., 2011; Griffiths et al., 2018; Vogt et al., 2023). This has two major implications.

First, it suggests that Zen practice and/or a rural monasterial setting may mitigate the emotionally taxing aspects of psychedelic-induced self-loss experiences. Second, it suggests that experiences of dread appear unlikely with Zen experiences of self-loss. This is evidenced by comparing the *dread of ego-dissolution* rates of non-Zen practitioners in psychedelic studies (e.g., Studerus et al., 2011; Griffiths et al., 2018) to the psychedelic sesshin study's placebo group who had mystical-type experiences (Smigielski et al., 2019b). It is difficult to say, however, whether this second implication is because Zen experiences of self-loss are less intense, taxing, or otherwise likely to produce negative affect, or if Zen experiences are similarly taxing, but only experienced by those with Zen training which mitigates the negative affect associated with these states.

Other potential convergences may be seen with regards to the deeply felt positive mood associated with Zen and psychedelic ASCs. Specifically, both forms of unity exhibit a breakdown in subject/object distinctions which can produce acute bliss states. As Stanislav Grof (1975) explains, psychedelic experiences of extrovertive unity are often accompanied by the sense that "everything appears perfect" or that "everything is as it should be" (p. 107). James Austin likens this non-judgmental orientation toward the world to the Zen principle of *suchness* (the immediate apprehension of the world as it is, free of interpretation or evaluative judgement—see: chapter 3) (2015, p. 583).

Additional Insights

Mystical Intensity

While Zen and psychedelic ASCs may sometimes be qualitatively similar, we ought to question whether they arise with similar intensity. The current evidence suggests any conclusive arguments made on this point would be hasty.

Yaden et al. (2016) surveyed 739 individuals who had had mystical experiences (347 of which had psychedelically induced experiences) and found that psychedelically induced experiences were rated as more intensely mystical than non-psychedelically induced experiences—e.g., those associated with meditation, religious rituals, and near-death experiences.[23] This finding runs contrary to some of the anecdotal evidence provided in the comparative literature surveyed for the present study.

[23] Note, the questionnaire used to test the intensity of these experiences' mysticality was based on Hood and Morris's (1983) *Death Transcendence Scale* and parts of Hood's (1975) Mysticism Scale, which test for the experience of domains: unity, temporal and spatial variations, inner subjectivity, ineffability, self-loss, and positive

Of the psychedelic sesshin study (Smigielski et al., 2019b) participants who had 'complete' or 'strong' mystical experiences, those who did so through Zen practice alone (the placebo group) reported similar rates of *positive affect, ineffability, ego-loss, timelessness/spacelessness, unity, noetic quality,* and *positive affect* on the Mysticism Scale questionnaire when compared to the psilocybin participants.[24] While psilocybin participants scored slightly higher in the *timelessness/spacelessness* and *sacredness* domains, the placebo group scored slightly higher in *ego-loss* and *positive affect* (Smigielski et al., 2019b). This would suggest that Zen practices can/do induce mystical-type ASCs with comparable intensity to those induced through psychedelics.

Ray Jordan (1971) describes his *kensho* experience as more intense than his psychedelic ones, both in terms of its acute phenomenology and its lasting impact on him. He explains that the key difference between these experiences has to do with his psychedelic experiences lacking the profound clarity of his kensho experiences. He claims this clarity afforded him a far more transformative glimpse into the interrelatedness of all things than psychedelics could. Sean Murphy similarly describes his kensho experiences as "deeper, broader, [and] more lasting" than his psychedelic insights, and similarly attributes it to a heightened clarity of experience (Osto, 2016, p. 101).

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affect. Because Yaden et al. (2016) do not provide respondent data on each of these domains, it is difficult to identify the specific aspects of psychedelic mystical experiences that make them purportedly more intense than non-psychedelic ones.

[24] Curiously, placebo participants scored significantly lower than psilocybin participants on domains *Unity* and *Blissfulness* (positive affect associated with self-loss) when responding to the 5D-ASC questionnaire. This suggests that these two questionnaires may track different features of ASCs despite convergences in language.

It is conceivable that this *clarity of experience* could intensify non-psychedelic mystical experiences. The reduced vigilance, major alterations to perception, and phenomenological richness of psychedelic experiences (which may blur spiritually significant with extraneous or 'profane' phenomena) are suggestive of a less than *streamlined* mystical experience. With Zen practices, however, the essence of a non-psychedelic mystical insight may present itself more readily and directly, unobstructed by confounding factors or the "cognitive bizarreness" associated with psychedelic ASCs (Kraehenmann et al., 2017). This may be why Zen practitioners like Jordan and Murphy regard their non-psychedelic experiences as more intensely mystical than their psychedelic ones. This could simply be because the sorts of psychedelic experiences these two individuals had weren't particularly mystical in nature (no data on the set, setting, or dosage of their psychedelic experiences is given), but it is plausible that their Zen ASCs were simply more intense because their relatively low rates of cognitive impairment and vigilance reduction allowed for a more pronounced noetic quality.

As Soto Zen monk Brad Warner (2015) points out, comparing the mystical intensity of Zen and psychedelic ASCs should not be taken out of context. For the Zen practitioner, kensho is achieved through rigorous and sustained effort, while mystical-type psychedelic ASCs can be achieved with relatively little effort. This, he argues, fundamentally changes the quality of the ASC, because the journey one takes to have such experiences necessarily informs the way in which it is experienced. To illustrate this point, Warner describes the important ways in which a mountaineer experiences the view when summiting a mountain differs from that of someone helicoptered to the summit. Even if the view is qualitatively identical, the experience of those qualities is very different for each person due to differences in their context—that is, mystical-type ASCs which mark the culmination of 20 years of practice may feel more intense than those

which come about through 60 minutes of psilocybin metabolization. This could also help explain why Jordan and Murphy found their Zen ASCs more impactful. Psychometric questionnaires like those used for the psychedelic sesshin study don't necessarily account for this.

Though only adjacently related to mystical intensity, James Austin notes that psychedelic ASCs last significantly longer than Zen ASCs (2015, pp. 430-431). As Preller and Vollenweider (2018) point out, however, certain mystical qualities of psychedelic ASCs may only briefly reach critical intensity levels during a several-hour psychedelic experience—e.g., the transient "peaks of self-transcendence" may only last a few minutes (p. 229).

Spiritual Elements

One of the most pronounced differences between mystical-type psychedelic and Zen ASCs identified in the psychedelic sesshin study was that psilocybin participants scored significantly higher than placebo participants in the "spiritual experience" domain of the 5D-ASC. This means those having mystical-type psychedelic ASCs scored much higher on questionnaire items like "I had the feeling of being connected to a superior power", "I experienced a kind of awe", and "My experience had religious aspects" than those having mystical-type Zen ASCs (Studerus, 2012, p. 79; Smigielski et al., 2019b).

Given that Zen is a non-theistic tradition which systematically avoids "lofty abstractions" in favour of concrete psychological techniques (Austin, 2015, p. 9), it's not surprising that those having mystical-type Zen ASCs scored low in this domain. What *is* surprising is that the psilocybin group, similarly steeped in this non-theistic tradition, had such overtly "religious" and "spiritual" experiences on psilocybin (overall, their scores averaged ~67% of the theoretical maximum on a subjective intensity rating scale) (Smigielski et al., 2019b).

This highlights an important difference between the phenomenology of Zen and psychedelic ASCs: even at high levels of mystical intensity, Zen ASCs do not appear to induce experiences involving "higher beings" or "superior powers"—a highly recurrent theme in psychedelic ASCs (Masters & Huston, 1966/2000; Strassman, 2001; Shanon, 2002; Heuser, 2006; Bache, 2019; Griffiths et al., 2019; Roberts, 2020), especially when the psychedelic is consumed in ceremonial or overtly religious settings (Panhke, 1963; Smigielski et al., 2019b; Bohn et al., 2022).

Pain Perception

There is some evidence suggesting causal convergences in the analgesic effects of psychedelics (Kast, 1967) and the heightened pain tolerance observed among Zen adepts (Grant et al., 2010). This, I propose, may have to do with the ways in which zazen and psychedelics produce similar states of "suchness" (Austin, 2015, p. 528)—i.e., both produce non-selective attentional states where stimuli are experienced immediately, unmediated by self-referential processes like evaluative judgments. In both Zen teachings and psychedelic research, such states seem to allow one to experience painful sensations without interpreting them evaluatively (e.g., "I am suffering").

Conclusions

My review of the literature revealed very little data systematically comparing the acute phenomenology of psychedelic ASCs and Zen ASCs. This suggests that there is a considerable gap in the literature regarding our understanding of how the qualitative features of these states compare to one another. This chapter has thus presented a novel, albeit preliminary comparative analysis of these two types of ASCs.

Both Zen practice and psychedelics have been shown to induce subjective states without a discreet sense of self, however, the currently available evidence suggests that these self-loss experiences may differ in nuanced ways. Interestingly, early evidence suggests rigorous Zen training may mitigate the emotionally taxing aspects of psychedelic-induced experiences of self-loss (often referred to as “dread of ego-dissolution”).

Both Zen and psychedelic ASCs exhibit high degrees of deeply felt positive mood, but the quality of this positive affect may differ substantially (e.g., psychedelic ASCs are more likely to be described as exhibiting “boundless pleasure”, “profound peace”, and “all-embracing love”).

Both Zen practice and psychedelics can dishabituate thinking and reconstruct cognition in ways less conditioned by past experiences, but a comparison of Zen and psychedelic ASCs reveals phenomenological differences. Habitual patterns of thought tend to be characterized by discursiveness, preferences, and the mobilization of conceptual categories. Zen practice disrupts these conditioned modes of cognition through a quieting of cognitive processes and the cultivation of an indiscriminate openness to the fullness of experience. Psychedelics disrupt conditioned modes of cognition through entropic brain activity, which allows one to make novel connections and carry out creative divergent thinking. Zen ASCs are generally characterized by a clear and stable (albeit highly affective) cognitive state, while psychedelics generally tend to be more “anarchic”. Psychedelics may impair cognitive functioning and agentic capacities in ways not associated with Zen ASCs.

Both Zen and psychedelic ASCs exhibit a high degree of ineffability, and this may be due to their shared capacity to disrupt normal ego-functioning. Further research is needed to determine if koan practice is associated with modes of cognition shown to aid in the induction of psychedelic ASCs (e.g., primary process thinking).

Psychedelics appear to augment perception in far more pronounced ways than Zen practices do, particularly with regards to visionary restructuralization. Psychedelics also appear to reduce vigilance, highlighting a dreamy quality uncommon in Zen ASCs. While this could theoretically reduce the noetic quality of psychedelic ASCs, the noetic quality of these states appears to arise with similar intensity in Zen ASCs (further research is needed).

Both Zen ASCs and psychedelic ASCs appear to similarly affect time-perception, characterized by the cessation of mental time-travel and heightened awareness of the present moment. At peak intensity, both Zen and psychedelic ASCs may involve a complete transcendence of space and time.

Psychedelic ASCs tend to involve significantly more "spiritual" aspects than Zen ASCs, particularly with regards to overtly religious themes or feeling "held by a superior power".

Evidence suggests that Zen and psychedelic ASCs may be comparable in their mystical intensity. Special consideration must be given to the contexts in which these states arise (e.g., idiosyncratic meaning-making processes) when drawing conclusions about the general intensity of these ASCs.

Implications for the Experiential Training Equivalency Debate

As mentioned in the present study's introduction, Janis Phelps (2017) suggests that in lieu of experiential training with psychedelics, prospective psychedelic therapists could potentially undergo experiential training in various non-psychedelic practices to become personally proficient in navigating ASCs. I refer to the question of whether a psychedelic therapist needs training *specifically* in psychedelically induced ASCs as the "experiential training equivalency debate", and this chapter's conclusions have important implications for this debate.

Based on the limited data available, many potential similarities and differences in the acute phenomenology of Zen and psychedelic ASCs have been identified. The number of phenomenological differences would suggest that issuing "*experientially trained*" credentials to psychedelic-naïve psychedelic therapists well versed in Zen ASCs may be a hasty decision on behalf of credentialling institutes and licensing bodies, and more research should be conducted before experiential training equivalencies are issued.[25] With that said, we ought to consider in greater depth precisely what is meant by "functional equivalency" in the context of the experiential training equivalency debate.

Phelps (2017) argues that experiential training is necessary for psychedelic therapists so they may develop a "personal knowledge and attitude of appreciation for numinous qualities of the mystical realms of consciousness" and "a comfort with unexpected and difficult experiences in induced alternate states". My research suggests that a deep familiarity with Zen ASCs could functionally prepare a psychedelic-naïve therapist on the first of these outcomes, but not the second. This is because, as shown above, both Zen and psychedelic ASCs exhibit similarly high degrees of mysticality in the domains of ineffability, self-loss, and the transcendence of space and time. While these may differ in nuanced ways with psychedelic and Zen ASCs, both could ostensibly produce an appreciation for the "numinous qualities of the mystical realms of consciousness".

It is, however, less clear that Zen training alone could prepare a therapist to be comfortable with unexpected and difficult experiences in induced alternate states associated with

[25] Demonstrating that Zen ASCs differ significantly from psychedelic ASCs does not imply that experiential training equivalencies are impossible (e.g., perhaps ASCs associated with sensory deprivation or Holotropic Breathwork are phenomenologically indistinguishable from psychedelic ones), but it does demonstrate that not all ASCs are the same, and this suggests we should carefully analyze how various ASCs compare to one another before considering their potential equivalency in the training of psychedelic therapists.

psychedelic ASCs, as the unexpected and difficult aspects of these two types of ASCs differ considerably—with psychedelic ASCs presenting a far greater potential to be acutely distressing for the experiencer. As described above, psychedelic ASCs appear far more likely than Zen ASCs to disrupt cognitive functioning and cause disorientation and acute anxiety; psychedelic users appear to have far less control over the altered state than do Zen practitioners; and Zen experiences of self-loss appear far more likely to be positively experienced than psychedelic ones (see above discussions on "dread of ego dissolution"). Zen training may help a therapist sympathetically relate to these challenging aspects of the psychedelic experience, but having never experienced them personally, they may struggle to fully empathize with clients undergoing these challenging states or trust these processes.

We may thus conclude that while there may be functional equivalency between Zen and psychedelic ASCs with regards to the need for what could be described as 'mystical literacy', extensive training in Zen ASCs may not sufficiently instil in prospective psychedelic therapists a comfort with unexpected and difficult experiences in psychedelic ASCs.

CHAPTER 5: FUTURE RESEARCH

In the previous chapter, some tentative conclusions were drawn regarding the potential similarities and differences between the phenomenology of Zen and psychedelic ASCs. These conclusions, however, were drawn from a single (very small) empirical study and a broad pool of largely anecdotal data, collected and documented by researchers and practitioners with poorly defined and potentially heterogenous interpretive frameworks. These conclusions should therefore only be considered potential hypotheses for future research, not evidence for the likeness or unlikeness of these states. But how can these hypotheses be tested effectively?

If comparative research into the phenomenology of psychedelic and non-psychedelic ASCs is to be compelling, new and theoretically sound approaches to data collection need to be developed. This chapter proposes several guiding principles for future research concerned with the comparative phenomenology of psychedelic and non-psychedelic ASCs.

Theoretical Challenges to Collecting Reliable Data

As mentioned in Chapter 1, Steven Katz (1978) identified several major theoretical challenges to the study of comparative mysticism: the four degrees of interpretation necessary to compare mystical states. To review, these were: (1) the mystic's first-person report of their experience; (2) the mystic's interpretation of their experience at some later and more reflective stage, where the experience has been 'digested' or 'integrated'; (3) the third-person interpretation of a mystic's experience from within the same tradition (emic interpretation); and (4) the third-person interpretation of a mystic's experience from outside the mystic's tradition (etic interpretation). As these interpretations become more distant from the mystical experience itself

(across time, persons, and traditions), they become increasingly mediated by language, culture, and interpretive frameworks, distorting the relative 'purity' of the experience itself.

I would add that in addition to these four interpretive distortions, the comparative process also allows for two *translational* distortions to occur: (5) during the transcription of the mystic's autobiographical interpretations (i.e., how accurately did the mystic document their interpretation?), and (6) during the reception of that interpretation (i.e., did readers understand the interpretation as it was intended by the author?). These translational distortions will compound as data is repeatedly mobilized in the discourse of comparative mysticism.

Comparative mysticism scholarship often relies on the textual analysis of mystic's first-person experiential reports. Through inductive reasoning, researchers identify the most recurrent phenomenological features of the altered state described in these reports and present a general qualitative description of it. These descriptions are then compared with qualitative descriptions of different altered states which were similarly produced through inductive reasoning.

To make this process methodologically viable, researchers will often deploy etiology-independent mystical typologies like those developed by William James (1902/1917) and Walter Stace (1961) (this is the approach taken for the present study). These etic and often reductive mystical typologies can result in crude interpretations of mystical phenomena, in no small part because they generally fail to acknowledge the complex cultural and idiosyncratic contexts in which these experiences arise and are interpreted. But there is a much more fundamental challenge inherent to the enterprise of comparative mysticism: *no matter how carefully we choose our words when designing our mystical typologies, or how precisely we describe our personal accounts of altered states of consciousness, there are inherent limits to the accuracy with which human language can capture the phenomenological quality of subjective experiences.*

Philosophers have termed this the *explanatory gap* (Levine, 1983); the fact that no amount of information about how subjective experiences happen seems to describe the quality of the subjective experience itself (e.g., no amount of information about light physics or the biological mechanisms which allow for colour-perception in humans seems to account for why the colour *red* is experienced as it is) (Jackson, 1982). No matter how many words we may have for different shades of red, there is currently no way of knowing whether one's subjective experience of red is the same as another's. What one experiences as red may be experienced as green by another, but because both were taught from a young age to call that colour-perception "red", they consistently agree on the colour of stop signs and Honeycrisp apples, never knowing that they were having qualitatively distinct experiences (Odom, 2008). The same can be said about our respective interpretations about the *sound* of a trumpet, the *taste* of pinot grigio, or the *feeling* of nausea (etc.). In this way, humans appear profoundly alone in many of their subjective experiences, on some fundamental level unable to share them with another.

This poses a considerable challenge for researchers studying the phenomenology of altered states: even if all inductive reasoning is carried out using the same interpretive frameworks and mystical typologies, the qualitative data being analyzed has itself been distorted in the process of collection. Therefore, this data—in its purest possible form—is effectively locked away, hidden within the subjective consciousness of others. So how confidently can we say one person's mystical experience of *unity* or *timelessness* was the same as another's? Can any amount of qualitative description produce in another's mind the *exact* experience one had during an ASC? Such philosophical questions are beyond the scope of the present study, but the question itself brings to attention a core concern about the methods we use to collect qualitative data.

For example, these considerations may lead us to question the worth of data collected through psychometric questionnaires. This is important, because the psychedelic sesshin study used two qualitative psychometric questionnaires to analyze Zen and psychedelic ASCs—the Hood Mysticism Scale and the 5D-ASC (Smigielski et al., 2019b). In the Hood Mysticism Scale, extrovertive unity is measured with the *Unity* domain, made up of two questionnaire items: (1*) I have had an experience in which I realized the oneness of myself with all things*; (2) *I have had an experience in which I felt everything in the world to be part of the same whole*. Introvertive unity is measured with the *Ego Loss* and *Timelessness/Spacelessness* domains, respectively made up of questionnaire items: (1*) I have had an experience in which something greater than myself seemed to absorb me*; (2) *I have had an experience in which everything seemed to disappear from my mind until I was conscious only of a void*; and (1*) I have had an experience which was both timeless and spaceless*; (2*) I have had an experience in which I had no sense of time or space* (Hood, 1975).[26,27] In the 5D-ASC, introvertive and extrovertive unity are measured together with the *Unity* domain, made up of five questionnaire items: (1) *Everything seemed to unify into oneness*; (2*) It seemed to me that my environment and I were one*; (3) *I experienced a touch of eternity*; (4) *Conflicts and contradictions seemed to dissolve*; and (5) *I experienced past, present and future as oneness* (Studerus, 2012, p. 79).

[26] All these questionnaire items are also presented in the negative to avoid problems of response set: e.g., "I have never had an experience in which I became aware of a unity to all things" is then re-presented as a separate questionnaire item: "I have never had an experience in which I became aware of a unity to all things".

[27] The specific wording of these items was presumably modified in the psychedelic sesshin study to refer to experiences had *during* the study, as opposed to experiences had at any time in the respondent's life.

Despite both these questionnaires attempting to capture experiences of introvertive and extrovertive unity, psychedelic sesshin study participants in the placebo group who had mystical experiences scored very differently on each of these questionnaires. According to the Hood Mysticism Scale, their mystical-type Zen ASCs were comparably unitive when compared to the psychedelic ASCs of the psilocybin group. But according to the 5D-ASC, the psilocybin group's psychedelic ASCs were significantly more unitive (~40% more pronounced on a subjective intensity rating scale) (see: *figure 1*.).

Perhaps something about the specific wording of questionnaire items in the 5D-ASC produced significantly different responses from those given in the Hood Mysticism Scale. This points to a considerable shortcoming of psychometric questionnaires used in this way: the language they use may be too vague or ambiguous to reliably capture the qualities of these ASCs. Carrying out a meaningful comparative analysis of the data thus becomes challenging, because the data being compared may be quite crude.

For the six reasons described above, qualitative data derived through conventional interviewing strategies may be similarly unreliable. This issue is exacerbated by the general lack of definitional consensus on what constitutes a specific sort of ASC (see: Chapter 4) and the fact that mystical-type ASCs tend to be ineffable in nature (meaning any description of them will be inherently reductive).

With such potential for the distortion of phenomenological data, one may be skeptical about the theoretical feasibility of studies comparing variously induced ASCs, but I believe there is an intuitive and practical solution to these issues seldom (if ever) discussed in the discourse of comparative mysticism involving psychedelics: the inclusion of what I have termed *dual insight* co-researchers.

Addressing Theoretical Concerns Using *Dual Insight*

Many of the theoretical problems associated with comparative mysticism arise because of the shortcomings of language and the ways in which we take private, subjective experiences and reduce them to words and concepts so they can be conveyed to others. By refining our language and descriptive approaches, the crudeness of this process can be reduced, but until we can directly transmit one's subjective experience to another, the phenomenological data we use to compare Zen and psychedelic ASCs will be suboptimal. We should thus strive for approaches to comparative mysticism which minimize our reliance on reductive interpretations of qualitative reports. To answer this need, I propose an approach to comparative mysticism which relies heavily on the involvement of what I call "*dual insight*" co-researchers—individuals who have experienced *both* of the ASCs being compared. To address the present study's research questions, this would entail the intimate involvement of individuals with first-hand experience of both Zen and psychedelic ASCs in the research.

At its core, the *dual insight approach* is grounded on the assumption that these co-researchers can say with far more confidence than an outside researcher that the quality of their Zen and psychedelic mystical experiences were similar or different—e.g., "*the unity I experienced with LSD was extremely reminiscent of the unity of my kensho experiences*", or "*during shikan-taza, time and space behaved very differently from how they did with my psilocybin experience*" (see Chapter 1's discussion of "contemplative scientists" for a theoretical justification of this assumption).

By having direct access to the phenomenology of both ASCs being compared, *dual insight* co-researchers can bypass many of the translational and interpretive challenges mentioned above (issues #3-6). In much the same way one can look at a crimson wall next to a

scarlet wall and recognize them as different without trying to identify which is "crimson" and which is "scarlet", one can conceivably recognize potential differences between altered states without resorting to qualitative descriptions or mystical typologies which invite translational and interpretive distortions. For example, the differences between kensho and a psychedelic state could be immediately and intuitively recognized upon experiencing one or the other, simply by the subject noticing how familiar or foreign certain aspects of the experience is to them.

Dual insight co-researchers may thus even be capable of avoiding the first issue Katz describes: the distortion that comes with the experiencer's first-person report. This is because *dual insight* seems to afford a degree of pre-linguistic comparison, an immediate sense of their experiences' qualitative features before ever having to describe them, even to oneself.

Now, constructivists like Katz may challenge this last point, claiming there are no "pure" (i.e., unmediated) experiences because all experiences are immediately and inherently processed through subconscious interpretative frameworks (1978, p. 26).[28] If he is correct, and there is no such thing as a truly "pre-linguistic comparison" of experiences, then every *dual insight* co-researcher may be experiencing their own distorted versions of kensho[29] and psychedelic-induced ego-dissolution. Researchers would therefore not be studying kensho and psychedelic-induced ego-dissolution *per se*, but rather, these experiences as they arise for individuals with

[28] Indeed, there is some scientific evidence to suggest that conceptual frameworks like one's native language impact the quality of our subjective experience. For example, Winawer et al., (2007) found that categories in language can affect performance of basic perceptual colour discrimination tasks—when compared to English speakers, Russian speakers could more readily distinguish between different shades of blue because Russian makes an obligatory distinction between lighter blues (''goluboy'') and darker blues (''siniy'').

[29] Though this would contradict the claim that kensho experiences are the same across time, space, and individuals (see: Chapter 3).

certain interpretive frameworks. This may limit the degree to which experiences can be compared across subjects, but it does not inherently limit the degree to which individual subjects can compare their own idiosyncratic Zen and psychedelic ASCs. This is because even if a *dual insight* co-researcher's interpretive frameworks significantly distort their experiences, the phenomenology of these variously induced ASCs would ostensibly be subject to the same frameworks and undergoing similar distortions. Intrapersonal comparative analyses may thus actually be quite internally consistent, and this internal consistency is key.

As discussed in Chapter 4, meaningful comparative analysis of Zen and psychedelic ASCs requires a consistent understanding of what constitutes Zen ASCs like kensho. Such definitional consensus can be asserted according to *a priori* criteria (e.g., kensho occurs when one experiences all domains of a given mystical typology at a minimum of 6/10 on a subjective intensity rating scale)[30], but this presupposes what kensho experiences could be based on etic notions of mystical experience and may inadvertently exclude genuine kensho experiences. To avoid this circular reasoning, *dual insight* research involving psychedelics relies on the assumption that co-researchers who are experts in a given ASC are more qualified in identifying when it arises than outside researchers. Findings from a study comparing Zen and psychedelic ASCs using a *dual insight* approach should thus identify co-researchers' Zen ASCs as self-described—e.g., "*this study found major phenomenological similarities between co-researchers' psychedelic experiences and those they described as 'kensho'*." If co-researchers demonstrated

[30] This is the sort of criteria commonly used for research investigating mystical experiences (Pahnke, 1963; Griffiths et al., 2006; 2011; Smigielski et al., 2019b; Garcia-Romeu et al., 2019).

divergent understandings of what constitutes a Zen ASC like kensho, then this would have to be discussed by researchers and identified in their study limitations.[31]

Readers may recall Katz's second theoretical concern: the ways in which one's mystical experience may be distorted as it is 'digested' or 'integrated'. This is to say, over time, one's interpretation of their mystical experience may distort their recollection of its acute phenomenology. This throws into question the proposed internal consistency of one's intrapersonal comparative analyses because a recent experience may be relatively more "pure" than historical ones. One's interpretive frameworks themselves may also change over time, further distorting distant experiences. These are valid concerns, but they can be remedied to a fair extent by ensuring *dual insight* co-researchers are experiencing both of the ASCs being compared within a close timeframe. This is relatively straightforward for a study comparing psychedelic and Zen ASCs, as both sorts of experiences can be produced relatively reliably with the proper preparation and training (this would not be the case if studying spontaneous ASCs like those associated with near-death experiences or giving birth).

By relying on *dual insight* co-researchers, we can thus address to some degree all six of the theoretical challenges described above. However, it must be stated here that this approach in no way eliminates *all* the issues associated with the reliability of the phenomenological data these co-researchers produce. For example, once these co-researchers experience both ASCs and do some form of introspective comparative analysis, they will have to communicate similarities and differences to researchers, and here translational issues resurface, as their findings will have to be communicated/catalogued in some way. While the distortion of phenomenological data will to some extent occur here, the fact that comparative analysis predates this distortion is

[31] Consistent definitional discrepancies between co-researchers would itself be a valuable finding.

significant, as it allows researchers to answer the vital question of the present study without the use of mystical typologies or reductive qualitative descriptions: *are these states similar enough to be considered equivalent for the purposes of training new psychedelic therapists?*

If co-researchers answer this question with anything other than "*Zen and psychedelic ASCs are completely different*" or "*they are exactly the same*", then qualitative descriptions of their experiences will be necessary for discussing the similarities and differences of each experience (conclusions drawn in Chapter 4 would suggest that this is highly likely). As discussed below, mystical typologies and psychometric questionnaires prove helpful here, but their semantic imprecision must be accounted for when researchers draw inductive conclusions using them.

Designing a *Dual Insight* Study

To demonstrate the potential of the *dual insight approach,* this section details two possible study designs which compare the acute phenomenology of Zen and psychedelic ASCs involving *dual insight* co-researchers, both informed by the theoretical considerations described above. These preliminary study designs will need to be expanded upon and refined before being used, but they may serve as basic frameworks from which future studies can be based.

The first of these studies would be quite rigorous and would produce highly valuable data. The second of these studies is more readily feasible, but it may produce weaker (yet more abundant) data. Both, however, are capable of meaningfully addressing the question of whether psychedelic ASCs are in some sense equivalent to Zen ASCs, and both could serve as frameworks for future research comparing the acute phenomenology of psychedelic and non-psychedelic ASCs outside the Zen tradition.

Study A

The primary goal of Study A is to thoroughly investigate the phenomenological qualities of altered states of consciousness induced through the ingestion of a psychedelic and through Zen practice. The secondary goal is to test the qualitative precision of validated psychometric questionnaires to determine if they are suitable for research comparing the phenomenology of two or more ASCs. This would consist of several phases after the necessary preparations have been completed.

In Phase I, co-researchers highly skilled in Zen practice would engage intensive zazen practice in a monasterial setting[32] with the aim of inducing a mystical-type ASC (e.g., kensho). Once a Zen ASC is self-reportedly achieved, these co-researchers would complete at least two validated psychometric questionnaires—one to track the acute phenomenology of the experience (e.g., the 5D-ASC) and one to track the experience's mysticality (e.g., the Mystical Experience Questionnaire or the Hood Mysticism Scale).[33]

As soon as deemed safe,[34] co-researchers would then proceed to Phase II, where they would be dosed with a psychedelic substance (most likely psilocybin) and undergo a standard

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[32] Like the psychedelic sesshin study (Smigielski et al., 2019a, 2019b), this would be organized as an augmented 5-day sesshin.

[33] Practitioners unable to induce an ASC through Zen practice during the sesshin (5 days) could still proceed to Phase II, but would do so on the final day of the study (day 6), and then be enrolled in Study B if carried out in conjunction with Study A.

[34] Ideally, co-researchers would proceed to Phase II within 24 hours of experiencing their Zen-induced ASC, but it is crucial that they and the study facilitators are well rested, as Phase II is likely to take ~8 hours. Phase II would thus have to occur at a set time on the subsequent day, especially considering that the psychedelic sessions would likely involve several co-researchers being dosed concurrently, being supervised with a group-therapy approach.

psychedelic therapy protocol similar to what patients would experience in mainstream psychedelic care—i.e., comfortably reclined, wearing eyeshades, and listening to music, supervised by two supportive and well-trained therapists (see: Fadiman, 2011 for detailed examples of mainstream psychedelic therapy protocols). Co-researchers would be instructed not to practice any of the open monitoring/mindfulness techniques used to induce their Zen ASC, and to simply engage the experience as intuitively and curiously as possible while remaining open to the possibility of learning something new and meaningful from the experience. As the psychedelic effects of the drug subside (usually around 360 minutes post-administration), co-researchers would once again complete the psychometric questionnaires, this time detailing their psychedelic experience. Upon completion of the questionnaires, co-researchers could be given a short rest-period, and be encouraged to quietly reflect on what aspects of the experience felt similar or different from their Zen ASC—initiating the process of introspective comparative analysis.

Once this phase is completed, a sub-group of the study facilitators would analyze co-researchers' responses to Phase I and II questionnaires to identify where psychometric data on their Zen ASC most closely resembled the psychometric data on their psychedelic ASC—e.g., "*for both their psychedelic and Zen ASC, co-researcher #11 scored 8/10 on item #7 of the 5D-ASC, 'I enjoyed boundless pleasure'*". All convergences in the psychometric data would be identified and set aside for later analysis.[35]

Phase III would involve at least two semi-structured qualitative interviews with co-researchers to investigate how these altered states compare to one another. The first of these

[35] What qualifies as a significant convergence in the psychometric data may have to be determined using *a priori* assumptions—e.g., responses within a 20% range of one another could be considered convergent.

interviews would take place immediately after the completion of the post-questionnaire rest period during Phase II. Carrying out the first of these interviews at this stage crucially addresses Katz's second interpretive concern: the distortions to experience that occur as they are interpreted over time. This distorting influence can be minimized by collecting this data within a 24 to 36-hour period where co-researchers have experienced both of the ASCs with which the study is concerned.

During the first Phase III interview, co-researchers would be asked to compare their Zen and psychedelic ASCs, at first in an open-ended way where they can identify the phenomenological convergences and divergences that seemed most obvious or important to them. During this stage, etic interpretive frameworks (e.g., mystical typologies) should not be deployed by the interviewer to frame the conversation, as it is important the co-researchers use the concepts and language they feel best describes their experiences. This addresses the fourth and fifth interpretive concerns described above: the interpretative distortions that come with etic interpretation and the translational distortions that can occur when the experiencer fails to effectively describe the quality of their experience. Following this, the interviewer can then rely on pre-determined prompts which aim to address the study's central research questions (see section below: *Testable Hypotheses*).

The second Phase III interview is concerned with testing the comparative reliability of the psychometric questionnaires used. That is to say, the mystical typologies and qualitative domains deployed in these questionnaires can be cross-referenced with the data collected through qualitative interviews to determine whether they sufficiently capture the phenomenology of these experiences. This is significant because it will determine if convergences in the psychometric questionnaire data reflect phenomenological similarities.

For example, if a co-researcher scores similarly high on the *noetic quality* Mysticism Scale question: "I have had an experience in which a new view of reality was revealed to me", they can then explain if the noetic quality of these experiences were phenomenologically distinct in any way. If the co-researcher expands by saying "*yes, both experiences revealed a new view of reality to me but with psilocybin, this view was ambiguous and ever-changing. My kensho experience was much more stable and trustworthy—easier to bring back into my every day waking consciousness*", then similar scores in the psychometric data may be misleading. Complementary qualitative data can thus inform researchers if the psychometric data derived through validated questionnaires alone are too reductive to determine the likeness or unlikeness of these ASCs. If this is the case, then qualitative interviews will be proven an essential method of collecting qualitative data in studies of comparative mysticism, and this will inform which methodological approaches should be taken in future comparative mysticism studies involving psychedelics.

Importantly, essential comparative analysis data (i.e., whether these experiences were similar enough to be considered equivalent) can still be collected during these interviews even if the ineffability of their experiences allows co-researchers to articulate very little about the quality of their experiences. As described above, this is because of the ways in which comparative analysis can be carried out pre-linguistically. For example, co-researchers may find that while they can't articulate precisely how the *unity* or *timelessness* of psychedelic ASCs differ from Zen ASCs, they could confidently report that "*they're definitely different*", and this would still be very valuable data. Considering this, the second Phase III interviews could be carried out as follows:

With the list of questionnaire items on which co-researchers scored similarly for both their psychedelic and Zen ASCs (compiled at the end of Phase II), interviewers would instruct co-researchers to give a Likert-scale rating for how closely their psychedelic experience of that specific questionnaire item resembled their Zen experience of that item—e.g., "your response to 5D-ASC item #21, *'It seemed to me that my environment and I were one'*, was very high for both your psychedelic and Zen experiences. How closely did your Zen experience resemble your psychedelic experience in this regard?". If the Likert-scale response indicates that these aspects of their ASCs were experienced differently, then co-researchers would be asked to describe these qualitative differences. If the ineffability of their experience inhibits the collection of this supplementary qualitative data, interviewers can move on to the next item so long as a Likert-scale response is collected. The Likert-scale responses are the most essential data for these interviewers, as they will: (1) indicate a quantifiable degree of equivalency for these ASCs; and (2) demonstrate the comparative reliability of the psychometric questionnaires used—i.e., if convergences in questionnaire responses are consistently described as qualitatively different, then they will be proven too reductive a method for data collection in studies comparing psychedelic and non-psychedelic ASCs.

Finally, Phase IV would consist of qualitative data analysis. Data from both sets of Phase III interviews would be analyzed and general conclusions about the similarities and differences of Zen and psychedelic ASCs would be drawn using whatever interpretative methodologies were deemed appropriate. Findings from the psychometric questionnaires would also be compared, but with careful considerations being made for any limitations identified through the second half of Phase III. Ideally, Phase III of the study demonstrates a high degree of comparative reliability with these questionnaires, allowing many conclusions to be drawn from them, but if this is not

the case, the psychometric data they collect may still be somewhat useful if supplemented with a thematic analysis of qualitative interviews identifying misleading convergences in comparative psychometric data.

Now, there are some limitations and concerns surrounding the proposed study, and these must be addressed. The first of these concerns is the potential paucity of appropriate study participants.

During the psychedelic sesshin study (Smigielski et al., 2019b), only 3 of the 19 placebo participants (15.8%) had a "strong" mystical experience, which is significantly lower than the 19 of 20 participants (95%) in the psilocybin group. To yield a sufficient dataset, co-researchers in Study A would need to be capable of inducing a mystical-type ASC through both Zen practice and psychedelic ingestion relatively reliably. The psychedelic sesshin study suggests that this wouldn't be a concern for the psychedelic phase (Phase II), but that measures would have to be taken to increase the reliability of the Zen phase (Phase I).

Participants in the psychedelic sesshin study had an average of ~5000 hours of meditation experience and had completed an average of ~30 retreats at least two days in length. This suggests that significantly more than 5000 hours of meditation experience may be necessary for Zen practitioners to reliably induce mystical-type ASCs. The participants of Study A would therefore likely have to be highly trained monks actively practicing within an established Zen lineage, having a history of reliably experiencing profound altered states during sesshin retreats. Unfortunately, not all highly trained monks are likely to volunteer as co-researchers in the proposed study.

Aside from their potential disinterest in participating in this sort of study, virtually all Zen monks practicing within an established lineage will have formally vowed to observe the ten

cardinal Mahayana precepts[36], the fifth of which prohibits the use or trade of intoxicants (Kapleau, 1993, p. 342). Traditionally, this explicitly referred to the use or trade of alcohol, but it is sometimes interpreted as a prohibition on the use of most or all mind-altering drugs (Kapleau, 1993, p. 342; Osto, 2016, p. 122; Coleman, 2001, p. 30).

The pool of potential study participants may thus be limited, however, there are at least two reasons to believe a worthwhile number of participants could be sourced (ideally, a minimum of 20). The first is that the psychedelic sesshin study (Smigielski et al., 2019a, 2019b) managed to source 39 participants for their study, at least some of whom had taken the precepts,[37] and this may indicate a precedent for similar studies, such as the one being proposed.

The second reason is that psychedelics are not universally regarded as intoxicants by Western Buddhists (Badiner & Grey, 2015; Osto, 2016)—an opinion supported by the torrent of recent clinical research demonstrating the safety and therapeutic applications of psychedelics (see: Chapter 2). While it's true that American Buddhists who historically used psychedelics tend to discontinue their use as their practice deepens (van Dusen, 1961; Austin, 2015, p. 425; Badiner & Grey, 2015; Osto, 2016), they rarely do so to adhere to the fifth precept. When they discontinue their psychedelic use, they typically do so as a rational choice because they lose interest in them, because they desire a safer/more structured spiritual path, or because they

[36] The Ten Precepts are regarded as the basic foundations of ethical behaviour for Zen practitioners. These are, however, not observed for ethical reasons alone. They are observed in large part because they are understood to be the foundation of Zen practice—practical measures which support the behavioural mindfulness necessary to progress towards enlightenment (Kapleau, 1993, p. 342)

[37] For example, Vanja Palmers, who oversaw the psychedelic sesshin study, has certainly taken the precepts and ingested psychedelics as part of the study (Nevejan, 2021).

desired more mental clarity, not simply because they violated the fifth precept (Osto, 2016, p. 119-121). This indicates that for many modern Zen Buddhists in the global West, the use of psychedelic drugs for research purposes may not always violate deeply held principles.

The third reason is that the proposed study would be legal. The supply of psychedelic drugs would be safe, and it would be carried out in the presence of qualified staff (the lack of these assurances may have served as barriers to psychedelic use for some Zen practitioners in the past). Psychedelic-naïve co-researchers would also be given an opportunity to gain first-hand knowledge of how these substances affect their Zen practice—this could help inform their approach to instructing Zen students for whom psychedelics are very personally important. While this last point may seem like a minor one, it's worth noting that psychedelic use is very common among Western Buddhists (Tricycle, 1996; Coleman, 2001; Tart, 1991; Osto, 2016), and this trend is likely to increase as illicit psychedelic use becomes more prevalent in the West (NIDA, 2022), and the decriminalization of psychedelics spreads (Siegel et al., 2023). This is likely to increase the already substantial number of Zen practitioners in the West who believe Zen and psychedelics can work synergistically (Osto, 2016, pp. 1-3; Badiner & Grey, 2015).

Study A could potentially be carried out at several sites and over a prolonged period of time if an insufficient number of co-researchers are available in a single region at a given time.

The second major concern of the proposed study has to do with the potentially limited generalizability of study findings. This is in part because findings are based on a single psychedelic ASC and a single Zen ASC, and in part because highly trained Zen practitioners may experience the effects of a psychedelic substance differently from the average user. For example, the psychedelic sesshin study's psilocybin group scored slightly lower in the Dread of Ego Dissolution domain on the 5D-ASC (which is associated with loss of self-control, thought

disorder, arousal, and anxiety) and significantly higher in the oceanic boundlessness domain (which is associated with positively experienced ego dissolution and transcendence of space/time) when compared to the average clinical psilocybin trial participant (Smigielski et al., 2019a; Studerus et al., 2010). This may be due to the environment in which the psychedelic sesshin study was carried out or the fact that Zen training may decrease one's susceptibility to anxiety (Chiesa, 2009). Importantly, however, these comparisons are drawn between a relatively large group of average (presumably non-Zen practicing) clinical psilocybin trial participants (n=327) (Studerus et al., 2010) and the relatively small number of psilocybin participants in the psychedelic sesshin study (n=20) (Smigielski et al., 2019a). More psychometric data on the psychedelic experiences of Zen practitioners is required to determine if they typically have characteristically distinct psychedelic experiences, and data collected through the proposed study would aid greatly here.[38] This will inform researchers on the generalizability of their findings.

Study B

If the above study cannot be conducted for logistical reasons (e.g., insufficient participant enrolment, lack of funding, etc.), Study B could serve as a much less rigorous alternative which still effectively incorporates the valuable comparative analysis of *dual insight* co-researchers.

Like Study A, Study B investigates the phenomenological qualities of altered states of consciousness induced through the ingestion of psychedelics and through Zen practice. Unlike Study A, however, Study B does this through interviews conducted with *dual insight* co-

[38] By producing more psychometric data on the psychedelic experiences of Zen practitioners, researchers carrying out Study A could also draw early conclusions about how Zen training may affect the ways psychedelics are experienced by comparing their findings *and* those of the psychedelic sesshin study to the data currently available on the psychedelic experiences of non-Zen practitioners.

researchers (highly trained Zen practitioners who have a history of both psychedelic and Zen ASCs) without the need of a Zen retreat (sesshin) or dosing session. Co-researchers intimately and personally familiar with mystical-type Zen ASCs who have an extensive history of psychedelic use would be preferentially enrolled (ideally, they will have had a minimum of 10 moderate to high-dose psychedelic experiences).

This study's interviews would combine the two Phase III interviews of Study A into one. During these interviews, co-researchers would be asked to compare the *general features* of their Zen and psychedelic ASCs, at first in an open-ended way where they can identify the phenomenological convergences and divergences that seem most obvious or important to them.[39] Following this, the interviewer can then rely on pre-determined prompts which aim to address the study's central research questions (see section below: *Testable Hypotheses*).

Interviewers would then proceed through a list of questions adapted from the psychometric questionnaires used in Study A (e.g., the 5D-ASC and Hood Mysticism Scale). For example, item #21 of the 5D-ASC asks respondents to give a Likert-rating response to "*It seemed to me that my environment and I were one*." This could be adapted to an interview question format—e.g., "*describe the similarities and differences between your psychedelic and Zen ASCs with regards to feeling you are one with your environment*." Like with Study A, qualitative descriptions would be recorded, and a rating scale response for the general qualitative

[39] Like in Study A, this is done in an effort to minimize the distortions that occur with etic interpretations/framing, but co-researchers may have already thoroughly reinterpreted their psychedelic experiences through a Zen lens. This may be somewhat mitigated by encouraging co-researchers to describe their historical psychedelic experiences in the language and framing they would have used at the time they were experienced, but it may not address this concern to the same extent the design of Study A does.

likeness of their Zen and psychedelic ASCs would be collected for each question. Once again, these rating scale responses are key, as they allow co-researchers to provide comparative data on the quality of these experiences even when their respective qualities cannot be effectively articulated.

Using interview questions that have been adapted from psychometric questionnaires may be preferrable to having participants complete the questionnaires retrospectively, as these questionnaires are generally formatted to analyze isolated ASCs. With these interviews, co-researchers are being asked to speak on their general impressions of all their cumulative psychedelic ASCs and their cumulative Zen ASCs. This poses a problem, because a conventional questionnaire wouldn't allow them to answer, "*it depends"*—e.g., on which of their psychedelic experiences are being discussed. In an interview, co-researchers can easily provide the necessary nuance, "*yes, I have had experiences where I felt I was one with my environment with both kensho and psychedelics, but this is an inherent feature of kensho, and it only happened occasionally with psychedelics*."

How reliably psychedelics and Zen practices produced specific types of experiences would also be data worth collecting. This could be incorporated into each interview question and collected using a rating scale—e.g., as part of the question, "*describe the similarities and differences between your psychedelic and Zen ASCs with regards to feeling you are one with your environment*", co-researchers could rate on a ten-point scale how reliably this feeling arises with each type of ASC, and this data could be a major consideration in answering the training equivalency question. This is because this data could demonstrate that while Zen practices *can* induce all the major qualities associated with typical psychedelic experience, they usually don't.

Therein lies one of the major strengths of Study B: it is not merely looking at a single Zen ASC and a single psychedelic ASC. It allows co-researchers to draw on a far broader set of experiences and subject them to introspective comparative analysis. This is important because both psychedelics and Zen practice are *potentialities*—they do not reliably induce a *single type* of ASC. By allowing co-researchers to share insights on the full range of their psychedelic and Zen ASCs, significantly more experiences can be compared. This grows the dataset exponentially.

The major problem with Study B is that it fails to address Katz's second theoretical concern, the ways in which interpretation distorts these experiences over time. Because co-researchers' comparative analysis is retrospective in Study B, the relative 'purity' of their experiences is diminished. This, however, may be an acceptable trade-off given its increased dataset and the improved generalizability of its findings.

Study B is also more logistically feasible than Study A as it would require significantly less time, staff, and funding. Sourcing co-researchers would also be much easier as there is no shortage of eligible participants; evidence suggests that many of today's Buddhists in the global West have a history of psychedelic use, and that psychedelics commonly provided the initial ASCs that would eventually lead them to studying Buddhism. For example, a survey with 1,454 respondents was carried out for *Tricycle*'s 1996 special issue on psychedelics and Buddhism. 89% said they were engaged in Buddhist practice, 83% said they had taken psychedelics, and over 40% claimed their interest in Buddhism was sparked by psychedelics. James Coleman's (2001) survey of psychedelic use among American Buddhists found that over 62% of his 359 respondents said that they had used psychedelics and of those, half said their use of psychedelics played some role in attracting them to Buddhism. And Douglas Osto's (2016) 2010-2011 survey

found that of his 196 respondents, 85.1% considered themselves Buddhist, 61.6% had tried LSD at least once, 54.7% had tried psilocybin, and when asked, “How important were your experiences with such substances in attracting you to Buddhism?”, 19.3% of Buddhist respondents said “somewhat,” 10.4% said “fairly,” and 21.5% said “very.” This is significant because it not only indicates that there are likely many potential *dual insight* co-researchers available, but that a substantial percentage of those individuals have a positive relationship with psychedelics and may be interested in the study, even if they no longer use them.

Study B could also be carried out remotely using video conferencing software, meaning co-researchers would not have to be sourced from specific geographic regions, making the study more accessible to those interested in participating. And lastly, the list of exclusion criteria would be shorter for Study B, as studies involving psychedelics typically include exclusion criteria based on health contraindications (e.g., cardiovascular health problems, history of psychosis, etc.) (e.g., Liechti et al., 2017; Bohn et al., 2022; Holze et al., 2023; von Rotz et al., 2023).

Testable Hypotheses

The present study’s survey of the currently available comparative research on psychedelic and Zen ASCs yielded several preliminary conclusions about the similarities and differences of these states (see: Chapter 4). These conclusions, however, were drawn from limited data and sources with potentially heterogenous interpretive frameworks. These conclusions should therefore not be mobilized as definitive evidence for the likeness or unlikeness of these states. These conclusions do, however, provide researchers carrying out *dual insight* studies on Zen and psychedelic ASCs with testable hypotheses to guide their research. These were:

- Zen ASCs differ substantially from psychedelic ASCs in their effects on visionary restructuralization. Psychedelics appear to induce visual hallucinations, synesthesia, and vividness of imagination at much higher rates than Zen ASCs.
- Psychedelics tend to impair one's cognitive functioning and sense of agency much more than Zen ASCs do.[40]
- Zen ASCs are typically induced through the experiencer's conscious and engaged efforts (something one does), while psychedelic ASCs are largely automatic (something happening to one).
- Psychedelics tend to significantly reduce one's vigilance, causing an unalert, hazy, or dreamlike state, whereas mystical-type Zen ASCs appear universally characterized by qualities of stability and clarity.
- Cognitive dishabituation is characteristic of psychedelic and Zen ASCs, but psychedelics do so in a more chaotic and less reliably noetic fashion.
- Both Zen and psychedelic ASCs exhibit similar degrees of ineffability.
- Both Zen and psychedelic ASCs exhibit high degrees of deeply felt positive mood, but the quality of this positive affect may differ substantially (e.g., psychedelic ASCs are

[40] This may be the most important preliminary finding of the current study with regards to training equivalency among psychedelic therapists. If this finding is correct, then psychedelic therapists who have experienced kensho but not a psychedelic experience are likely to be unfamiliar with the quintessential challenging psychedelic experience of one feeling like they're dying or losing their mind—experiences which one may be significantly more equipped to guide someone through if they themselves have navigated them (Rochester et al., 2021; Nielson, 2021; Brennan et al 2021).

more likely to be described as exhibiting “boundless pleasure”, “profound peace”, and “all-embracing love”).

- Psychedelic ASCs are far more likely than Zen ASCs to exhibit “spiritual” or “religious” content.
- Psychedelic ASCs and Zen ASCs similarly affect time and space perception. Both can precipitate a complete transcendence of time and space, but more often, these states result in one’s complete preoccupation with the here and now.

In addition to testing the accuracy of the above claims, the qualitative interviews of Studies A or B could include questions like the following, which were identified as outstanding blind spots in the comparative analyses of Chapter 4:

- Do makyo differ in quality and intensity from psychedelic visions and phantom sensations?
- Do makyo experiences ever resemble mystical-type ASCs? If so, how are these distinguished from genuine mystical-type Zen ASCs?
- How do one’s experiences of self-transcendence differ qualitatively between Zen and psychedelic ASCs?
- How does the clarity of Zen ASCs impact their mystical intensity?
- What characterizes the deeply felt positive mood associated with Zen ASCs?
- Are Zen and psychedelic ASCs ineffable for the same reasons?
- Zen ASCs tend to happen with the eyes open, and psychedelic ASCs may occur with eyes open or closed. Are open-eyed psychedelic ASCs more akin to Zen ASCs than eyes-closed psychedelic ASCs?
- Are psychedelic ASCs less reliably noetic than Zen ASCs?

Conclusion

The studies proposed in this chapter should not be regarded as foolproof or readily deployable. If used as rudimentary frameworks for future research, logistical, theoretical, and methodological challenges will inevitably arise as formal project proposals are developed. It must be stressed that the proposed studies have been presented as mere examples of how the *dual insight approach* could be used in future studies. If either of this chapter's proposed study designs are developed further, researchers must be cognizant of each study's strengths and weaknesses. In summary, Study A presents feasibility challenges and potentially limited generalizability, but is more theoretically sound in key ways. Study B is much more feasible and produces significantly more data but upholds slightly lower standards for its theoretical reliability. Different (and I imagine superior) study designs could be developed using the *dual insight approach*.

In this chapter, I have argued for the merits of incorporating *dual insight* co-researchers into studies comparing the acute phenomenology of ASCs induced through psychedelics and non-psychedelic means (e.g., Zen practices), as doing so addresses the major theoretical concerns which have hampered comparative research to date.

CONCLUSION

This study investigated the acute phenomenology of altered states of consciousness induced through psychedelics and various Zen practices to assess claims that certain psychedelic ASCs are in some sense equivalent to non-psychedelic ASCs. This study identified a major gap in the literature, as comparative analyses on the acute phenomenology of these states was shown to be inconsistent in their interpretive frameworks and based primarily on anecdotal evidence. The little empirical evidence that has been gathered represents an extremely small dataset, limiting the generalizability of comparative analysis based on these findings. Nevertheless, the limited anecdotal and empirical data were analyzed, core themes were extracted, and some preliminary conclusions were drawn regarding the qualitative convergences and divergences in the acute phenomenology of these states.

Both Zen and psychedelic ASCs were shown to substantially impact cognition, perception, and mood, and based on inductive inferences, both met the *a priori* criteria for mystical-type experiences set out by a mystical typology derived from the writings of William James (1902/1917) and Walter Stace (1961). Conclusions were drawn regarding the qualitative convergences and divergences in the acute phenomenology of these states, and these were categorized according to their effects on perception, cognition, and mood with special attention given to qualities traditionally deemed mystical.

While some potential qualitative convergences were identified, the present study found far more evidence suggesting that Zen and psychedelic ASCs differ substantially in their acute phenomenological qualities. This preliminary evidence suggests such states should not be regarded as equivalent, but further research is needed because of the limited data from which this conclusion was drawn. It must therefore be stressed that this study's findings are highly tentative

and should not be mobilized as evidence for or against the likeness of these states. These findings may, however, prove valuable as testable hypotheses for future research comparing Zen and psychedelic ASCs.

Inconsistent interpretive frameworks, a lack of definitional consensus, and theoretical challenges to reliably collecting qualitative data on Zen and psychedelic ASCs were all common issues identified with the sources used for this study. Future research testing this study's conclusions must grapple with these challenges. To aid in this, the present study developed a novel theoretical framework for future studies investigating the acute phenomenology of Zen and psychedelic ASCs known as the *dual insight approach*. Two study designs were proposed to demonstrate how this approach could be mobilized to produce data reliable enough to answer the question of Zen and psychedelic ASC equivalency more conclusively. Carrying out such studies would have both real-world implications for the training of psychedelic therapists and for religious studies scholars engaged in comparative mysticism.

Answering the question of Zen and psychedelic ASC equivalency would impact the policy decisions currently being drafted on the credentialing protocols for newly trained psychedelic therapists. "Experiential training" (i.e., therapists having their own psychedelic experience) is currently regarded as best practice in the psychedelic therapy community. The rationale for this decision is based on the belief that it is unethical or unsafe for therapists to guide patients through a psychedelic experience if they themselves have not experienced this sort of altered state. It has been suggested that if newly trained psychedelic therapists cannot receive experiential training (e.g., for legal, religious, or health reasons), that they may be credentialed based on their experiential training in equivalent ASCs. If Zen and psychedelic ASCs are shown not to be equivalent, it would demonstrate that not all ASCs are the same, and the onus of proof

would then be shifted to the newly trained psychedelic therapist to demonstrate equivalency. While the preliminary conclusions drawn in the present study should not be mobilized as definitive evidence for or against the likeness of Zen and psychedelic ASCs, they should give psychedelic therapy credentialling bodies pause, and encourage them to reconsider any perennialist biases that may underpin their policy decisions.

Answering the question of Zen and psychedelic ASC equivalency may have important implications for religious studies scholars engaged in comparative mysticism—particularly for those engaged in the perennialist-constructivist debate. Of course, the specific impacts this research has on this debate will depend on study outcomes. If proven highly effective for circumventing the theoretical pitfalls associated with reliably gathering and comparing qualitative data, the *dual insight approach* to comparative mysticism research may have a greater impact on the debate than specific findings on the similarities and differences of Zen and psychedelic ASCs.

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Appendix

Figure 1: Comparisons of psychometric data collected in the psychedelic sesshin study

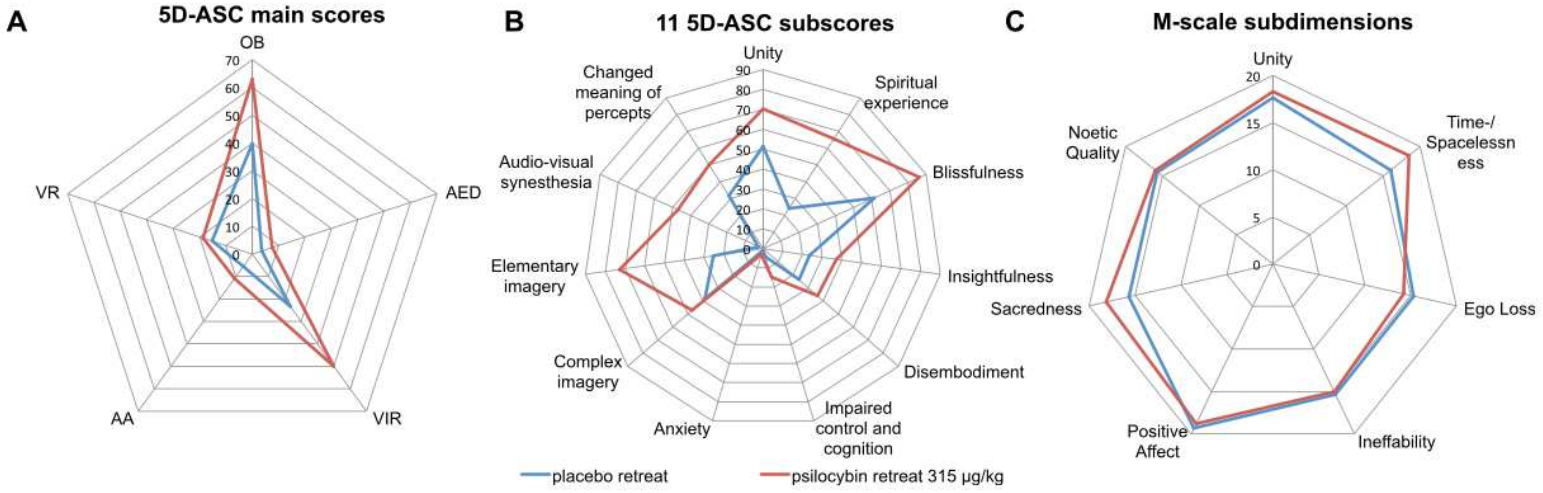

Figure 1. Here, the psychedelic sesshin study's psychometric questionnaire findings on the acute phenomenology of Zen and psychedelic ASCs are visually contrasted (Smigielski et al., 2019b). Each image depicts study participants' subjective intensity ratings of experiential domains in accordance with **(A)** the 5D-ASC questionnaire (Dittrich, 1998), **(B)** the 5D-ASC questionnaire with the 11-deminsional revised factorial analysis (Studerus et al., 2011), and **(C)** the Mysticism Scale (Hood, 1975). These images only show responses from study participants who reached the a priori criteria for a "strong" mystical-type experience (n=19 in the psilocybin group, n=3 in the placebo group). Despite similar M-scale subdimensions **(C)**, there were marked differences in various scale and subscale scores of altered states of consciousness **(A, B)**.