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*Dark Side of the Shroom: Erasing Indigenous
and Counterculture Wisdoms with Psychedelic
Capitalism, and the Open Source Alternative*
or,
A Manifesto for Psychonauts[†]

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Psychedelic or ecodelic medicines (e.g., psilocybin, ayahuasca, iboga) for the care and treatment of addiction, post-traumatic stress disorder, cancer, cluster headaches, anxiety, and depression have surged to the forefront of discussions about mental health in the US, leading to the emergence of well-capitalized biotech companies offering multimillion-dollar IPOs. Venture capital website Pitchbookreports “continuing investor interest and growing acceptance of what until recently was seen

as a fringe area of medicine.” As scholars, activists, and practitioners who have been healed by these medicines and applaud the recent wave of decriminalization after a long, strange trip of mass incarceration and widespread dangerous misinformation, we look forward to a culture that makes these medicines available in a safe and affordable way that respects the lineages of the knowledges that are essentially and not accidentally bundled with these plants—Indigenous and counterculture wisdoms for whom these medicines were never “fringe,” but always foundational. In place of corporadelia’s pursuit of standardization, we emphasize the care and wisdom of the Indigenous and countercultural teachings—traditions that have made psychedelics available to the emerging corporate/research partnership in the first place. These knowledge traditions offer foils to the ongoing translation of university peer-reviewed research into market copy, technical articles, and IPOs, and the concomitant emergence of psychedelic pundits. In particular, we examine instances where prominent researchers have overstated the findings of existing clinical trials in public-facing representations of the field. We argue that these corporate priorities and tactics are being aided by a new wave of psychedelic “thought leaders” who seek to delegitimize non-hierarchical approaches to knowledge production and community support within a psychedelic commons. While prominent psychedelic psychiatrists and behaviorists are focused on rooting out and transforming individual habits of mind, we argue that there is another, latent potential for psychedelics to draw attention to and transform the invisible, hegemonic infrastructures and ideologies that subtly naturalize and perpetuate deeply unequal societies.

KEYWORDS: psychedelics, medicalization, open science, capitalism, neoliberalism

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There’s no way to get these [medicines] to people who need them unless you have a big industry. — David Nichols, “The Shulgin’s Pioneering Psychedelic Research” (June 26, 2021)

For your convenience Out-Grow LLC has made an all in one manure based mushroom grow bag solution to simplify the gourmet mushroom cultivation process. . . . — Amazon Copy, Outgrow Grow Bag (2 pk)

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PRÉCIS, OR “AN EXECUTIVE SUMMARY FOR THE VC AI”

Psychedelic or ecodelic medicines (e.g., iboga, ayahuasca, psilocybin) for the care and treatment of addiction, post-traumatic stress disorder, cancer, cluster headaches, anxiety disorders, and depression have surged to the forefront of discussions about mental health in the US, leading to the emergence of well-capitalized biotech companies offering multimillion-dollar IPOs and billions in valuation. Venture capital website *Pitchbook* reports “continuing investor interest and growing acceptance of what until recently was seen as a fringe area of medicine.” As scholars, activists, and practitioners who have been healed by these medicines and applaud the recent wave of decriminalization after a long, strange trip of mass incarceration and widespread dangerous misinformation, we look forward to a culture that makes these medicines available in a safe and affordable way that respects the lineages of the knowledges that are essentially and not accidentally bundled with these plants—Indigenous and counterculture wisdoms for whom these medicines were never “fringe,” but always foundational.

For whom were these medicines fringe? When contemporary psychedelic medicine “discovers” the efficacy of psychedelic plants, they “erase” the long lineages and diverse knowledges that have curated, tended, and cultivated the human relationship to these plants. Hence, the sheer velocity of this development—and the role of financial media and interests in this “growing acceptance”—make our due diligence vital, as well-shared and criminalized open source Indigenous and counterculture knowledges are repackaged, intensified, and sold back to an underinsured public. With billions at play—atai Life Sciences recently reached \$3.2 billion in valuation—it’s also worth attending to the traffic between an already tightly-clustered scholarly peer review system that undergirds the research now licensing and generating the intellectual property for this “growing acceptance,” and the media representations of the same.

Standards can slacken as the portfolio grows. Many researchers cried foul, for example, when Imperial College London’s Robin Carhart-Harris represented important outcomes of a clinical psilocybin trial with non-preregistered data as if it were “data proving” the trial’s hypothesis in London’s very own *The Guardian*. Negative results may not be what massively-funded new university research programs are looking to include in their weekly MailChimp PR as they report their role in the “new psychedelic science.” This paper will look closely at the shadow of bias cast by researcher stakes in positive outcomes. In place of the dominant, Corporadelic 2020 narratives, we highlight alternative and repressed counterculture wisdoms,—themselves often drawing on Indigenous wisdoms.¹

We note that the shadow of bias cast on research in media representations mimics the total eclipse of the sacred context and effects of ecodelic plants. The considerable efficacy of psilocybin for occasioning experiences of the sacred was again demonstrated in the early 21st century as Johns Hopkins updated Walter Pahnke and Timothy Leary's Harvard University and Boston University "The Good Friday Experiment" (1962), yielding "Psilocybin can occasion mystical-type experiences having substantial and sustained personal meaning and spiritual significance." Thus, the sacred was the very catalyst for sprouting the new wave of psychedelic research centers in the first place, even while "medicalization" becomes the method for delivering psychedelics. Is this bait and switch substitution of the medical for the sacred a case of classic monopolist competition, as billions in ecodelic research rest on the ability to control and limit access to a safely-consumed (and oft described as "sentient") organism that can be easily grown in your closet and "...occasion mystical-type experiences having substantial and sustained personal meaning and spiritual significance"?

And the intellectual property Sooners² are indeed planting their stakes in more than the molecules or the plants. Psychedelic medicine, with its essentially effaced Indigenous roots, still recognizes the constitutive and not accidental quality of the care and context with which these plants are consulted. For both Indigenous and counterculture traditions, this context and care qualifies as what Mircea Eliade defined as the sacred—a domain exceeding the mundane aspects of space and time and oriented to the transcendent. London-based COMPASS Pathways has filed patents for longstanding components of "set and setting," including the use of "a room with a high-resolution sound system," and "a bed or a couch" where "the therapist provides reassuring physical contact" (Psychedelic Times 2019; McDaniel 2021). If we follow due diligence, should not the poems of Mazatec curandera Maria Sabina be "prior art" on anything COMPASS might "discover" in their psychedelic focus groups at university research centers? This paper will look closely at the modalities of care that are necessary but not sufficient for a healing psychedelic experience.

We tarry with and explore the shadow of capitalist health state bias across the widely proliferating discourses of contemporary psychedelic science, including the desacralizing function—a "Protestant Ethic and the spirit of psychedelic capitalism"—forged at the nexus of university research and the emerging psychedelic medicine market. In a nutshell, the dark side of the shroom algorithm works like this:

- *Establish the technoscientific "legitimacy" of ancient plant medicines curated by Indigenous and counterculture traditions by ignoring the knowledge and sacred context and occasions of those traditions, as well as the*

history of psychedelic science. Ignore the effects of set and setting—e.g., cultural context and ritual—and focus on what can be isolated and owned. Declare a “new psychedelic science.” We point to the Mazatecs and Andean curanderismo, and the open source psychedelic science of Alexander Shulgin as well as researcher Roland Fischer, as examples of each respective type. For Fischer and Shulgin, there was no “new psychedelic science,” only ongoing and courageous psychedelic science through the long prohibition—a lockdown aided and abetted by these very same institutions now declaring a brave New Jerusalem of psychedelic medicine.

- *Shift from the “sacred” context to the “medical context.” Avoid, elide, and ignore the “ego death” context of psychedelic experience and emphasize the treatment of symptoms that correspond to dubious taxonomies (e.g., DSM).*
- *Engage in high-profile media campaigns declaring the “new psychedelic science,” beginning with major publishing houses and gatekeeper periodicals (e.g., Allen Lane, The New Yorker).*
- *Project and protect exclusive rights to these knowledges. Pollan: “Not so Fast on Psilocybin Mushrooms” (New York Times).*
- *Raise millions by leveraging these new narratives of legitimation and desacralization enabled by this “new psychedelic science.” Promise “to end the mental health crisis” with this new intellectual property (Costa and Shead 2021).*
- *Begin integrating psychedelics into mental health therapies with little to no training.*
- *Repeat.*

We observe that as billions funnel into the no-longer-“fringe” market, university research centers sprout. What are the connections between these new forms of Big Pharma Capital and the structure and content of ongoing research in psychedelic science? We systematically and collectively contest this grab for intellectual property and the concomitant erasure of Indigenous, counterculture, and scientific traditions in the name of our own healings and spiritual practices.

We then humbly invite readers to look deeply into an essential feature of sacred plant wisdom and all nondual traditions: healing is a function not of any “grabbing,” but of release—a letting go. Psychedelic science pioneer Myron Stolaroff described this psychonautic practice as exercising the “letting go muscle,” and we suggest that recognizing and toning the letting go muscle is necessary but not sufficient to the healing efficacy of these sacred plants. Compare Stolaroff’s focus on the individuated but not individual encounter of psychonaut healers with COMPASS Pathways’ Lars Christian Wilde’s stratified and standardized commodity concept of the “psychedelic experience”:

We have to ensure that the treatment rooms are similar across the world. We have nice pictures on the wall, the patients put on eyeshades and all listen to the same carefully curated soundtrack. (Bradley 2021)

Even within the logic of capitalist efficacy and scalable knowledge, the status quo of “one-size-fits-all” therapeutic protocols artificially forestalls the range of potential transformative outcomes for those seeking healing, since the stripped-down protocols designed for scaling up treatments inherently restricts access to the body’s innate rhythms and modes of knowing. Set and setting are infinitely more capacious than “have nice pictures on the wall, the patients put on eyeshades and all listen to the same carefully curated soundtrack.” Each of us comes to a psychedelic healing with a distinct “psychedelic macromicrobiome.” Since we all bring the radically unique and aleatory experiences that make up a life, a one-size-fits-all protocol is no more appropriate than identical diets or sexual practices.

When it comes to an experience as subjective as any particular psychedelic treatment, dosage and “set and setting” become fundamental, as psychedelics are well known to be “extremely sensitive to initial rhetorical conditions” (Doyle 2011). How we talk about these medicines impacts how they can affect us and how well they can be studied. The language and frameworks we bring to the design and implementation of psychedelic medicine will be fundamental to any successful integration of these plant medicines into a culture more recently enchanted by the scale of molecules than with plants. Any shift to the scale of plant causality—where the healing is caused by something larger in complexity and order than a chemical, and instead involves a subjectively palpable sentience—not only challenges our outdated prohibition laws, but also renders obsolete our past-due paradigms of materialist reductionism and mechanism—labels for the very impetus and aesthetic of our current planetary-scale ecological crisis.

This article suggests history and heuristics for navigating the emerging intellectual property and hype market in psychedelic medicine. In place of corporadelia’s pursuit of standardization, we emphasize the care and wisdom of the Indigenous and countercultural teachings—traditions that have made psychedelics available to the emerging corporate/research partnership in the first place. We focus on the translation of university peer-reviewed research into market copy, technical articles, and IPOs, and the concomitant emergence of psychedelic pundits. We hope thereby to maximize the efficacy of these sacred plants for patients and pilgrims, even as we minimize the costs. We emphasize remembering the many prior arts of knowledge and care from which psychedelic science now poaches. We call for the “letting go” of

monopolistic competition with a Fair Trade and open source approach to intellectual property (akin to the role of Linux and Apache for the emergence and sustainability of the Web) and a correlative collective DIY approach to ecodelic healing, which is already and even now explored in diverse ceremonies across the planet. Finally, we suggest some heuristics for establishing open source norms for those ceremonies that respect the diverse Indigenous and counterculture traditions that have curated them.

And the wind is crying
 From a love that won't grow cold
 My lover, she is lying
 On the dark side of the globe — *Led Zeppelin, "The Rover"*



P-HACKING FOR FUN AND PROFIT WITH PSILOCYBIN

For the Kiowa, like most other North American Indians, had no nations; no government in the sense that we intruders understand those terms. Such rulership as existed was vested in the philosopher-priests of certain rites, and those rituals transcended boundaries between languages and of antagonisms, and thus it was that wanderers interlocked with wanderers. Supreme among these rovers were the Kiowa. (Harry Smith)

There's no question about it: Surf's up for psychedelic capitalism. A psychonaut can't even quasi-swing Schrödinger's cat without coming across an excited proliferation of psychedelic memes hovering not quite in the corner of your compound field of eyes. A revolution in "psychedelic psychiatry" (a phrase that, we shall suggest, augurs many bad trips indeed), we are told, is incipient. Are we like some (no longer tie-dyed) Beckett characters emerging from a long, strange hiatus on research, crawling out of a long, sober slumber into the medicalized world of transhuman fitness? Like commercials in Philip K. Dick's *Ubik*, we are promised the promise of promises: "Be healed of What Is! Seek approved outlets for sacred healing experiences!"

It may seem, therefore, that emerging psychedelic medicine and psychiatry represent the ultimate triumph of a kinder, gentler, and ever more woke global capitalism. In this essay, though, we humbly seek to pause and reflect, and to situate the contemporary well-nigh *irrational exuberance*³ animating psychedelic capitalism within the six thousand plus years of R&D of

Indigenous, mestizo, counterculture, and contemporary psychonautic culture across the planet, and suggest an open source commons approach to psychedelic (entheogenic, ecodelic) wisdoms and healings.

Yet hope persists in the wake of widespread movements towards decriminalization. We again say yes to the noösphere and affirm the birthright of all beings to discover the truth about themselves on their own terms, with or without the gnostic technologies and sentient plant beings of contemporary psychonautics. We therefore propose the development and ongoing evolution of open source standards for the context and deployment of ayahuasca, cannabis, iboga, psilocybin, Huachuma (San Pedro) and other sentient plants.

In this nascent psychedelic medicine industry—the Nasdaq stock exchange’s website casts psychedelics as a “disruptive [medical] technology”—leading academic researchers stand to profit from their formal and informal alliances with major corporations (Hawkins, Versace, and Abssy 2021).⁴ Given that the “psychedelic drugs market” is projected to reach \$10.75 billion by 2027 (FinancialNewsMedia 2021), with the potential for psychedelic medical corporations to scale globally and monopolize market share, much is at stake for clinical trials and their public interpretations in the popular media. Since the aspirational oligarchs of psychedelic capitalism realize that their anticipated windfalls depend upon the development of new scientific, political, and cultural regimes, they are investing heavily in new endowed professorships (SciComm Services 2021) and psychedelic research centers (COMPASS Pathways 2021)—often in the name of “philanthropic” investments—in order to secure their bottom line.

As a likely and certainly predictable consequence of this tangle of financial motivations, prominent researchers have considerably overstated the findings of existing clinical trials in public-facing representations of the field. Consider, for example, the April 2021 opinion article for *The Guardian*, in which Principal Investigator Robin Carhart-Harris mischaracterized the findings of his blockbuster study comparing psilocybin to escitalopram (a leading SSRI also known as Lexapro or Cipralex) for the treatment of depression. The study in question was a phase 2, double-blind, randomized controlled trial comparing a moderately high dose (25 mg) of psilocybin to escitalopram, both in the context of 35-40 hours of supportive psychotherapy based on the ACE (Accept, Connect, Embody) therapy protocol. Escitalopram was combined with a “presumed inactive” dose (1 mg) of psilocybin, which meant that all study participants were expecting to receive some unspecified dose of psilocybin.⁵ The April 2021 publication of the study’s results in the prestigious *New England Journal of Medicine* was both historic and highly anticipated, since it represented the first time that any psychedelic medicine was evaluated in a head-to-head comparison with an existing (however ineffective) “standard of care” biomedical treatment (Hernandez 2021).

The escitalopram trial was preregistered, which required that the researchers declare in advance which outcomes they would measure and how they would analyze their resulting data.⁶ By defining the research questions and analysis plans in advance, preregistration increases the credibility of research findings by differentiating predictions from “postdictions” or post hoc explanations in the published results (Standen 2019; Nosek et al. 2018). As one initiative within the broader push for open science, the process of preregistration offers protection against questionable research practices including “data dredging” or “p-hacking”—a misuse of data analysis that imputes causation to correlations within a given data set. In the case of post hoc analysis, researchers under pressure to publish might present a single analysis that supports their research priorities even though a different (unpublished) way of measuring their data might have contradicted their desired conclusion. Similar bias can also impact the analysis of results unintentionally, as when researchers make decisions during the process of analysis that align with their prior expectations and beliefs about the subject matter under investigation (Békés and Kézdi 2021, 163). In a discussion of Carhart-Harris et al.’s *NEJM* paper, Kevin McConway describes the importance of preregistration for protecting against researcher bias: “The trouble is that, if you measure enough different things, it becomes pretty likely that the new treatment will show up as successful on at least one of the measures simply by chance, even if in fact the new treatment really has no effect at all” (Science Media Centre 2021). In the case of the escitalopram comparison study, the pre-registered primary clinical outcome was determined as the score difference from baseline to week six on the self-rated 16-item Quick Inventory of Depressive Symptomatology–Self-Report (QIDS-SR-16).

Despite high hopes from the psychedelic medical industry and its swelling ranks of venture capitalists, the formal paper’s published results showed no statistically significant difference between psilocybin and escitalopram in the treatment of depression (Carhart-Harris et al. 2021; Haichin 2021). Although both the psilocybin group and the escitalopram group displayed clinically significant improvements on this measure, there was no statistically significant difference in efficacy between the two groups. While secondary outcome measurements (additional data analyzed beyond the pre-registered outcome) did favor psilocybin, the study design meant that no definitive conclusions could be drawn from this information, as Gershom Hernandez explains in an editorial review of the study: “[T]he confidence intervals for between-group differences were not adjusted for multiple comparisons, so no information can be interpreted that would be statistically significant from the [secondary] data” (Hernandez 2021). McConway’s analysis echoes this point:

The fact they [the researchers] now have results on a number of different psychological and clinical measures, not just the primary outcome, could well help them to design any phase 3 trial more appropriately. However, the lack of adjustment does mean that again, we can't take these secondary measures to show that psilocybin is more efficacious than the comparator drug escitalopram. (Science Media Centre 2021)

In stark contrast to this concurrence amongst outside reviewers of the escitalopram study, Carhart-Harris' translation of the study's results for *The Guardian* leaves readers with the unmistakable impression that psilocybin was proven to be more efficacious than escitalopram for the treatment of depression:

Those in the escitalopram group did about as well as one would expect, based on previous SSRI trial data. . . . In comparison, psilocybin worked more rapidly. . . . At the end of the trial, the average response rate to psilocybin therapy was more than 70%. While we suspected that psilocybin might perform well compared to the SSRI, we had not expected it to perform as well as it did. . . . So why does psilocybin appear to be a more successful treatment for depression than a typical antidepressant? (Carhart-Harris 2021)

In this discussion, Carhart-Harris interprets the secondary data in a manner that aligns with his preexisting expectations, biases, and financial interests. Although he allows for plausible deniability in the final sentence by including the word “appears,” Carhart-Harris' choice to begin the sentence with “So” offers a rhetorical strategy akin to “assuming the sale”: by focusing the reader's attention on the consequences of Carhart-Harris' preferred interpretation, it distracts attention away from the debatable question of psilocybin's relative efficacy and implicitly assumes the preferred answer: “So why does psilocybin appear to be a more successful treatment for depression than a typical antidepressant?” (Carhart-Harris 2021). According to the preregistered study, it isn't. Dark side of the shroom.

The significance of Carhart-Harris' specific framing is highlighted by contrast with the commentary offered by his co-investigator, Rosalind Watts. Her characterization of the escitalopram study, as expressed on a public Facebook post on April 15, 2021, seems to describe a different study altogether:

After two years leading this trial, you might think that I'd be disappointed that psilocybin didn't outperform SSRIs. Many people point out the limits of SSRI[s], and yet psilocybin has all this hype and expectation around it. Yet this result is something to celebrate, because I think it goes to show the power of care. . . . I think that our results show the magic of genuine care, time, presence, respect, and being part of a healing community. And that is what is sorely missing from our psychiatric system. So if psilocybin becomes just another drug, it will be as uninspiring and ultimately disappointing as SSRIs have been for many. And psychedelics without caring community may turn out to be not just ineffective but also risky. (Watts 2021)

Watts' emphasis on the fundamental role of relational care in the context of a supportive community stands in stark contrast to Carhart-Harris' focus on individual psychodynamics—the domain where psilocybin itself becomes Watts' "just another drug," where it can become most easily monetized and branded (Noorani and Martell 2021). Here the dark side of the shroom is the shadow cast by psychedelic capitalism, where "psychedelic science" and "IPO" become word proximity queries in Google Analytics. In short, by ignoring the complex ecosystem of care illuminated here by Watts, Carhart-Harris can rebrand the same reductive, biomechanical approach to healing by focusing on the efficacy of psilocybin for outcomes not pre-registered in the study.

Carhart-Harris supports the claim that psychedelics are more efficacious than SSRIs by distinguishing the two drug classes according to differing mechanisms of action. He explains that SSRIs represent a "biomedical" approach to the treatment of addiction based on the "serotonin hypothesis"—a theory that causally links low levels of serotonin to the pathophysiology of depression, suggesting that depression can be treated by modulating serotonin signaling in the brain (Cowen and Browning 2015). Since the advent of modern antidepressants in the twentieth century, this hypothesis has contributed to the ascendance of biological psychiatry, which "holds that DSM-defined mental disorders are diseases of the brain, no different than diabetes or cancer" (Lacasse and Leo 2015; Whitaker 2010). With this framework of chemical imbalance, psychiatric medications including SSRIs were once held out as potential "magic bullets" capable of curing mental illness by targeting its underlying biological causes, akin to the way antibiotics could directly target the causes of bacterial infection. However, unlike biomedical conditions like diabetes or cancer, there are no definitive biological correlates

for most of the psychiatric conditions defined by the DSM to date, despite decades of extensive search for such causes:

Psychiatric labels. . .do not correspond to known biological pathologies that treatments can then target and ‘cure’. They are rather socially constructed labels ascribed to collections of feelings and behaviours deemed disordered or pathological by the psychiatric committees who compiled the DSM. . .the majority of [whom] (including the DSM’s three previous chairs) also had financial ties to the pharmaceutical industry. (Davies 2021)

Even beyond the absence of data, scholars in the sociology of medicine have catalogued the many limitations and unintended negative side effects of this particular etiology of mental distress for patient outcomes. In multiple studies, patients who were told that their depression was caused by a chemical imbalance in the brain had more pessimistic prognoses, were likely to favor drug treatment in place of psychotherapy, and had lower perceived ability to self-regulate their depressed moods using evidence-based cognitive strategies (Kemp, Lickel, and Deacon 2014; Deacon and Baird 2009). Furthermore, as James Davies has chronicled in his books *Cracked* and *Sedated*, societal measures of mental health outcomes largely declined during the decades when the theory of chemical imbalance was in ascendancy:

[I]n precisely those nations where antidepressant prescriptions have doubled in the last twenty years (e.g., the US, the UK, Australia, Iceland, Canada), we have also witnessed the doubling of mental health disability during the same time period. This means that rising prescriptions, in country after country, has presided over rising mental health disability, which is the opposite of what you would expect if the drugs were working. (Davies 2021)

As a Quartz article on the psychedelic pharmaceutical market (which itself smacks of an advertisement for a psychedelic vending machine as represented in Philip K. Dick’s *Ubik*) explained, there is “a growing acknowledgment that the state of the art for psychiatric conditions [isn’t] cutting it,” given that mental disorders now require the bulk of public health spending in the United States (Ossola 2021; Roehrig 2016).

For Carhart-Harris and those who fund his research, this poor performance of traditional pharmaceutical solutions represents a rhetorical goldmine for

their efforts to sell the new science of psychedelic wellness to an eager (and often desperate) public in the grip of an opiate addiction crisis and the mental health impacts of the pandemic. But rather than addressing the underlying environmental stressors and absence of care that are contributing to worsening mental health outcomes and widespread distress, Carhart-Harris' framing of psychedelic medicine offers the promise of a new "magic bullet" replacement for the old serotonin hypothesis while it leaves the underlying paradigm of neoliberal mental healthcare—drugs, not care—under biopolitical capitalism intact. At root, he is swapping out one biomechanical model of the diseased brain for another: in place of locating disease at the level of neurochemistry, his vision of psychedelic action intervenes at the level of the brain's neurophysics. Under the new paradigm, suffering is attributed to hardened, "canalized" neuronal pathways, which psychedelics are able to relax by increasing plasticity (Kočárová, Horáček, and Carhart-Harris 2021). Translating a preprint (coauthored by Carhart-Harris) to a journalist at the *Guardian*, researcher Amy Kuceyeski drew on a topographical metaphor of a mountain range to describe the theoretical impact of psychedelics on neuronal energy transfer as a "flattening" of the brain's habitual cognitive map:

By comparing scans of the brain on LSD versus placebo, the researchers found that the drug reduced the amount of energy the brain needed to switch from one brain state [to] another. Dr Kuceyeski likens it to flattening the landscape over which the brain can roam. Normally, the brain's activity is constrained by the mountains and valleys of our prior beliefs, but on LSD these obstacles are flattened out. "It allows us to move more freely and have more dynamic brain activity," she said. (Sample 2021)

There are also indications that issues with blinding and expectancy are impacting the data from all randomized clinical trials (RCTs) with psychedelics, as Suresh Muthukumaraswamy and colleagues have recently examined (Muthukumaraswamy, Forsyth, and Lumley 2021). Discussing their paper with *New Atlas*, Muthukumaraswamy points out that unconscious bias might lead study therapists to provide less enthusiastic emotional support to control group participants who are obviously not in the throes of a deep psychedelic experience. Conversely, these same therapists might be especially attentive in their interactions with those participants who are clearly in the psychedelic experimental group, given that all of the study's investigators believe (and frequently have financial stakes in proving) that psychedelic medicine holds so much excitement and promise. As *New Atlas* summarizes, "Add to this the

popular wave of media coverage heralding the revolutionary potential of psychedelic medicine and you have a perfect storm of bias and expectancy both enhancing the positive effects for those in the active group and amplifying the negative outcomes for those getting the placebo” (Haridy 2021).

In some studies, participants described a sense of moral obligation to support “the psychedelic renaissance” by providing good data, since the stakes—given the historical significance of legitimizing psychedelics—seem so high. As Jonathan Dickinson and Dimitri Mugianis revealed, at least one participant in a MAPS study of MDMA for PTSD admitted to misrepresenting their mental health outcomes in official reporting. Although their negative symptoms were acutely exacerbated during the MAPS protocol, they worried that acknowledging this fact could torpedo the overall movement, and that they might be responsible for preventing others from accessing such a promising treatment:

“I wanted to be fixed,” they said, “and I felt great responsibility. At the time I felt that if I didn’t get better then the FDA was not going to approve it. I was going to fuck up their numbers and then it wasn’t going to be legal, and millions of people were not going to have access to it.” As a result, Mel said, they “only gave them the good stuff that was happening. I really omitted a good number of things that were challenging and difficult. . . .” [T]he container that was required by the research, which is designed to fit these drugs into the healthcare system, simply wasn’t suitable to process the experience. At the end of the three sessions, Mel felt they had not had the white light transformation they had expected from all the media coverage. “I was still horribly broken and it was devastating,” they said. “It shattered me in a whole new way.” (Dickinson and Mugianis 2021)

A related indication of participants’ sense of duty to provide good data is apparent in the Johns Hopkins study of psilocybin for smoking cessation, where two participants (out of 13) described their relationship with the therapist-guides as the single greatest motivating factor for quitting smoking:

For Participant 422, “I think if you didn’t have that [the rapport] I’m not sure if it would work. I don’t know. And then the trust with the people, the folks in this clearly—when you know that people want you to do well. . . want this to work for you. . . and then you don’t want to let them down. Because there’s so much invested.” (Noorani et al. 2018)

In this example, the impact of rapport with investigators was perceived as more significant than the actual impact of psilocybin. By attributing these studies' positive outcomes to psychedelic medicine in isolation from the care of relationships and expectancies, corporate media and their collaborators are inflating the effects of psychedelics on mental health outcomes across these studies.

Regardless of Carhart-Harris' specific motivations or intentions, his selective interpretation of the escitalopram study is being used to supercharge a psychedelic medical industry built on hype and expectation. Despite confident media appearances by corporate executives like atai Life Science's Christian Angermayer (Costa and Shead 2021) and COMPASS Pathways' Lars Christian Wilde (Taylor 2020), psychedelic capitalism remains a predominantly theoretical construct with aspirations to monopolize the paradigm of legitimate psychedelic access. The website *Sifted*, a journalistic site covering European startups, acknowledges that there is "still widespread uncertainty" about the future of drug regulation, and the question of which psychedelics will "take off commercially" is still undecided. Thus far, only the Multidisciplinary Association for Psychedelic Studies (MAPS) has published results from a Phase 3 clinical trial (Hales 2021). *The Motley Fool*—a company that offers private financial and investing advice—notes that "many companies in the psychedelics sector are in their very early growth stages and aren't generating much (if any) revenue" (Jagielski 2021).⁷

Corporate players, meanwhile, are seeking to homogenize and standardize treatment protocols to ensure profitability at (global) scale. As COMPASS Pathways' Lars Christian Wilde explained:

We know that these experiences can go wrong when they aren't done in a therapeutic setting. . . . So it's important that we figure out how to deliver this therapy safely, in a scalable form. . . . We have to ensure that the treatment rooms are similar across the world. We have nice pictures on the wall, the patients put on eyeshades and all listen to the same carefully curated soundtrack. (Bradley 2021)

There is no evidence that this standardization and routinization of psychedelic therapy confers therapeutic benefit to individuals, since there is not a single, "correct" way to safely and meaningfully access psychedelic states of consciousness. (It would make as little sense to try to standardize the soundtracks for sexual experiences on a global scale.) To the contrary, this approach to "scaling" prioritizes corporate profits over participant wellbeing. Similar tradeoffs are also occurring on other levels of the corporate medical

paradigm, with demands for “cost-effective interventions” that include minimizing the amount of training required for therapists or guides; minimizing patients’ physical access to therapists or guides by relying on telemedicine and virtual reality interfaces; and reducing the total number of dosing sessions (Noorani 2020; Ponieman 2021).

Furthermore, as with the “shell games” identified in for-profit sectors of the cannabis industry, there are already indications that some early patent applications are oriented towards signaling “promise” to potential investors in the absence of meaningful therapeutic benefits (Parry 2019). Although some groups—like the MAPS Public Benefit Corporation—are styling themselves as pharmaceutical companies, these start-ups are not engaged in novel drug discovery and do not have recourse to patent entire molecules, which presents barriers to profitability. COMPASS Pathways has attempted to circumvent this limitation by patenting a specific crystalline structure of synthetic psilocybin; however, despite legal precedents for patenting polymorphs in the pharmaceutical industry, COMPASS Pathways has not provided any indication of therapeutic benefit, and an ongoing legal challenge contends that they are merely duplicating research that has long existed in the public domain (Harrison 2020; Nickles 2018). So far, there has been no evidence that any proprietary versions of psychedelic compounds offer any therapeutic benefit to patients over the original molecules, as *The Motley Fool* described of Cybin’s proprietary psilocybin formulation, CYB001:

[S]uccess with CYB001 alone may not be enough to propel this stock to lofty heights. Based on the data that the company has already released, it’s unclear whether the drug’s formulation is making psilocybin more controllable and more convenient for patients. In other words, if the therapeutic benefits patients reap from CYB001 are generally the same as they can get from black-market psychedelic mushrooms, it could be harder to convince many of them to pay significantly more for Cybin’s product. (Carchidi 2021)

Let me Shroomsplain: This is Your Mind on the Psychedelic Punditocracy

These corporate priorities and tactics are being aided by a new wave of psychedelic “thought leaders,” among whom Michael Pollan is the most prominent. Pollan emerged on the psychedelic scene with the 2018 publication of his New York Times bestselling book, *How to Change Your Mind: What the New Science of Psychedelics Teaches Us About Consciousness, Dying, Addiction, Depression, and Transcendence*, which developed out of a 2015 article on psilocybin research that he wrote for the *New Yorker* (Pollan 2015). With the 2021 publication of his follow-up book, *This Is Your Mind on Plants*, Pollan is increasingly embracing his role as a psychedelic pundit by making

pronouncements about the field as a whole, including assessments of the relative worth of competing ideas alongside assertions about the best allocation of funding in light of the most urgent research priorities. During a May 2021 AMA (“Ask Me Anything”) at the Effective Altruism Forum, for instance, he responded to a question about the field’s priorities with the confidence of an insider:

Question: “Within the field of psychedelics, where do you think additional action is most urgent, and why?”

Michael Pollan: “[T]raining up facilitators is key. I also think we need more basic science to understand the brain mechanisms involved. Most research is focused on treating new disorders, which is important, but there’s not much on HOW psychedelics work—neuroplasticity, neurogenesis, anti-inflammatory effects, potential to re-open critical periods of development, etc. This work will lead to new treatment for new indications eventually. It will also shed light on what consciousness is.” (Gertler 2021)⁸

Just under a year from the publication of *How to Change Your Mind*, Pollan waded into the editorial section of the *New York Times* to decry the historic ballot initiative that effectively decriminalized psilocybin mushrooms in the city of Denver, Colorado, writing under the title “Not so fast on psychedelic mushrooms.” (Although the measure technically deprioritized policing rather than outright decriminalizing psilocybin, it unleashed a wave of similar decriminalization actions in communities across the nation, with successful outcomes in Oakland, CA; Santa Cruz, CA; Arcata, CA; Ann Arbor, MI; Detroit, MI; Somerville, MA; Northampton, MA; Cambridge, MA; Washington D.C.; Seattle, WA; and the state of Oregon (Robinson 2021; Wang 2021).) Writing in the immediate aftermath of Denver’s ballot—which was not originally expected to pass, given that the “no” votes were leading until the day’s final tally (Mazzei 2019)—Pollan’s exhortations were underdeveloped and contradictory.

Having just written about his own experiences with illegal, underground psilocybin in his bestselling book, Pollan suddenly claimed that we weren’t yet ready to meaningfully debate an alternative framework for integrating psychedelics into society beyond the status quo of criminalization: “we’re about to have a national debate about the place of psilocybin in our society. Debate is always a good thing, but I worry that we’re not quite ready for this one” (Pollan 2019a). In a remarkable bit of shroomsplaining, Pollan

paternalistically sought to remind reform advocates that psilocybin is “a very different drug” than cannabis and “is not for everyone,” as if political actions were driven by misunderstandings about the nature of psilocybin’s subjective effects. He ultimately suggested that grassroots initiatives like Denver’s ballot initiatives risked jeopardizing the responsible, sober cultivation of knowledge by institutional researchers, which he deemed more important and respectable than knowledge production by the commons:

I look forward to the day when psychedelic medicines like psilocybin, having proven their safety and efficacy in F.D.A.-approved trials, will take their legal place in society. . . . My worry is that ballot initiatives may not be the smartest way to get there. We still have a lot to learn about the immense power and potential risk of these molecules, not to mention the consequences of unrestricted use. It would be a shame if the public is pushed to make premature decisions about psychedelics before the researchers have completed their work. (Pollan 2019a)

Despite insisting that we need more data before we contemplate any meaningful change to the status of psychedelics in society, Pollan nevertheless noted that “No one should ever be arrested or go to jail for the possession or cultivation of any kind of mushroom—it would be disingenuous for me to say otherwise, since I have possessed, used, and grown psilocybin myself.” For many readers, it was unclear how Pollan anticipated keeping individuals out of jail under a regime of criminalization, however (Valentish 2019).

As demonstrated by the raft of post-Denver ballot initiatives and city council resolutions, the commons was undeterred by Pollan’s moralizing. As his contradictions and unfounded claims to rational neutrality were highlighted by observers in subsequent weeks, he was forced to backpedal with a series of amendments and revisions, which ultimately undermined the confident and self-assured tone of his original opinion piece. In a follow-up essay posted to Medium, he characterized the many criticisms of his original editorial as “misrepresent[at]ions” based on hasty readings of his “nuanced” position, and he doubled down on discounting the extent of continuing psychedelic practices developed across the commons in both underground and non-Western contexts: “I don’t believe medicalization should be the only future for psilocybin. . . . [b]ut we don’t yet know the best way to do that safely outside of a medical or religious context” (Pollan 2019b).⁹ During a July 2019 lecture stop in Australia, he reaffirmed his opposition to legalization on the basis that “we” don’t yet know what we’re doing with psychedelics, as paraphrased by

journalist Jenny Valentish for the *Guardian*: “His concern is that North America does not yet have a cultural understanding of psychedelic use” (Valentish 2019).

After the 2021 publication of his second book on psychedelics and other plant medicines, *This is Your Mind on Plants*, Pollan returned to the *New York Times* opinion pages with a difference in tone, though not in substance. While his portrayal of decriminalization carried none of his original hesitancy, he emphasized psilocybin’s nature as a “dangerous” drug that demands rigid, routinized, and hierarchical models of access. According to Pollan, our collective priority should be to develop “models of safe and sane psychedelic use” that won’t be “disruptive (as psychedelics were in the West in the 1960s)” to dominant culture and its existing societal institutions (Pollan 2021). He names three specific avenues for the “normalization” of psychedelics in society: medicalization through FDA approval; religious access through institutional churches (he names only syncretic examples relating to Christianity); and—lastly—spa-like retreat centers as a “secular” option for “healthy normals.” He explicitly contrasts these legitimate, “formalized” modes of psychedelic access with the reckless, democratized contexts of festivals and protests:

When psychedelics first burst upon the West in the middle of the last century, they arrived without an instruction manual and so were sometimes used recklessly. . . . People thought nothing of dropping acid at festivals and protests or of spiking punch bowls with LSD, a practice that seems crazy, if not cruel. It’s no wonder the bad trip became such a powerful meme and the culture turned against psychedelics.
(Pollan 2021)

Throughout this piece, Pollan seeks to naturalize as “sober” and “healthy” the specific avenues to psychedelic access that are most compatible with the existing, neoliberal capitalist order of society (Gearin and Devenot 2021). Emphasizing the transformation of the individual within an unchanging hierarchical order, each of his three proposed models offer a means of enriching and prioritizing the goals and preferences of a new psychedelic elite, whether the hierarchy is disciplinary (emphasizing scientific ways of knowing at the expense of other fields), ecclesiastic, or corporate. His “neutral,” “evidence-based” vision is also deeply biased by class-blindness; although some festivals are certainly inaccessible to much of the working class, festivals and protests are specific avenues by which the commons has been able to gather and envision new modes of sociality and relating throughout the long decades when dominant culture disparaged and

pathologized psychedelic use. In place of these democratic, participatory contexts—which have already proved transformative of the political order through the counterculture politics of the 1960s and 1970s, yielding such “disruptions” as Earth Day and the anti-war movement—Pollan prefers the sort of “top shelf” experience described by Henri Sant-Cassia, founding partner at UK-based VC firm the Conscious Fund, where all meaningful decisions about the psychedelic setting are made for (elite) clients in advance: “You can’t make [taking these medications] [sic] like going to a fast food burger joint because, in order for it to work, you have to sit the patient at a table with a tablecloth and champagne glasses and have someone show up with a menu,’ Sant-Cassia says” (Ossola 2021).

By seeking to delegitimize non-hierarchical approaches to knowledge production and community support within a psychedelic commons, Pollan is also erasing the liberatory, world-building potentials of psychedelic *communitas*. Whereas the capitalist “set and setting” of neoliberal medicine envisions psychedelics as tools for better accommodating and tolerating the current sociopolitical status quo, the alternative settings of psychedelic *communitas* opens up possibilities for what Mark Fisher has described in *Capitalist Realism* as an emancipatory politics: “emancipatory politics must always destroy the appearance of a ‘natural order’, must reveal what is presented as necessary and inevitable to be a mere contingency, just as it must make what was previously deemed to be impossible seem attainable” (Fisher 2009). Pollan’s dismissal of the countercultural currents of the psychedelic ‘60s, as well as of the knowledge of decriminalization activists of the present, amounts to an erasure of psychedelics’ potential to facilitate such an emancipatory politics, where old orders are destroyed in acts of creation and mutual aid. As Roan Kaufman and others have noted, psychedelics hold the potential to act as societal, systemic medicines, rather than merely offering individualistic solutions to human suffering (Kaufman 2016). While psychedelic psychiatrists and behaviorists are often preoccupied with rooting out and transforming individual habits of mind, there is another, latent potential for psychedelics to draw attention to and transform the invisible, hegemonic infrastructures and ideologies that subtly naturalize and perpetuate deeply unequal societies and experiences. Fisher named this erasure in his draft introduction to *Acid Communism*, which remained incomplete at the time of his death:

Those aspects of the counterculture...which were incompatible with a world of overwork have been condemned as so many idle doodles... [After the Sixties,] the mandatory individualism imposed by neoliberalism was a new form of individualism...defined against the different forms of collectivity that clamoured out of the Sixties. This new individualism was designed to both surpass and make us forget those collective forms...

Acid Communism. . .points to something that, at one point, seemed inevitable, but which now appears impossible: the convergence of class consciousness, socialist-feminist consciousness-raising and psychedelic consciousness, the fusion of new social movements with a communist project, an unprecedented aestheticisation of everyday life. (Fisher 2016)¹⁰

In contrast to the liberatory potentials of acid communism, Pollan's editorials reveal the extent to which he has been captured by "capitalist realism," or the feeling that it's "easier to imagine the end of the world than the end of capitalism" (Fisher 2009). Pollan appears interested in fitting psychedelics into the already existing order in a manner that enriches existing apparatuses of power and further fuels the apparent inevitability of the existing socioeconomic and biopolitical system. In doing so, this approach neatly avoids addressing the ecological and social determinants of distress. Instead, the new psychedelic capitalism seeks to materialize its preferred vision of societal integration, crafting maintenance therapies that mollify the symptoms of living under climate change and pandemic capitalism while leaving the major root causes of contemporary suffering intact. Dark side of the shroom.

The Ginsberg Response to the Protestant Ethic and the Spirit of (Psychedelic) Capitalism: Extracting the Surplus Value of Metanoia

"You do not have to hoard samadhi, you do not have to keep the state of samadhi, you do not have to increase it—you can totally let go of it at the moment of recognition." — *Tulku Urgyen Rinpoche, As it Is, Vol. 2 p. 195-6*

If psychedelic capitalism has worked to separate these sacred plants from the more utopian (and yet proximate) promises of an acid communism founded on mutual aid and an open source approach to property, it does so by eliding the sacred aspect of psychonautic practice and repackaging it as a materialist, mechanistic, and branded "experience." Experiences are the prize left at the bottom of the box when the capacity for metanoia—widespread healing transformation and change—is extracted. Even ego death—the infamous and often ill-understood shift in scale from the personal egoic level to the communal, cosmic, or even divine magnitudes of a peak psychedelic experience—has sometimes become both a claimed attribute of psilocybin therapy and a deficit of any particular patient who fails to achieve it. By attributing an individual's failure to heal from psychedelics to insufficient ego

death, institutions seek a “spiritual bypass” on any need to reform working conditions or the workplace. Thus “ego death” becomes a mere signifier for avoiding the conditions of neoliberal compulsory individualism (Gearin & Devenot 2021).

If ego death is a sufficient condition for psychedelic healing, it is to the traditions of the sacred that we must critically look, for it is there that the infinite space of care necessary to psychedelic healing has been curated. Thirty years after publication in Donald Cutler’s (ed.) *The Religious Situation*, religious studies scholar and sage Huston Smith remixed his own “Secularization and the Sacred: The Contemporary Scene” into an appendix for his turn-of-the-century compilation, *Cleansing the Doors of Perception: The Religious Significance of Entheogenic Plants and Chemicals* (2000). Smith points us beyond the hierarchical domain of churches, synagogues, and mosques, and towards those roving rituals transcending “boundaries between languages and . . . antagonisms,” such as the Kiowa practices noted by Harry Smith. Huston Smith reminds us that “life calls for balancing the rewards of control with gifts that come to us through openness and surrender. The more we resolve to have things our own way, the more closed we become to the virtues in alternative ways. If we cannot perceive the virtue inherent in the capacity to surrender—to surrender to another person in love, or to obligation in the sense of feeling its claims upon us—cynicism awaits us” (Smith 2000). Two decades later, we come around again to Smith to say: Legalize it, don’t desacralize it.

And while Pollan claims that “. . . North America does not yet have a cultural understanding of psychedelic use,” we point here not only to the Indigenous wisdoms that have curated these medicines across the planet, but also to the counterculture wisdom of a great American poet, practiced meditator, and seasoned psychonaut, who participated in precisely those formal and informal psychedelic therapies that both entrance and worry Pollan. Intriguingly, Allen Ginsberg frames an appropriate application and integration of psychedelic medicine through the Buddhist trope of “*upaya*,” or “skillful means.” Ginsberg seems to anticipate Pollan’s hierarchical response—as well as the monoculture of a one-size-fits-all approach that is seemingly integral to any commodified psychedelic medicine imagined by today’s corporadelic IPOs—when he recalls his own experiences with a problematic psychedelic medicine that is “fixated on some God realm or some monotheistic central state-ism” (Ginsberg 1992). Here Ginsberg—who drank yagé with curanderos in Peru well before he took LSD in a controlled, VA-sponsored study administered by Gregory Bateson—notes the radically “unscientific” nature of psychedelic science administered outside the commons:

GD: What would “skillful means” be?

AG: *The “skillful means” aspect of activities comes as a by-product of centering. The “wisdom” aspect might be psychedelic perception of the transitoriness of the world—with minute particular detail glittering in the malady of the eyeball, a sense of emptiness in the world. So, combining wisdom and skillful means together would be necessary. Unfortunately, the teaching of the government is neither wise nor skillful. It’s fixated on some God realm or some monotheistic central state-ism. And the government is entangled in its own projections, the projections that it had originally when the CIA introduced acid—that psychedelics were war weapons, and would drive the enemy nuts. They never got over it because perhaps they were nuts themselves. . . .*

Much earlier, D.T. Suzuki suggested that the technical Sanskrit term *upaya*—whether translated as “expedient,” “strategem,” “device,” or “craft”—simply does not translate well (Suzuki 1963). Ginsberg here updates our understanding of and the exigence for *upaya* as care and context, as a loving craft attuned to the holistic specificity of each and every context, when he ponders the threat of tangled authoritative projections heralded as healing, as “psychedelic perception of the transitoriness of the world.” Drawing a sharp contrast to the government experiments, Ginsberg notes that it was when that ever so “disruptive” Timothy Leary left Harvard that his studies became “scientific,” precisely because they attended to the dynamic context and care in which psychedelic therapy was practiced—a context that included spiritual as well as psychological practices:

AG: *Well they trained people—psychologists and Eastern advisors—with a foundation aimed at exploring reactions and uses and safe procedures with LSD or other psychedelics. Hospitable. Open. Actually, quite scientific, compared to the government’s experiments, which were totally unscientific. And, as someone who took part in legal government experiments, I know how they were unscientific.*

GD: *How were the government-sponsored acid tests unscientific?*

AG: *They put me in a terrible room with whitewashed-tile hospital walls and all sorts of batteries and machines and stuck electrodes on my skin and treated me like a hospital victim. It wasn’t the right way to take LSD.*

Ginsberg contrasts this more “object”-oriented approach with the ecodic and interpersonal model of Leary’s at Millbrook:

Leary had you take it in the woods or in the big house with friendly people so you didn’t become an “object.” See, in government experiments at the Stanford Institute of Mental Health—1959—they treated subjects like objects to be studied, rather than living persons with whom to relate. Leary was treating the people he was working with as living, autonomous, individually-different people, and taking a lot of notes and information on the subjective experience, saying that all you can get from that experience is subjective description.

This affirmation of this collective subjective perspective, the psychonautic grow-a bag-of-mycelium-in-your-closet aspect of psychedelic medicine, inverts the one-size-fits-all model of psychedelics and re-integrates it into the legacy of the sacred and Indigenous forms of knowledge that have curated it. A model for this is offered up by Ginsberg, whose invocation of *upaya* represents a suite of techniques for a practiced letting go into the possibilities of a psychedelic medicine that transforms and heals a planet in the crosshairs of climate change pandemic capitalism, where there’s “a growing acknowledgment that the state of the art for psychiatric conditions [isn’t] cutting it.” Along with newly syncretic vegetalismo even now practiced on a planetary scale, such psychonautic culture hopes to honor and contribute to the long curation of sacred plants from the collective subjective perspective.



NOTES

- ¹ Psymposia defines “corporadelic” as “manifesting corporate structures, ethos, or logic within the context of the psychedelic landscape.”
- ² “Sooners is the name given to settlers who entered the Unassigned Lands in what is now the state of Oklahoma before the official start of the Land Rush of 1889. . . . As people lined up around the borders of the Oklahoma District, they waited for the official opening. It was not until noon that it officially was opened to settlement. The name derived from the ‘sooner clause’ of Proclamation 288—Opening to Settlement Certain Lands in the Indian Territory, which stated that anyone who entered and occupied the land prior to the opening time would be denied the right to claim land.” Wikipedia entry, “Sooners.”
- ³ Alan Greenspan’s December 1996 speech: “Clearly, sustained low inflation implies less uncertainty about the future, and lower risk premiums imply higher prices of

stocks and other earning assets. We can see that in the inverse relationship exhibited by price/earnings ratios and the rate of inflation in the past. But how do we know when irrational exuberance has unduly escalated asset values, which then become subject to unexpected and prolonged contractions as they have in Japan over the past decade?" <https://www.federalreserve.gov/boarddocs/speeches/1996/19961205.htm>

- ⁴ The disclosures of industry funding listed on Carhart-Harris et al.'s psychedelics vs. escitalopram study is representative: "Dr. Carhart-Harris reports receiving consulting fees from COMPASS Pathways, Entheon Biomedical, Mydecine, Synthesis Institute, Tryp Therapeutics, and Usona Institute; Dr. Giribaldi, receiving consulting fees from SmallPharma; Dr. Watts, receiving advisory board fees from Usona Institute and being employed by Synthesis Institute; Dr. Baker-Jones, receiving fees for facilitating meetings from Synthesis Institute; Dr. Erritzoe, receiving consulting fees from Field Trip and Mydecine; and Dr. Nutt, receiving consulting fees from Awakn, H. Lundbeck, and Psyched Wellness, advisory board fees from COMPASS Pathways, and lecture fees from Takeda Medical Research Foundation and owning stock in Alcarelle" (Carhart-Harris et al. 2021). atai Life Sciences files regularly with the SEC and has offices in New York, London, and Berlin.
- ⁵ In the field, this amount would be described as a "microdose"; while microdoses aim for sub-hallucinogenic effects, ongoing research is studying anecdotal effects of microdosing, including changes to mood, memory, attention, and sociability (Cameron, Nazarian, and Olson 2020).
- ⁶ As Rotem Petranker and colleagues describe in an article advocating for preregistration in psychedelic research trials, "Pre-registration commits the researcher to formally stating hypotheses, procedures, and collected variables, establishing an analytic/statistical plan, rules for data exclusion, and sample-size stopping rules" (Petranker, Anderson, and Farb 2020).
- ⁷ *The Motley Fool's* David Jagielski notes that many psychedelic corporations are "burning through cash," citing the example of COMPASS Pathways in particular: "Compass Pathways reported a net loss of \$13 million for the first three months of 2021, incurring expenses but no sales. And over the trailing 12 months, the company has used up \$51 million through its day-to-day operations" (Jagielski 2021).
- ⁸ The question of how any amount of psychedelic research will "shed light on what consciousness is" remains in the shadows here. Just as Carhart-Harris replaces one magic bullet with another through a bait and switch that resembles p-hacking, Pollan slides from the relation of psychedelics to particular effects—neuroplasticity, anti-inflammation—to questions on another scale altogether: "What consciousness is."
- ⁹ The Global Drug Survey's Adam Winstock disagrees. Used with care and reverence, "Magic mushrooms are one of the safest drugs in the world." See also Johns Hopkins' psilocybin pioneer Roland Griffith's interview about the Global Drug Survey: https://www.hopkinsmedicine.org/news/media/qanda_griffiths.html

¹⁰ To this list of consciousness-expansion labels, we would add creative consciousness and spiritual consciousness.

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