

The Nature of Nonduality: the epistemic implications of meditative and psychedelic experience

Response to Jylkkä's (2022) *Mary on Acid: Experiences of unity and the epistemic gap*

Abstract

In Jylkkä's (2022) *Mary on Acid: Experiences of unity and the epistemic gap* the author contends that psychedelic experience, by inducing unitary—nondual—experiences of subject-object dissolution, brings to light the epistemic gap between *unitary* knowledge, constituted by experience, and *relational* knowledge, distinct from the experience. Jylkkä draws a connection between the nondual experience as occasioned through psychedelic usage, and Buddhist contemplative practices. Whilst Jylkkä's ambition to establish an epistemic dialogue between analytic philosophy, Buddhism and the science of psychedelics is laudable, more rigorous attention is required to characterizing the forms of unitary, nondual, experience occasioned by psychedelic use. Whilst such parallelism *may* speak to a deeper unification, such a claim requires substantiation to avoid indulging a naïve perennialism which elides the varied and rich engagement with nonduality across complete traditions. This article highlights the: internal tensions that exist surrounding the nature of the nondual elucidated across Indo-Tibetan traditions; dangers of decontextualizing states induced through culturally embedded contemplative practices; underrecognized epistemic function of ceremonial ethnomedicine usage in generating Indigenous metaphysics; under acknowledged potential of psychedelic substances for attenuating introspective bias in first-person phenomenological inquiry.

Psychedelic Science ; Physicalism ; Perennialism ; Contemplative Studies ; Epistemology

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Physicalism, Psychedelics and the Epistemic Gap

In his (2022) article *Mary on Acid: Experiences of unity and the epistemic gap* Jylkkä explores Frank Jackson's (1986) famous philosophical thought experiment Mary's Room, in relation to the phenomenology of psychedelic experience. Jylkkä's contention is that experience cannot be adequately understood by the empirical sciences; rather, he suggests, that contemplation upon the nature of unitary knowledge, derived from psychedelic experience, results in a more refined metaphysical understanding of the physical universe. For Jylkkä, psychedelic experience brings to light the epistemic gap between experiences themselves and the descriptions about them—between *experiential* and *relational* knowledge.

Jylkkä argues that science cannot capture what experiences *feel like* because that knowledge is *unitary*, whereas scientific knowledge is always *relational* and *distinct* from what it is about. Jylkkä contends that a better appreciation of the divergence between experiential and

scientific knowledge can be achieved through the use of psychedelics which may induce such unitary experience. Jylkkä's suggestion is that such a unitary experience catalysed by psychedelics, offers a problematization of physicalism. This problematisation is akin to the thought experiments offered by: Jackson's (1982, 1986) *Mary Thought Experiment* or the *Knowledge Argument*, Nagel's (1979) *What is it Like to be a Bat?* and Chalmers's (1996) *Hard Problem of Consciousness*. In each of these thought experiments attention is drawn to the existence of an 'epistemic gap' between experiential and scientific knowledge.

For instance, Jackson's thought experiment asks hypothetically, could Mary, an expert neuroscientist who has only ever seen in black and white, know what it is like to see the colour red, if she knew everything about the neurophysiology of sight? The suggestion made is that there is something added to Mary's knowledge *about seeing the colour red*, through the *direct experience* of the colour red. This 'knowledge argument' has called for a nuancing of both our physicalist ontology, and quantitative epistemologies; offering a challenge against the reductivist assumption, that all there is to knowing a phenomenon is to know abstract features of that phenomenon.

Jylkkä adapts Jackson's Mary thought experiment by applying it to the psychedelic experience, asking: could Mary *know* what it is like to undergo an acid trip based on an understanding of the neurophysiology of the event alone? Jylkkä here points to a key problematic that calls for redress in the emerging science of psychedelics: that is, is science capable of offering a comprehension of the sense of unitary experience—the purported dissolution of the boundary between subject and object—occasioned by psychedelic experience? Jylkkä's contention is that such psychedelic induced 'unitary' experience conveys knowledge that is not *about* anything; knowledge the author terms 'unitary knowledge' or simply knowledge of 'This'. Jylkkä is therefore suggesting that the scientist Mary upon taking psychedelics and experiencing a dissolution of subject-object duality gains knowledge that she did not have previously; even with her encyclopaedic understanding of neurophysiology. This is as scientific knowledge is always *relational* and thereby distinct from what it is about, whereas unitary knowledge is constituted by the experience. Psychedelics in catalysing unitary experience, may allow individuals to see the difference between these forms of knowledge. In order to substantiate his theory of the nature of unitary knowledge, Jylkkä draws upon the understanding of nonduality and the ineffability of experience, as described within the Zen Buddhist tradition, an attempt we will evaluate in what follows.

The Case for Nonreductive Physicalism

Jackson's scenario offers a *Reductio Ad Absurdum* response to extreme forms of Eliminativist or Identity-physicalism, that claim that all that exists, including experience, is *merely* physical—that is nothing *over and above* the physical (Churchill, 2010). Such theses hold to the *Causal Closure of the physical domain*: that only occurrences at the physical level are causally

efficacious, rendering higher level occurrences epiphenomenal (Lowe, 2000). Of course, Eliminativist-Reductive Physicalism is only one rendering of what constitutes the physicalist thesis alternate non-reductive physicalist theses allow for the existence of other levels, including the mental, which possess genuine causal efficacy. This is the case as long as the 'higher' level events are supervenient upon a physical base, and do not violate the *Completeness of Physics* thesis—that is, the contention that all events are explicable in purely physical terms (Stoljar, 2008). The *Completeness of Physics* thesis diverges from the causal closure of the physical domain.

Jackson's *Knowledge Argument* demonstrates, nonetheless, that an account of the physical mechanics in operation in the world remains necessarily incomplete if it excludes experiential knowledge. In Nagel's (1979) phrase, there is "something it is like" to undergo experiences; to see red for the first time, to *be a bat*. Yet empirical science, in offering only relational knowledge—knowledge that is necessarily distinct from its subject—misses the knowledge that results from undergoing experience. The dominant critiques of reductive physicalism offered by Chalmers, Jackson, Nagel *et al.*, rely upon the *Epistemic Gap* that lies between knowing a thing through how it *appears to us*, versus knowing it *in itself*—between experience-in-itself and scientific theories about experience. This gap indicates the necessary incompleteness of scientific knowledge and the inadequacy of reductive physicalism.

Jylkkä suggests that psychedelic experience, as a *brute happening*, provides the individual a unitary experience which provokes insight into the distinction between relational and experiential knowledge, writing: "we do not know, through science alone, the full truth about the physical—a *limitation that psychedelic experience brings to light*." (p.167, 2022 italics added). *Why* is unitary experience occasioned by psychedelics, *how* does it produce insight into the distinction between relational and experiential knowledge, and finally *what is* unitary experience? In evaluating Jylkkä's argument we will consider these questions in turn.

Why Psychedelics produce Unitary Experience?

Why is Unitary Experience produced by psychedelics? To answer this question, we must consider the different ways in which psychedelics affect human cognition. As Letheby (2022) amongst others, suggests, beneficial effects of psychedelics seem to be mediated by experiences with various qualities. Broadly the experiential effects of psychedelics include altering the sense of self and changing how people relate to their own minds and lives, while more specifically, a number of authors have spoken to the dissolution of subject-object duality, which Jylkkä refers to as 'unitary' experience.

What produces these dissolution experiences? there are various postulated physiological mechanisms which attempt to understand unitary experience, or the experiential dissolution of the subject-object duality; however, at this stage there is no conclusive physiological

correlate. Nonetheless some contenders include the following. Changes to mental representation of self, world and other, has been postulated as linked to diminished activity in the Default Mode Network (DMN)—associated with reductions in ‘self’ oriented or ego-centric thinking, alongside reductions in mind wandering. This physiology has been correlated with the subjectively felt loss of self, and dissolution of the subject-object boundary. Such reduced DMN activity has been measured in both deep meditative states alongside psychedelic experiences (Palhano-Fontes et al., 2015; Gattuso et al., 2022). In a clinical register these shifts have been mapped to reduced symptoms of anxiety, depression and addiction, along with improved well-being. Despite this promising research, as I have written elsewhere, we have good reason for caution when scientifically seeking neural correlates for mystical experiences, like nonduality, or soteriological states, like awakening: see my work on the neural correlates of awakening (x, 2023).

What Did Mary Learn on Acid?

Having considered some of the proposals for how unitary experience is occasioned by psychedelics, we can conclude that a number of physiological mechanisms have been proposed that have been correlated with the experience of subject-object dissolution, colloquial a facet of ‘ego death’, induced by psychedelics. We will turn, now, to considering Jylkkä’s case for why psychedelically induced unitary experiences produces insight into the distinction between relational and experiential knowledge.

In brief, unitary experiences for Jylkkä reveal the way experience is *always already unitary*: that is, below the illusion of ‘relational knowledge’ or knowledge that a subject has about the objects of the world, there is a unified holism. In this way psychedelic unitary experiences, in which perceived subject-object duality dissolves, catalyse insight into the distinction between the relational and the unitary. This, for Jylkkä, is what Mary learns on Acid.

Importantly, Jylkkä thus suggests that *all* experience in fact *implies* unitary knowledge—when Mary sees the colour red for the first time, she gains unitary ‘knowledge’ of red, when she takes Acid for the first time, she experiences the fact that all experience is ultimately unitary in nature. As Jylkkä writes:

[psychedelic experience] aids us to see what it is that Mary learns when she sees colours for the first time: the knowledge she gains *is* the experience. [psychedelic experience] can show that all experience constitutes this, ineffable consciousness. (p.164, 2022 emphasis added)

The case that *all* experience constitutes unitary knowledge will hinge upon Jylkkä account of the nature of the unitary knowledge produced by psychedelic experiences of subject-object dissolution. This subject shall be our focus in what follows. Such an inquiry raises a number of

interrelated and important questions; what is the connection between the psychedelic experience and the mystical experience? Is the psychedelic experience a 'nondual encounter' akin to the soteriological goals or certain stages of direct insight, described in various contemplative traditions? Is unitary experience, as Jylkkä claims, purely non-conceptual, non-intentional, and not 'about' anything? There is a need to disambiguate the meaning of unitary knowledge.

What is Unitary Experience?

Jylkkä assumes a linkage between the psychedelic experience and a sort of non-denominational universal 'nondual' mystical encounter, which he refers to as a unitary experience of 'This'. Without further explication, his argument, that psychedelics occasion encounter with unitary knowledge is suggestive of a perennialism of sorts; a problematic assertion we will address later in this paper. Despite the rich philological dialogue surrounding this subject, Jylkkä offers little engagement with the broader Eastern or Indigenous understandings of mystical experiences; and the epistemic- or metaphysical doctrines arising in relation to such contemplative experiential practices. Whether unitary experiences—however they are induced—constitute modes of insight into the nature of consciousness is a question of religious scholarship as much as science.

Engaging with this subject requires navigating topics such as: the nature of non-conceptual or epiphanous knowledge; the nature of direct-insight; the limitations of introspection and apperception; the demarcation between religious soteriology and scientific methodology; and the demarcation between first- and third-person modes of inquiry. While Jylkkä's work opens the door to this interdisciplinary dialogue, a much richer engagement with mystical theology and Buddhist metaphysics, is required to understand the purported insight occasioned by psychedelic experience.

Buddhism and Unitary Experience

There is value in Jylkkä's ambition to respond to the excesses of physicalism by placing nondual experience in dialogue with the analytic philosophical tradition, however in cross-cultural exchange there is the danger of oversimplistic characterisation. As will be seen, Jylkkä's account of This, or nonduality, would benefit from a fuller engagement with the wider non-western literature.

Jylkkä utilises a Zen Buddhist metaphysical framework to explicate and language unitary experience, and the collapse of the subject/object dichotomy, occasioned by psychedelic experience. He draws upon the Zen term 'This' (with reference to Watts, [1958] 1973) to refer to the 'brute happenings' of psychedelic unitary experience:

This involves no 'subject' or 'object', no 'experiencer' and 'experienced'; there is merely the brute happening of what could be conceptualized as 'an experience' [...] In *This*, unitary consciousness, there is no subject that becomes acquainted with an experience, there is simply the happening of an experience, the occurrence of a process, *This*.

Jylkkä uses the term 'This' to refer to conscious pre-conceptual, raw experience beyond the reflective descriptions appended to it. He thereby suggests that any introspective or reflective characterization of an experience is separate from the experience itself.

This subject has however generated debate for millennia in Buddhist scholarship, particularly amongst Indo-Tibetan traditions. This is illustrated, for instance, in the Buddhist doctrine of the two truths (dvasatya) perhaps best explicated by the philosopher Nāgārjuna of the Madhyamaka school of Mahāyāna Buddhism. This doctrine draws a distinction between 'conventional' and 'ultimate' reality, suggesting that all phenomena are empty (śūnyatā) of an inherent self or essence due to the non-existence of self (anattā), yet exist inextricably dependent upon all other phenomena (pratītyasamutpāda). This metaphysics seeks to describe exactly that pre-conceptual reality encountered through direct meditative experience which Jylkkä describes as unitary experience. Indeed, Indo-Tibetan Mahāyāna traditions have long navigated the distinction between modes of non-conceptual ineffable experience, direct insight, and conceptually mediated knowledge (Garfield, 2014). However, Jylkkä offers only a limited cursory engagement with the relationship between contemplative metaphysical understandings of unitary experience, and the psychedelic experience.

Further illustration of the need for greater engagement with Buddhist scholarship is evident in Jylkkä's assumption that:

The unitary character of experience can be noticed not only in [psychedelic experience], but in any experience where one loses oneself and is completely present without reflection; where there is only *This* ... (p.160).

Yet this claim is highly contentious and runs together the wide gamut of described dissolution experiences—whether temporary or sustained. As such Jylkkä's argument begs the question: are all non-ordinary states of perception the same? Are all awakenings and various 'flow' states isomorphic? These are just a few instances in which Jylkkä's understanding of unitary experience would have been enriched and contextualised by being put in relation to important constructs within Buddhist metaphysics. A fuller engagement is called for surrounding notions including: bodhi; satori; moksha; vimutti; advaita; śūnyatā; and tathāgatagarbha or buddhadhātu. We will explore the need for a fuller disambiguation of *nonduality* in what follows.

The Nature of Nonduality

As suggested, a central characteristic ascribed to psychedelic experience is ego dissolution or loss of the sense of self (Carhart-Harris et al., 2014; Huxley, [1954] 2009; James, 1882; Pollan, 2018; Ward, 1957). Such ego death experiences, or nondual encounters, typically involve a sense of unity with one's surroundings and a loss of the perceived sense of self as distinct from other things. While many binaries may be seen to dissolve during the psychedelic experience, Jylkkä focuses upon precisely this dissolution of the subject-object division: upon which an individual, rather than being a subject *having* an experience, experiences themselves as indistinguishable *from* the stream of experience. Indeed, Jylkkä describes contemplative mystical experience as involving “a sense of becoming one with what one is doing [...] dissolution of the boundary between subject and object amounts to the experienced vanishing of subject and object as distinct things” (p.156-7,).

Consideration of the nondual encounter brings to the surface important questions for further inquiry. Is there a single truth, a direct experiential insight into the nature of consciousness occasioned by psychedelics shared by varied meditative practices? If so, is such a single truth best described as the unitary experience of subject-object dissolution? Is such experience conceptually mediated or ineffable? In western philosophy these questions relate to the status of introspection; conceptual and nonconceptual knowledge and the nature of direct insight. If we are to make meaningful sense of the psychedelic experience, its implications for our epistemic modes of knowing, and its scientific and metaphysical ramifications, further research into the literature surrounding such questions is required. While subject-object dissolution has long been described across contemplative traditions, Jylkkä's account offers only a rudimentary engagement with this dissolution.

Jylkkä writes: “I have argued that [psychedelic experience] constitutes unitary knowledge or This. In fact, as Zen emphasizes, all experience is This” (p.163). Is that the end of the story for ‘This’ and Buddhist metaphysics? Why is Zen drawn on with no reference to the wider Buddhist cannon? The author goes on to write: “What I mean by ‘This’ is completely nondual and beyond concepts, it is the brute happening of experience” (p.160). Yet we might ask, what does it mean to be ‘beyond concept’ and a ‘brute happening’? Debate surrounding such terminology has a rich scholastic history in Buddhist philosophy. Jylkkä appears to assume that the nondual unitary experience occasioned by psychedelics are non-conceptual in character: but whether or not nondual ‘awakening experiences’ in Buddhist philosophy, are conceptually mediated is recognisably a more vexed subject. Indeed, the relation between awakening and conceptuality is a topic on which the traditional texts are equivocal. Some suggest that awakening experiences occur in a state of advanced meditative absorption, in which ideation is completely absent. Others suggest that an awakening experience is a complexly structured cognitive insight into the four noble truths, dependent arising, and emptiness—for further see Thompson (2020) and Garfield (2021).

A further highly contentious subject concerns whether unitary experience, induced by psychedelic substances, amount to 'awakening' experiences. We might ask: is psychedelic nondual experience akin to the Mahayana doctrine of *Buddha Nature* (tathāgatagarbha and buddhadhātu)? In Tibetan Mahayana teaching, the term *Rigpa*, refers to a universal enlightenment underlying all beings; this is closely related to the term Buddha Nature. Buddha Nature, referred to an uncompounded wisdom, and is described as the union of awareness and emptiness (Dharmadhātu). It is viewed as naturally arising, pure, pervading all phenomena, beyond transition or change; like space. It remains beyond birth and death and is the fundamental nature of all mind streams. The suggestion made is that awakening is possible because all beings share this ground of being (sugatagarbha). There are adventitious stains or afflictions which veil this naturally pure and unobscured mind, as encapsulated in the four noble truths. These veils include; the false of view of self and belief in the persistence of objects; illusions which, one might suggest, relate to those binaries that dissolve during nondual encounters.

There is an evident parallel that may be drawn with Jylkkä's claim that psychedelic unitary experience reveals unitary knowledge underlying all experience; just as meditation reveals Buddha Nature underlying all experience. Yet while some branches of Indo-Tibetan Buddhism, such as Dzogchen, emphasised the relation between awakening and nonduality, this is less evidently the case in some Theravadan traditions (Fischer-Schreibe et al; 2008). This tension is reflected in the dispute between what may be termed 'sudden' awakening schools, in which awakening is instantaneous and totalising, following realisation of the unconditioned quality of nondual awareness—and 'gradualist' awakening schools that emphasise cultivation and purification practices (Gregory, 1991). A proponent of the 'sudden awakening' school of thought might read Jylkkä as suggesting that psychedelics, in occasioning unitary nondual experience, *produce* enlightenment. As such, if adopting a view of awakening as inextricably tied to nondual experience, is it reasonable to suggest that a decontextualised psychedelic experience can produce a state of 'stream entry' (sotāpanna) from which an individual has seen the Dharma (i.e. experienced subject-object dissolution) and thereby entered upon the first of the four stages of enlightenment? Such a notion would be scoffed at by those who question whether psychedelic experiences, in producing mere *glimpses* of dissolution, can really equate to the stabilisation of 'the view', as it is termed in Dzogchen or Mahamudra practice traditions, required for stage-based progress towards enlightenment (Brown et al, 1986).

Furthermore, there is a wide literature surrounding the subject of nonduality and a host of questions that require addressing, when Jylkkä relates psychedelic experience to nondual experience. Further work is required in determining whether the nondual experiences induced by psychedelics map to any specific quality of the awakened mind: i.e., the pure, luminous, undefiled, natural or true state, as it is variously described. What about other properties of

‘pure awareness’ that are thought to remain when subject-object duality falls away: characteristics such as being empty, boundless, timeless, awake?

The Sanskrit word for nonduality, *advaita*, refers to “not two”, both/and, inseparable, all at once, and simultaneous—does this meaning map accurately to Jylkkä’s use of the phrase? Does the Mahamudra lineage encapsulate the same meaning, as Jylkkä, through the phrase ‘same taste’ when seeking to describe the relation between ultimate and relative reality, form and formlessness? Is Jylkkä’s sense of nonduality akin to the Dzogchen term *Rigpa*, which, as described, refers to ‘pristine’ or ‘bare’ awareness and Buddha Nature—or is it closer to Ordinary Mind as understood in Mahamudra? Does Jylkkä’s sense of unitary experience distinguish primordial consciousness from witness-consciousness, choiceless awareness from big-sky mind or moksha from vimutti?

Consider an illustrative tension. If psychedelics occasion an experiential encounter with emptiness, as Jylkkä contends, should we understand psychedelics as occasioning an experiential encounter with ‘emptiness’ understood as non-implicative negation (as in Madhyamaka) or the *alaya-vijñāna* notion of a “store-consciousness” (as in Yogācāra); or emptiness as understood in relation to the Theravādan description of interdependence (*Pratīyasamutpāda*)? Jylkkä leaves such questions ambiguous. A further tension arises, for instance, concerning the difference between experience in which the ‘witness’ is aware of arisings as they occur in the mind, set against a totally *nondual* awareness, according to which even the arisings of content in the field of awareness are recognised as themselves not distinct from awareness itself. In contemplative training this is considered a later stage that involves the complete collapse of perceived duality, and the unveiling of the awareness that is always already awake. In Advaita traditions, this is referred to as the distinction between Turiya and Turiyatita (Brown, 1986). Yet Jylkkä fails to situate psychedelic unitary experience in relation to this distinction.

By proposing a commonality to unitary experience without engaging these complexities, Jylkkä fails to move with the evolution in contemplative studies towards a *contextualised* understanding of contemplative practices. The suggestion made is that awakening, and all other mystical states or attainments, cannot be conceived or properly understood, when divorced from the practice traditions out of which they emerge (Kirmayer, 2015). A similar argument has been raised in relation to psychedelics as ethnomedicines and contemplative technologies, developed in traditional Indigenous contexts. These critiques speak to the relevance of traditional knowledge systems that inform and shape the meaning derived from contemplative experiences (Reyes-García, 2010). This is an argument made also, by Buddhist scholar Thompson (2020) in relation to awakening as embedded in cultural context; a subject I elaborate in relation to the quest for neural correlates of awakening states (x,2023). We will explore the need for a contextualised understanding of ethnomedicines in what follows. Importantly, engagement with contemplative scholarship means addressing foundational

concerns regarding perennialism. Such perennialism is evident in Jylkkä's assumed linkage between the psychedelic experience and non-denominational universal nondual mystical encounter.

Nonduality and Perennialism

Jylkkä's ambition to describe the unitary experience occasioned by psychedelics, if unexamined, implies the existence of a common underlying religion and a unity through shared mystical experience (Shear, 1994), indicating a faith in the existence of a perennial philosophy of sorts (Ferrer, 2000). Yet to defend such a perennialism the argument needs to be made compellingly that psychedelic experience, alongside contemplative or meditative unitary experiences, are in fact, held together by a shared conceptual reference point. Whilst appealing, the convergence has yet to be established empirically or philologically.

The danger with suggesting such a universalist perennialism is that one runs the risk of smuggling in one particular viewpoint in the name of being universal (Thompson 2020, p.154). A point well worth making is that universalism is itself a specific viewpoint, and, in the rush to integration or assimilation, the universalist often fails to respectfully acknowledge the existence of different and irreconcilable perspectives. As indicated genuine philosophical and religious differences exist beneath the broad umbrella of mystical traditions, as well as between the varied traditional Indigenous metaphysical understandings developed in relationship with ethnomedicines.

There are further important critiques of this universalist tendency. It is problematic in that it bespeaks a secular faith that our scientific knowledge and rationalist outlook will help us to 'shear' culturally construed understandings of unitary experience of their traditionalist baggage, magical thinking, and cultural foibles. Such an attitude is distinctly modernist, failing to identify our own positionality within culture or to acknowledge that a similar process of acculturation is underway for us, instead situating ourselves above or beyond cultural contingency (Gleig, 2019). Consequently, in attempting to offer a scientific engagement with unitary experience, the problems of perennialism need to be addressed explicitly.

Jylkkä's work is illustrative of a wider modernist project; that faces similar perennialist issues. As I describe elsewhere, perennialism emerges in the quest for neural correlates for enlightenment—a secular project that seeks to unify stage models of awakening described across Buddhist traditions (x, 2023). Jylkkä's work provokes a similar concern. If psychedelics are believed to induce nondual experiences, then neuroscientists may seek to scientifically 'operationalise' that experience—through reduction to the biochemical mechanism of action by which psychedelics produce such experiences. The claim that there is a singular construct of nonduality mirrors the equally dubious suggestion that awakening constructs across contemplative traditions may be so unified.

Jylkkä's engagement with nonduality is limited to referring to the Zen notion of 'This'. This is illustrative of a perennialist approaches to unitary experience that begins by running together a great range of constructs that emerge out of distinct religious traditions. We have discussed but a few of these: Buddha Nature and Stage models of Awakening; Rigpa and Ordinary Mind; Moksha and Vimutti; Śūnyatā and slaya-vijñana; Turiya and Turiyatita. There may be meaningful differences between these constructs, and yet speaking of nonduality as a singular concept elides such important distinctions. Given these complexities it is more appropriate to speak of *various* nondualities, or theories of nonduality, consequently when utilising the term, careful explication is in order.

Much as the many nondualities call for careful disambiguation, the experiences occasioned by *various* psychedelics require elucidation. We might ask, is it the same experiential insight, or unitary encounter with *This, subject-object dissolution*, that occurs when one utilises psilocybin, as when one sits with cactus, or microdoses LSD? Attention to this question requires a navigation of the neurobiological mechanisms of action produced by these various subjects and the distinct experiential profile of such substances. Given the scope of Jylkkä's project, such subjects could not be raised, yet require greater address if psychedelic experience is to put compellingly into dialogue with Buddhist soteriological goals.

As psychedelics move into the medical sphere—with countries likely to follow Australia in legalising psychedelics for therapeutic use—these questions will become more prominent (Andrews & Wright, 2022). Jylkkä's work holds value in attending to the inevitable limitations of a science that offers only what he terms *relational* knowledge; these being immediately apparent in the clinical sphere. How do psychedelics produce therapeutic change? Science as it currently stands cannot in principle conceive of unitary knowledge, knowledge *by being*, as the therapeutic change agent in itself. Whilst unaddressed in Jylkkä's article, his work opens us onto the crux of this subject, and western epistemology will need to adapt if it is to be able to explain what will happen when the metaphysical is medicalized.

Ethnomedicine and Epistemology in Indigenous Culture

Beyond questions surrounding the relationship between the nondual encounter disclosed through psychedelic experience and western epistemology, there is a broader question raised concerning contemplative scholarship and its intersection with the academy. Attempts have been made to draw meditation practices derived from eastern traditions into dialogue with western science; in order to explore their ramifications for our theory of mind and cognitive sciences. Yet recent years have seen, too, a dialogue emerging around the alternate epistemologies present in Indigenous communities. As we will demonstrate this is an area which would evidence and extend Jylkkä's claims.

This is the case as Jylkkä's contention that psychedelic experience can induce epistemic shifts in individuals aligns with emerging research involving formal testing concerning how psychedelics alter metaphysical beliefs. This research involved conducting online surveys concerning perception of; the nature of reality, consciousness, and free-will, and how they change following psychedelic use (Timmermann et al., 2021). Results have revealed significant enduring shifts away from physicalist or materialist views, and towards panpsychism—changes positively correlated with improved mental-health outcomes. These shifts were believed to be mediated by perceived emotional synchrony with others during the psychedelic experience. Such findings support Jylkkä's contention that experiences induced by psychedelics produce profound new epistemic perspectives and metaphysical beliefs. However, such research is enriched by considering, too, the millennia of ritualised Indigenous ceremonial engagement with plant medicine use. In this way we can better comprehend the inextricable relationship that holds between ethnomedicines and Indigenous metaphysics and epistemologies.

Indeed, Indigenous cultures have always bound epistemology to participation in a living landscape and the forms of conscious experience evoked through relationship with place, animals, and importantly plants, or *ethnomedicines* (Botchway, 2014). There is value to reflecting upon the experience-based practices of Indigenous peoples and how these may bring understandings that have been lost to western metaphysics. In engaging with the unitary experiences occasioned by psychedelics, Jylkkä is participating in this emerging dialogue. That is, even should psychedelics be dis-embedded from their traditional contexts, or synthesized in labs, it is indisputably true that the longest ritualised engagement with psychedelics to produce experiential knowledge and perspectival shifts, resides with Indigenous peoples. Elsewhere I have written upon the process of Indigenous knowledge creation and transmission; indeed, increasing work is being done on the role of psychedelic experience in these ritualised contexts (x, 2023 forthcoming *Process Studies*). In particular, thought is emerging concerning the relation between psychedelic unitary experience and the process philosophy undergirding Indigenous belief systems. There is increasing recognition that cultural activities—including contemplative practices of various sorts; ceremonial plant medicine use, mantra recitation, fasting practice, and meditation—play a formative role in epistemic knowledge making and metaphysical belief system formation. Engaging with the role ethnomedicines have historically played in Indigenous knowledge systems is vital to coming to understand the mechanism of action for Jylkkä's proposed psychedelically induced perspectival shifts.

There are important ramifications that derive from psychedelic unitary experience, including—of sure interest to Jylkkä—the fact that ceremonial psychedelic use has a relationship with: the Indigenous perceptions of cosmos as living Country; place-based totemic mythology and Lore; the relational metaphysics embedded in ritual and the resultant panpsychist and animist metaphysics. Whilst Jylkkä's work speaks to an audience of analytic philosophers, as we have suggested even the analytic paradigm is moving towards recognition of the need to develop a

language that attempts to think arounds the role of embodied-, haptic- and situated-knowledge in Indigenous science; Indigenous holistic reasoning; the mind-body connection; and the broad relation between Indigenous epistemologies and ethnomedicine. As such Jylkkä's questions reflect upon not only the role of philosophical analysis in understanding how psychedelics have afforded human beings across cultures insight but illustrates too, how psychedelics may inform our prevailing western metaphysical frameworks, our epistemic belief structures, and our modes of inquiry.

We are left to ask: may psychedelics disrupt the neat lines drawn between domains such as science, culture, experience, and objectivity? Jylkkä's approach to addressing such questions begins with the bi-directional relationship between different forms of knowledge: the relational and the unitary; the third person and the first person; Western and Eastern; secular and religious; Indigenous and non-Indigenous. The humility necessary to meet psychedelic experience not merely as a type of 'induced madness,' but as a valuable mode of inquiry requires such recognition. Respectful engagement has long been recognised in Indigenous traditions, as a prerequisite for being in right-relation to ethnomedicines and their lessons. As we have much to learn from these custodians of entheogenic substances, let us begin with such humility.

Psychedelic Attenuation of Introspective Bias

It is important to note that unitary experience also has unexplored ramifications in the field of introspection. It is worth therefore, extending upon Jylkkä's claims by pointing towards the further development of our introspective science and phenomenology, that may be occasioned by psychedelic unitary experience. Critiques have historically been levelled at introspective reportage including the: fallibility of self-reportage; potential for cognitive illusion; distortions of wishful thinking, such as confirmation bias or affective biases; poor validity; and poor generalisability. One might contend that psychedelic experience—In generating pre-conceptual, pre-reflective, 'unitary' experiences—may serve to attenuate such biases. Similar contention has been made in the domain of contemplative direct experiential practices (Kang et al., 2014). Should psychedelics attenuate such introspective failings, offering novel unmediated experientially sourced knowledge claims, then psychedelics may plausibly serve as profound new tools for epistemic inquiry. This is true not only for therapeutic self-inquiry purposes but also for soteriological ambitions and scientific methodologies.

Indeed, the field of empirical phenomenology offers us insight into how unitary experience might attenuate introspective bias. In the seminal works *The View from Within* (1999), *Neurophenomenology* (1996), and especially *On Becoming Aware* (2003), Varela contends that to address introspective fallibility, the 'content' of experience ought not be viewed as the primary focus. From this perspective, phenomenology ought to prioritise the study of experience rather than its conceptualisation; first-person inquiry should be concerned with the

How rather than the *What*: “*How* is it to experience a particular phenomenon?” Our suggestion is that psychedelics, in encouraging a pre-reflective focus upon nonconceptual unitary experience, orients us towards the *How* not the *What*, in just such a way. In Jylkkä’s frame this is the distinction between knowledge about things (relational knowledge) and knowledge constituted by direct experience (unitary knowledge). As Hurlburt (2006) notes, the resurgence of introspective reporting has only recently been accompanied by an increase in the sophistication of methods guiding that reporting. As such psychedelics may constitute an important additional tool in first-person data-gathering; allowing research participants an encounter in which definitions come secondarily to the researchers’ growing intimacy with the phenomenon reported.

Conclusion

Jylkkä opens up important lines of inquiry regarding psychedelic experience, its metaphysical ramifications, and its bearing on the critique of the prevailing physicalist paradigm. Jylkkä reframes the epistemic gap that lies at the heart of the physicalist paradigm by speaking to the way in which psychedelic experience may elucidate the distinction between what is *relational knowledge* and what is *direct knowledge*. The merit of Jylkkä’s article lies in the inquiries it opens onto. Whilst his ambition to establish an epistemic dialogue between analytic philosophy, Buddhism and the science of psychedelics is laudable, more rigorous attention is required to characterize the forms of unitary, nondual, experience occasioned by psychedelic use. Whilst such parallelism *may* speak to a deeper unification, such a claim requires substantiation to avoid indulging a naïve perennialism which elides the varied and rich engagement with nonduality across complementary traditions. This article highlights the: internal tensions that exist surrounding the nature of the nondual elucidated across Indo-Tibetan traditions; dangers of decontextualizing states induced through culturally embedded contemplative practices; underrecognized epistemic function of ceremonial ethnomedicine usage in generating Indigenous metaphysics; and under acknowledged potential of psychedelic substances for attenuating introspective bias in first-person phenomenological inquiry.

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