

The Varieties of Psychedelic Epistemology
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Author's accepted manuscript (post-print).

Published in N. Wyrđ, D. Luke, A. Tollan, C. Adams, and D. King (eds.)
Psychedelicacies: more food for thought from Breaking Convention. Strange Attractor
Press, 2019. Please quote from published version.

INTRODUCTION

Is it possible to gain knowledge¹ by taking psychedelic² drugs? One influential answer is 'yes': according to this conception, by inducing mystical states of consciousness, psychedelics afford direct knowledge of supernatural, transcendent dimensions of reality. This is an *entheogenic* conception of the drugs as agents that "generate the divine within". A second influential answer is 'no': since materialism or physicalism³ is true, there are no transcendent realities, and psychedelics just cause compelling hallucinations or delusions. This is a *psychotomimetic* or *hallucinogenic* conception of the drugs as psychosis-mimicking or hallucination-generating agents whose essential effects are *anti-epistemic*⁴; far from facilitating knowledge gain, psychedelics actively hinder it.

A third, relatively unexplored view is that psychedelics can afford genuine epistemic benefits, even if materialism is true and there is no transcendent reality. From this perspective, the drugs' epistemic credentials do not depend on the existence of anything supernatural. Rather, psychedelics can afford genuine and sometimes transformative insights of a kind compatible with physicalism.

Several authors have recently made proposals along these lines. Here I offer a

¹ [This term is examined closely later in the chapter. Ed.]

² My sole focus in this paper is 'classic', serotonin-2a agonist psychedelics such as LSD, psilocybin, mescaline, and DMT/ayahuasca; I reserve the term *psychedelic* for substances of this class.

³ Despite philosophical complications, I will use the terms 'materialism', 'physicalism', and 'naturalism' interchangeably, to refer to views on which mind and consciousness always result from or depend on the complex activities of ultimately non-minded things (such as atoms): that is, views which hold that the mental is not fundamental to reality, but arises from or is constructed out of the non-mental. This excludes mind-body dualism, idealism and its variants (such as cosmopsychism), panpsychism and its variants (such as pan-experientialism and pan-protopsyichism), and neutral monism (in Russellian and other versions.) It is also intended to exclude all metaphysically literal varieties of theism.

⁴ 'Epistemic' is a philosophical term meaning 'of or pertaining to knowledge'.

taxonomy and critical review of these proposals using standard categories from epistemology, the philosophical study of knowledge. This is intended as a contribution to the “progressive initiative to demystify the psychedelic experience” being pursued by Carhart-Harris and colleagues (Carhart-Harris et al. 2018).

While it is possible that psychedelics afford propositional knowledge gain, I suggest the most promising idea is that they offer *new knowledge of old facts* (Gertler 1999). Rather than helping us learn new factual information, psychedelics allow us to understand or appreciate already-known (or otherwise knowable) facts in deep, vivid, affectively and motivationally significant ways.

Some authors have tried to refute the very idea of psychedelic-assisted knowledge gain. Roche (2010) argues that psychedelics impair the operation of brain mechanisms whose function is to represent reality accurately. It is highly unlikely, he says, that such impairment would lead to epistemic benefits. But in this dialectical context, the claim that “impairment” is psychedelics' only or most important effect is question-begging. Certainly some of their paradigmatic perceptual effects are misrepresentational, as when they cause subjects to perceive stationary objects as moving (e.g. the phenomenon of ‘walls breathing’). But the question at issue is whether *some* of their various effects on cognition and perception might be epistemically beneficial, even though others are detrimental or neutral. Looking through a telescope impairs one's ability to perceive near objects accurately, while improving one's ability to perceive distant objects accurately. Some practices and technologies that affect humans' epistemic capacities improve them in one domain despite impairing them in others (Bortolotti 2015).

Another sceptical argument is as follows: for any putative drug-induced (or altered-state-induced) knowledge gain, either we can verify it independently or we cannot. If we cannot, then we have no reason to trust it; and if we can, then the drug (or altered state) is redundant, since we could have obtained the knowledge anyway (cf. Windt 2011)

One possible response is to suggest that we might independently verify a *method of learning about a certain type of fact*, obviating the need to verify independently each specific fact learned by that method. For example, suppose that certain findings about psychedelics' neurocognitive effects, combined with independent evidence about the functional architecture of the brain, support the following claim: psychedelics promote

accurate and unbiased introspection of hidden or repressed desires and motivations. In that case, we could adopt a general policy of trusting psychedelic-assisted introspection of this kind, without needing independent verification of each of its individual deliverances. A second possible response would be to concede the point regarding *factual* or *propositional* knowledge, but hold that psychedelics afford access to other kinds of knowledge, discussed further below.

In any case, I do not think that *a priori* master arguments can establish the existence or otherwise of psychedelic-assisted knowledge gain. Rather, we must consider specific proposals about psychedelic epistemology individually, on their own merits, in light of the best available evidence.

KNOWLEDGE THAT

When we think about gaining knowledge, we usually think of what philosophers call *factual* or *propositional* knowledge, otherwise known as “knowledge that”. This is the kind of knowledge that one can gain (*inter alia*) through testimony, or through reading textbooks; it amounts to knowing that certain statements are true, that certain facts or states of affairs exist. Examples might be knowing that Paris is the capital of France, that next Thursday is aunt Judith's birthday, or that the boiling point of water at sea level is 100 Celsius. This is the kind of knowledge at issue in claims that psychedelics can promote genuine extra-sensory perception, such as telepathy or precognition—but such proposals are *prima facie* inconsistent with physicalism, and compelling evidence for them is lacking.

One less mysterious type of factual knowledge that psychedelics might afford is knowledge of one's previously hidden or unconscious mental states. Their putative ability to do this was the premise of the *psycholytic* form of therapy practised in Europe throughout the 1960s, in which patients were given low doses of psychedelics to facilitate psychoanalytic discoveries about their own repressed desires, motivations, and so forth (McCabe et al. 1972). As Metzinger (2003, p. 249) points out, many patients given psychedelics report such apparent epiphanies, and seem to improve clinically; a simple explanation is that at least some of the insights are genuine (cf. Shanon 2010).

There is no doubt that people intoxicated by psychedelics have experiences of *apparent* insight into their own minds (Shanon 2002). There are two questions: first, do

these insight-like experiences really cause clinical benefits? Second, are the apparent insights genuine? On the first count, there is little evidence as yet. Controlled and rigorous psychedelic research in the 21st century has tended rather to focus on correlations between mystical-type experiences and clinical benefits (Letheby 2015). It would be relatively straightforward, however, to see if subjective feelings of psychological insight predict clinical improvement, and Carhart-Harris (2018) has proposed doing this, using a scale developed to measure the feeling of emotional insight in dreams.

Whether or not it predicts clinical improvement, there is a separate question about whether the feeling of insight is veridical. On the face of it, confabulations that *feel* like insights could equally well have emotional and therapeutic benefits. As Windt puts it, “phenomenal certainty—the experience of persuasion or knowing—is not the same as epistemic justification” (2011, p. 246). So how can we know which it is? This is very difficult; as per the sceptical argument above, it would seem to require that we have some independent way of confirming or falsifying patients' psychedelic-induced claims about their own previously unconscious psychological states. This, of course, is the basic methodological problem of consciousness research: the unavoidability of heavy reliance on introspective verbal report.

As mentioned earlier, one solution might be if there were a theory of the cognitive functions of the brain regions affected by psychedelics that entailed psychedelic-induced changes should lead to veridical insights. Carhart-Harris and Friston (2010) offer a neo-Freudian, “neuropsychanalytic” interpretation of the function of the brain's default mode network (DMN) and its interactions with limbic and other systems which suggests that psychedelic-induced downregulation of the DMN could facilitate genuine self-discovery. This is a possibility that deserves further theoretical analysis—which is beyond the scope of this chapter⁵. Another possibility is that subjects' putative insights could be tested against outcomes of behavioural measures—for instance, emotional and perceptual priming effects, obtained prior to the session. Ingenious methods have been used to probe the introspective accuracy of meditation practitioners (Fox et al. 2012) and some of these could perhaps be adapted to the psychedelic state, though the intense phenomenology of the latter may pose problems.

It has also been suggested that psychedelics can allow users to gain (non-

⁵ See Carhart-Harris and Friston (2019) for further discussion.

telepathic) insights into *others'* minds. As Shanon (2010) points out, users of ayahuasca sometimes feel, when looking at another person, that they are grasping something fundamental about the other's character—perhaps as though the other's mental states, character traits, or aspects of their biography are ‘written on their face’. Are these apparent insights genuine? They would be relatively straightforward to test, in principle—again, given some independent means of verification. Not all putative insights of this kind will be easy to operationalise. However, one possibility might be to have psychedelically-intoxicated subjects guess at others' approximate (relative) scores on the Big Five personality domains (Gosling et al. 2003) and see if their accuracy exceeds that of subjects under placebo, when relevant variables are controlled for.

One issue is that this kind of experiment would require multiple subjects taking the drug together in the same session, which does not typically happen in modern clinical research. (It happens in non-clinical contexts, of course, such as traditional ayahuasca rituals—but in such contexts other variables become harder to control.) It is also worth pointing out that there is some preliminary evidence that psilocybin *impairs* subjects' ability to recognise emotional facial expressions, although this is in relation to static, disembodied images of faces on screens; matters may be different when dealing with embodied, dynamic human beings (Schmidt et al. 2013).

Shanon (2010) also raises the interesting possibility that subjects can gain an abstract type of self-knowledge about patterns of thought and behaviour in their lives. He gives the example of a subject who saw visions of several episodes from her life juxtaposed *thematically*, rather than chronologically, leading her to see the abstract commonalities in superficially different events. It seems entirely plausible that psychedelics might afford this kind of knowledge, given their capacity to enhance pattern-recognition, and that such knowledge might be therapeutically beneficial. As always, however, it is difficult to know how to test this, and especially difficult to know how to distinguish cases of veridical pattern-recognition from cases of pareidolia, or pattern-imposition (which could equally well lead to clinical benefits.)

Finally, one famous pilot study raises the possibility that psychedelics might help subjects discover novel and creative solutions to problems in their fields of specialisation (Harman et al. 1966; cf. Shanon 2010). Although these results require more rigorous replication, this also seems plausible. One view is that psychedelics serve to enhance the

context of discovery, as it is called in philosophy of science, allowing subjects to 'think outside the box' and come up with novel and creative ideas. The 'context of justification', however, in which ideas are scrutinised for adequacy and accuracy, would be another matter (Hoyningen-Huene 1987). So there are two possible claims here: (i) that psychedelics simply help people come up with interesting new ideas, and (ii) that they also help people reliably discern which of these ideas are correct. The latter would be much more controversial. This is an epistemological proposal on which more conceptual work is needed.

KNOWLEDGE HOW

A second type of knowledge is knowing *how* to do certain things, sometimes called 'ability knowledge' and roughly equivalent to the possession of skills. Examples include knowing how to ride a bicycle, how to dance, or how to program a computer. Is it possible that psychedelics facilitate the acquisition of new skills or abilities?

One proposal from Shanon is that psychedelic states allow subjects to learn *how to skilfully navigate psychedelic states*. As he says, “people may eventually become accomplished in the very art of drinking ayahuasca... drinking ayahuasca is an artful skill in its own right” (Shanon 2010). There is apparent experimental support for this claim: dysfunctions in executive processing under ayahuasca are considerably lessened in experienced drinkers, which could be interpreted as showing that these people have gained some skill in managing the intoxication (Bouso et al. 2013).

This may seem like a trivial form of knowledge gain, akin to claiming that psychedelic experience lets people learn what it is like to undergo psychedelic experience. But it depends on what kind of skill *navigating psychedelic states* actually is. One intriguing possibility is that it is similar or identical to the ability to let go, open, and accept inner experience—perhaps the same kind of skill in relating to one’s mental contents that is deliberately cultivated in mindfulness meditation (Baer 2009).

There is a suggestive set of observations supporting this idea. The standard instructions given to subjects in psychedelic clinical trials emphasise the importance of an open, curious, non-reactive attitude toward whatever strange or frightening phenomena arise, and clinical wisdom suggests that following this instruction helps to ensure a beneficial experience. Some trials deliberately recruit subjects with experience of

psychedelic states on the grounds that they are better able to navigate the experience calmly and (relatively) fearlessly. Psilocybin- and LSD-induced states have been found to increase the personality trait of Openness to Experience (MacLean et al. 2011, Lebedev et al. 2016).

Meanwhile, the posterior cingulate cortex (PCC), a key node of the DMN implicated in self-representation, is downregulated by psychedelics—correlating with ego dissolution (Carhart-Harris et al. 2012)—and exhibits thinning in long-term religious ayahuasca users, correlating with the extent of prior ayahuasca use and with psychometric scores for 'self-transcendence' (Bouso et al. 2015). Neurofeedback studies of experienced meditators find that PCC activity co-varies with the feeling of being 'caught up' in experience—in other words, becoming gripped by a train of thoughts or feelings such that one loses one's open, non-reactive stance (Brewer et al. 2013). Finally, the 'decentering' capacities cultivated by mindfulness practice are elevated in the days following an ayahuasca session, and these psychological changes correlate with neural changes centred on the PCC (Soler et al. 2016, 2018, Sampedro et al. 2017).

This suggests a straightforward experimental test, similar in spirit to recent studies exploring the effects of psilocybin sessions on novice meditators undergoing meditation training (Griffiths et al. 2017). It would be possible to explore prospectively any lasting effects of a series of psychedelic sessions on subjects' decentering capacities while sober, and the duration of any such increases. (Perhaps retention of executive function while intoxicated could also be used as a measure in this context.) Substantial positive results would support the claim that psychedelic experiences can help subjects gain knowledge of how to let go and accept inner experience.

Shanon (2010) lists a number of other putatively epistemic benefits of ayahuasca classified under 'knowledge how', such as increased well-being and stamina, and enhancements to artistic performance and creativity, while intoxicated. However, unless these enhancements lead to lasting improvements in the relevant domains while sober, it is not clear that they amount to *knowledge* of any sort. In my view they might better be described as transient performance enhancements.

KNOWLEDGE BY ACQUAINTANCE

A third category recognised in epistemology is *knowledge by acquaintance*, which is less

conceptually straightforward than the others. The idea is simple enough on an intuitive level: consider the different ways in which you can know about Donald Trump. You can know all sorts of facts about the man indirectly, by watching TV, reading news articles, and the like. Or you can meet Trump and become acquainted with him directly. After this, you *know him* in a sense in which you did not before. Thus, knowledge by acquaintance contrasts with indirect knowledge mediated by (mere) description or testimony.

One debate in philosophy of mind, relevant to psychedelic epistemology, concerns Frank Jackson's famous thought experiment 'Mary's Room'. This was originally given as an argument for mind-body dualism. Mary is a super neuroscientist living at a future time when neuroscientific and medical knowledge is complete. Everything about the functioning of the human brain and body is fully described and understood. Mary lives her whole life in a black-and-white room and never sees colours, but while in her room, she masters the entirety of neuroscience. (She is a super scientist, after all.) She learns everything there is to know about what goes on in the retina, the visual cortex, and so forth when a human sees something red. One day, Mary leaves her room for the first time and sees something red, such as a ripe tomato. Intuitively, she learns something new and important: she learns *what it is like to see red*. Since Mary supposedly already had all the *physical* information about seeing red, Jackson (1982, 1986) concludes that there is more information than this, and so physicalism is false.

Many philosophers share a strong intuition that Mary does learn something new, while remaining unconvinced that the argument refutes physicalism. Consequently, they have expended a lot of energy trying to say what sort of knowledge she gains, exactly, and how (despite first appearances) it is compatible with physicalism. The conceptual tools and distinctions developed in this literature could be useful for a sophisticated and precise characterisation of psychedelics' possible epistemic benefits. One prominent suggestion is that before leaving the room, Mary has only indirect knowledge by description about the experiential phenomenon of seeing red, but when she leaves the room, she gains knowledge by acquaintance with it (Conee 1994).

I have argued elsewhere that psychedelics afford knowledge by acquaintance of two important facts: the vast potential of the human mind, and the constructed nature of the normal sense of self (Letheby 2015, 2016). On the first count, psychedelics certainly demonstrate dramatically that the range of human experience is far bigger and stranger,

for better and worse, than normal waking consciousness suggests. And even those intellectually aware of this fact can find the direct experience a very different matter. An obvious example is Aldous Huxley, the long-time student of mysticism, experiencing mystical consciousness for the first time under mescaline (Huxley 1954). Pahnke describes this insight based on his own clinical observations administering psychedelics to terminal patients:

At this point, unless the patient previously had experienced mystical consciousness spontaneously, he becomes intensely aware of completely new dimensions of experience which he might never before have imagined possible. From his own personal experience, he now knows that there is more to the potential range of human consciousness than we ordinarily realize. This profound and awe-inspiring insight sometimes is experienced as if a veil had been lifted and can transform attitudes and behavior. Once a person has had this vision, life and death can be looked at from a new perspective. Patients seem able to meet the unknown with a new sense of self-confidence and security. Logical arguments that human experience must be limited to the narrow range of ordinary human consciousness never can have the same force again.

(Pahnke 1969, p. 15).

On the second count, in ego dissolution experiences, psychedelic subjects come face-to-face with the fact that the ordinary sense of a separate and enduring self is a vulnerable, contingent, constructed feature of experience. They experience consciousness in the absence of the normal sense of self—perhaps of any sense of self at all (though this is controversial.) This does not entail that the self is an illusion, of course; psychedelic subjects also experience the dissolution of their bodies, which undeniably do exist. Some mystics and philosophers (myself⁶ included) do hold the self to be ultimately illusory. But regardless, discovering the constructed nature of one's ordinary experiential *sense* of self is a big deal. Many psychedelic subjects, with or without prior belief in this constructed nature, experience it directly and intensely for the first time (cf. Albahari 2014).

There are other proposals in the same broad spirit as knowledge by acquaintance.

⁶ Irony unintended but noted.

Shanon suggests that a key epistemic benefit of ayahuasca may lie not in generating new factual knowledge, but in allowing a deeper apprehension of truths already known:

The information gained may be banal but its mode of appreciation might be experienced as special... looking at the leaves of plants observing how they were directed towards the rays of the sun, I felt I was actually seeing the nurturing sustenance of the solar light. Had I obtained any “information” I had not known beforehand? I doubt it. But I was open to see the world in a new light.

(Shanon 2010).

This is somewhat similar to Tupper's (2003) proposal that psychedelics facilitate access to evolutionary old but culturally neglected 'mythic' and 'somatic' forms of understanding. Not all of these proposals are captured by the idea of knowledge by acquaintance. Moreover, the notion of acquaintance is philosophically problematic. Russell (1910) originally defined knowledge by acquaintance as involving no mediation of any kind between the mind and the object of knowledge, but it is not clear that this ever happens. Finally, acquaintance is a relation, and anyone who thinks the self is illusory may wonder: *who* or *what* becomes acquainted with the constructed nature of the sense of self, or with the mind's potential?

One useful concept here may be that of *modes of presentation* (Alter and Walter 2007). Once again, the basic idea is intuitive enough⁷: consider the difference between viewing a painting, a photograph, and a CGI animation of the World Trade Centre falling on September 11th, 2001. To appreciate that the difference is not simply one of medium or representational format, consider too the difference between reading descriptions of the event by Al Qaeda, the US Government, and eyewitnesses. Even if the descriptions do not factually contradict one another, they will each paint a very different picture of the same event. They will each present it in different ways, or under different modes.

This may be the simplest unifying characterisation of the epistemic benefits afforded by psychedelics, other than factual or ability knowledge: they afford the apprehension of already-known (or otherwise-knowable) facts via new and different modes of presentation. This difference can be vast. Believing intellectually that

⁷ I am riding roughshod over many important philosophical subtleties here.

everything in the universe is deeply interconnected is worlds apart from apprehending this profound interconnectedness as a visual, somatic, spatial, and affective sensation vividly pervading the entire conscious field. It is akin to the difference between a new recruit's belief that they will be shot at, and the experience of standing on a muddy battlefield with bullets whizzing past. We might even hold, with some cognitive scientists, that there is a crucial difference between mere (abstract propositional) knowledge and real *understanding*⁸, which requires rich sensory, motor, and affective simulations (Zwaan 2004). Perhaps psychedelics, by increasing cross-talk between normally distinct brain networks (Tagliazucchi et al. 2016), connect memory and cognition more directly to affect and perception, allowing us to understand what we otherwise could merely know.

CONCLUSION

Even those sceptical about supernatural and transcendent realms should take seriously the possibility of psychedelic-assisted knowledge gain. I have suggested that psychedelics may afford the gaining of factual knowledge (of *one's own mind*, *others' minds*, *abstract patterns in one's life*, and *novel solutions to specialist problems*); of ability knowledge (especially *knowledge how to let go and accept inner experience*); and of greater *understanding* via new *modes of presentation*. I have also offered some suggestions about how to test these hypotheses. The epistemic claims of psychedelic subjects should not be accepted uncritically, but nor can they be refuted from the armchair. Specific proposals about psychedelic epistemology must be considered in their own right and subjected to rigorous interdisciplinary inquiry. Mounting evidence for the therapeutic efficacy of psychedelics behoves us urgently to understand the mechanisms of this strikingly novel treatment modality. One pressing question is whether it is a form of therapy based on genuine insight. I think it probably is—but only further research will tell. Most generally, we need to appreciate that there is a viable third way between traditional conceptions of psychedelics as *entheogens* disclosing transcendent supernatural realms, and as *hallucinogens* or *psychotomimetics* whose epistemic effects are solely detrimental.

⁸ I am indebted to Gavin Enck for raising this possibility.

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