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MYSTICAL EXPERIENCES AND MENTAL DISORDERS:  
WHAT PSYCHEDELIC RESEARCH ON DEPRESSION AND ANXIETY CAN  
TELL US ABOUT THE NATURE OF MENTAL ILLNESS

Master's Thesis in Philosophy

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## 1. Introduction and background

### 1.1 What is a mental disorder?

Unlike somatic or neurological disease, what we call a mental disorder is an almost purely subjective phenomenon – a collection of feelings, thoughts, sensations and perceptions that exist only in one’s conscious mind. Over the course of human history, various theories were developed about the nature and origin of these phenomena: from an imbalance of humours in the body, through demonic possession, to more modern ideas about biological malfunctions or repressions of unconscious desires (Porter, 2002). Currently, the dominant account in mental health research and practice conceptualizes and categorizes painful or otherwise undesirable mental states into a system of disorders modeled on how physical illness is also understood. On this view, depression or schizophrenia are seen as no different from cancer or diabetes, in that they are discrete forms of illness that can be diagnosed and treated – they are something one *has*, rather than something one *is*. This position is reflected clearly throughout the most widely known tool for assessment of mental disorders for both research and practice purposes, the Diagnostic and Statistical Manual currently in its fifth edition (“DSM-5”), produced by the American Psychiatric Association (“APA”).

However, this medical model works well to explain illness only when there is an organic abnormality that one can trace undesirable symptoms to: a lump of cells that refuse to die, a malfunctioning organ, a virus invading one’s body. For mental disorders, by and large, this is not the case: disturbing mental symptoms are not just manifestations of an underlying illness – they *are* the illness. While research over the last few decades has increasingly clarified how such mental states might develop – through a complex interaction of genetic tendencies, social and environmental triggers, and one’s individual history and psychology – on reflection, these discoveries prove surprisingly unhelpful in determining whether the nature of these mental states is pathological. For instance, research indicates that up to 40% of individual differences in mental states that comprise depression is attributable to genetics, with the development of such states being

influenced by the combined effect of a large number of genetic variants, each having a relatively small effect (Howard et al, 2019). From this, one might be tempted to argue that, if depression is partially heritable, it must be an illness – a question of some unfortunate people having “bad” variants of certain genes, that make them particularly vulnerable to becoming depressed. However, this would fail to take into account that genetics influence the development of most, if not all, of our mental landscape – our attitudes, beliefs and behaviors. Political orientation, for example, also seems to be about 40% heritable (Dawes and Weinschenk, 2020), yet no one seems to be suggesting that we should send, say, Republicans to therapy.

So what is it that makes a mental state disordered? The distinguishing factor is not suffering, given that certain painful states (such as grief) are judged to be perfectly normal, while states that cause no apparent suffering to the “victim” at all – narcissism springs to mind here – are considered pathological. The DSM makes it clear that cultural context plays a large role in what is, and what is not, a mental disorder: “[t]he boundaries between normality and pathology vary across cultures for specific types of behaviors.” Culture, we are told, provides the “interpretive frameworks that shape the experience and expression of the symptoms, signs, and behaviors that are criteria for diagnosis.” Certain disorders are confined to particular cultures, or may be expressed through different clusters of symptoms; some behaviors recognized in one culture as normal might be indicative of an illness in another; and so on (American Psychiatric Association, 2013, p.14). Thus, for instance, homosexuality is no longer a mental disorder, having been ejected by a democratic vote of the members of the APA in the 1970s from one of the earlier versions of the DSM (McNally, 2011, p.23).

Ultimately, while mental suffering is undoubtedly a real phenomenon (in as much as any subjective experience can be), whether it or some forms of it can be termed an “illness,” and the status of the mental disorders into which it is categorized, are far more questionable. Further, the extent to which these diagnostic categories reflect the subjective experiences of individual sufferers is

also unclear. Both phenomenological research and the fact that comorbidity (the co-occurrence of one disorder with another) is the rule rather than exception indicate that individual experience is much richer and more varied than can be accurately captured by the existing diagnoses, encompassing bodily, temporal and intersubjective dimensions that cut across diagnostic boundaries. Nevertheless, whatever its deficiencies, there is little doubt that some system of classification is needed for research purposes, to help ensure consistency in diagnosis and treatment, and for the sheer convenience of having a common language that serves as a reference point for researchers, clinicians and patients in sharing their experiences. It would be both difficult and awkward to communicate about the relevant mental phenomena without this diagnostic shorthand – the language of disorders and symptoms - and this paper will not even attempt to do so; though the fact that diagnostic labels might obscure parts and variety of subjective experiences they refer to, and might mislead us (at least partly) as to their nature, should be borne in mind.

### *1.2 The central question and three kinds of answers*

However categorized, grouped or labeled into “disorders” the central question of mental suffering is this: is it a distinctive form of illness, or is it a constitutive part of one’s self? Broadly speaking, there are three kinds of theories that try to answer this question.

The first treats disturbing or painful mental states, or some of them, as disorders that disrupt or interfere with the way one’s mind is supposed to function when healthy. These types of theories are broadly congruent with the medical model, seeking to disassociate the sufferer from the mental states in question. The main challenge for theorists who fall into this camp is coming up with the grounds upon which such dissociation should be made, particularly in absence of any clear physical malfunction to which the undesirable mental states can be traced. One good example of a theoretical framework that accepts the absence of any physical abnormality as the root cause of mental distress, yet attempts to elucidate a distinction between normal and disordered states, is that provided by

Graham (2013). He asserts that what makes a state disordered or undesirable can be captured by three factors: (1) the harmful or dangerous nature of the state in question; (2) its non-voluntary and personally uncontrollable nature; and (3) an inability to alter or excise it by providing additional or compensatory psychological resources. Thus, it can be said that, for instance, states that comprise depression are disordered or undesirable because (1) they are both harmful (involving mental suffering and being incomprehensible to oneself) and dangerous (they carry the risk of suicide); (2) they are not the product of willful effort nor under direct or voluntary control (one cannot simply “snap out of it,” no matter how much one might want to); and (3) they are not abated by additional psychological resources, such as “special opportunities for social affiliation “ (Graham, 2013, pp.47-48). I am not persuaded by this analysis, given that there are a number of mental states – desire for vengeance, devotion to a cause or a god, or even love – that can, upon reflection, easily fulfill these requirements without being considered mentally disordered; nor have I found any other criteria for making the normal/abnormal distinction any more persuasive.

The second kind of theoretical position – anti-psychiatry - denies that there is any suffering that is inherent in the relevant mental states at all. Instead, it posits that labeling people mentally ill is merely the means to control and suppress socially divergent behavior. On one version of this view, even schizophrenia is a positive development: “an inner voyage of discovery” that a person should be allowed to undergo undisturbed, with episodes of psychosis being seen “as more of a breakthrough than a breakdown” (McNally, 2011, p.18). This rather extreme version has always been more of a fringe view, and need not be seriously considered here, especially given an abundance of research that points to the fact that most of the mental states considered disordered are in fact disturbing and cause suffering to the person who experiences them. However, weaker versions of this theoretical position have been an important voice of criticism in psychiatry, pointing out the ethically problematic nature of certain practices, such as involuntary confinement and treatment, inflicted upon those judged mentally ill on the basis of diagnoses that are, to a greater or lesser

extent, based on normative ideas about what a particular culture finds abnormal. They have also contributed to our understanding of not only how we construct our concepts of mental disorders, but also of how the mental states they represent develop: the idea that social attitudes, practices and values are crucial in how mental disorders arise and are experienced is now generally accepted (McNally, 2011, pp.18-22 and 128-158 on social causation vs. social construction of mental disorders). Nevertheless, as this position generally downplays or outright rejects the importance of biological and psychological factors in the development of the relevant mental states, it is in my view not a complete or sufficient account of the nature of mental suffering.

The third type of theories about the relevant mental states views them primarily as part of that flow of subjective experience that human consciousness and selfhood are grounded in. Such theories reflect on the intensely personal nature of this type of suffering, and point to the lack of any strongly principled basis for disassociating some painful or otherwise undesirable mental states from the identity of the sufferer. Phenomenological theories that view mental disorders as alterations or disturbances in the modes of human experience and existence, relating their symptoms to “the subject and the whole of consciousness in which these symptoms emerge,” (Fuchs, 2010, p.548) belong in this category. On this view, mental disorders consist in alterations to the basic structures of conscious experience, profoundly transforming the person’s sense of existence and self. This transformation might still be viewed as pathological – an illness of the self – although this appears to be based on normative assumptions about what a “healthy” experience of one’s self and its relation to the world is, and how it ought to be constructed (for examples, see Fuchs 2010 and Svenaeus 2014). Aside from these normative assumptions, I consider this type of view broadly correct as way of conceptualizing mental suffering, and this thesis will seek to support it, though only partly on phenomenological grounds.

### *1.3 Research questions and thesis*

This paper will attempt to make a modest contribution towards answering the central question by examining the implications of the recent research into psychedelic substances and their effects on mental health. More specifically, the paper will analyze the findings concerning the link between a particular state of consciousness reliably induced by ingestion of psychedelics – the so-called “mystical experience” – and long-term improvements in subjective well-being. In light of this connection, the main research questions this paper will address are the following:

- (1) How can a mystical experience improve mental health? In what way can it substantively alter the mental and phenomenal states that are considered disordered, in particular given its temporary nature?
- (2) What does the effect of the mystical experience on mental health, and the manner in which it is achieved, tell us about the nature of mental suffering and how it should be conceptualized?

The central thesis for which this paper will argue is that the “self-model” of mental suffering better accommodates the evidence from psychedelic research on the effects of mystical experiences on mental health, given in particular how these effects are seemingly achieved: through a profound alteration in the conscious self.

### *1.4 Limitations and terminology*

The research on mental suffering and its various manifestations is vast and encompasses a number of fields of inquiry in addition to philosophy. The parts of it that pertain specifically to psychedelics are far more limited – this type of research having only just recommenced in the two decades – but even so, they are substantial enough in volume to make summarizing them in one Master thesis unrealistic. This paper will therefore consider the research on psilocybin as a representative example of the effects classic psychedelics have specifically on depression and/or anxiety.



For ease of reference, this paper will utilize the standard classification and terminology of the mental health field. “Mental disorder” and “mental illness” will be used interchangeably to refer to the types and collections of mental and phenomenal states that have traditionally been classified as such, whatever the deficiencies of that classification might be. It should be noted here that the focus of this paper is on only those types of mental suffering that have no clearly identifiable biological cause: thus, what is meant by mental disorder or illness will not include symptoms or states that can be traced to a particular substance, hormonal deficiency, brain damage or disease, or some other such organic dysfunction or abnormality. It is acknowledged that this division between the physical and the mental is not quite so clear-cut: but for the purposes of this paper, a rough-and-ready boundary will suffice and any complexities of making the distinction between somatic illness and mental disorder will be, for the most part, ignored.

“Depression” and “anxiety” should be construed broadly, and refer to the respective symptomology that purports to cover the various combinations of mental and experiential states that may attach to each, as far as that can be measured by the relevant diagnostic tools. The primary focus of this paper will be on depression; but as it is difficult to disentangle it from anxiety, the latter will also be included in the discussion. The diagnostic categories used in this paper will be those of the DSM-5, and depression and anxiety will be defined by reference to its symptomology. This is a reflection of the popularity of the DSM in research, clinical practice and even popular culture, despite its ostensive focus on North American society. Further, the differences between the DSM and its nearest rival, the International Disease Classification (“IDC”) produced by the World Health Organization, are for the present purposes negligible.

### *1.5 Materials and method*

The primary methodology will be philosophical argumentation and conceptual analysis, relying on findings from empirical research and theoretical work in psychology and neuroscience, as well as phenomenological description.

DSM-5 will be utilized to anchor the discussion to a shared framework in research and clinical practice that provides a common reference point between disciplines for communicating about depression and anxiety.

### *1.6 Structure*

Following this introductory chapter, Chapter 2 will set out what is commonly understood by depression and anxiety: how these conditions are diagnosed, treated and experienced. Chapter 3 will then focus on how depression and anxiety have been found to react in empirical research to administration psilocybin, and explore the correlation between the “mystical experience” that reliably occurs following ingestion of said psychedelics and subsequent improvements in mental health. On the basis of Chapters 2 and 3, and by reference to a neuroscientific theory of consciousness, Chapter 4 will move on to argue that mental disorders are best understood as part of the sufferer’s conscious self, given that it is an alteration in consciousness and its integration into one’s sense of self that appear to be key to the therapeutic effect. Finally, Chapter 5 will offer a brief conclusion to the paper and propose some directions for further research.

## **2. The case of depression and anxiety.**

What does it mean to be depressed and anxious? For many sufferers, their quest to understand what is happening to them starts not with the onset of their symptoms, but rather with their first attempt to seek professional help and treatment – often only after they had already suffered for months, if not years, on a constant or recurring basis. The first explanatory framework most will encounter – usually through their primary care physician – will be the medical model: their doctor might ask them to describe how they’re feeling, consult the relevant diagnostic checklists, and offer a prescription for anti-depressants or a referral for a course of therapy. This, for the lucky few, might be it: the drugs or the therapy will lift their mood, and they might come to view their depression as merely a passing illness. But for the majority, this initial encounter will mark the

beginning of a lifetime of frustration and disappointment, as available treatments fail, result in side effects that substantially lower one's quality of life, and ultimately prove ineffective in preventing a recurrence or relapse.

For the most part, the medical model is unable to explain these failures, or offer more than a temporary relief in symptoms. However, the understanding of mental suffering for most sufferers – and for most professionals – starts with and develops from that model. Its diagnoses and symptomology are also the standard reference point for research, including the research that will be examined in the next chapter. The remainder of this chapter will therefore aim to set out the basics of diagnosing and treating depression and anxiety as distinct forms of mental illness; before briefly discussing a more complex reality that underpins this system.

## *2.1 Depression and anxiety as distinct forms of mental illness*

### 2.1.1 Depression: diagnosis and treatment

The DSM-5 sub-categorizes depression into eight separate disorders; but when researchers and clinicians talk about “depression” they are normally referring to major depressive disorder (“MDD”), so that the remaining categories could be seen as variations on MDD. Thus, for instance, dysthymia (persistent depressive disorder) – one of the other diagnoses in the depressive disorders category – has the same symptoms as MDD, and is diagnosed in almost the same way, except for the fact that the symptoms must be less severe and chronic (persisting for two years or more) to distinguish it from MDD. Some of the other variants are situational, or attempt to classify clinically significant presentations of depressive symptoms that nevertheless may not warrant the full diagnosis of MDD. According to the DSM-5, “[t]he common feature of all of these disorders is the presence of sad, empty, or irritable mood, accompanied by somatic and cognitive changes that significantly affect the individual's capacity to function. What differs among them are issues of duration, timing, or presumed etiology.” (American Psychiatric Association, 2013, p.155)

To be diagnosed with depression (MDD), the individual concerned must report experiencing five or more of the following symptoms over the course of the same two weeks minimum: (1) depressed mood most of the day, nearly every day; (2) markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day; (3) significant weight loss when not dieting or weight gain, or decrease or increase in appetite nearly every day; (4) insomnia or hypersomnia nearly every day; (5) psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down); (6) fatigue or loss of energy nearly every day; (7) feelings of worthlessness or excessive or inappropriate guilt nearly every day (not merely self-reproach or guilt about being sick); (8) diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others); and/or (9) recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide (American Psychiatric Association, 2013, pp.160-161).

Leading interventions for depression are cognitive behavioral therapy (“CBT”) and anti-depressant medication. CBT treatment is normally delivered in 16-20 sessions, spread over three to four months, and consists of teaching patients “compensatory skills and different ways of thinking to reduce the symptoms of and their own vulnerability to MDD” (Wells and Fisher, 2016, p.65). Research estimated that around 41% of patients who complete this course of treatment “have reliably lower scores [on the scales that measure the severity of symptoms] than those expected from the waitlist and placebo groups” (Wells and Fisher, 2016, pp.65-69). However, reduction in symptoms does not imply full remission – only between 17-25% of patients are asymptomatic when treatment finishes. Secondly, within two years, around 54% of patients successfully treated with CBT have been shown to relapse, although the rate of relapse can be lowered as long as the patient enters into and maintains some form of “continuation” treatment (Wells and Fisher, 2016, pp.69-76).

Psychoactive drugs – anti-depressants – are an alternative to therapy considered to be equally efficacious, although the exact method by which they achieve their effects remains something of a mystery (Wells and Fisher, 2016, pp.87-88). Estimates of their efficacy vary, but by most accounts, anti-depressants appear to be roughly as effective as therapy in reducing symptoms of depression – modern research estimates that around 40% of patients will have a therapeutically significant response to this type of treatment. However, the placebo effect accounts for much of this improvement: around 30% of patients will also get better given a placebo, rather than an active anti-depressant compound (Khan and Brown, 2015, p.294-295). This has led to some soul-searching in the medical profession, given that – unlike therapy – anti-depressants come with a whole host of unpleasant and dangerous side effects, including (but not limited to) nausea, diarrhea, insomnia, weight gain, sexual dysfunction, and an increased risk of suicide: with these symptoms appearing weeks before any anti-depressant benefit can be expected. Further, in order to maintain any benefit gained, the drugs must be continued over a 4-12 month maintenance phase (or longer), once the patient enters remission: even so, the risk of relapse in the 6 to 12 month period once the drugs are discontinued is quite high (Wells and Fisher, 2016, pp.98-101). Finally, anti-depressants appear to cause physical dependency, in that their discontinuation causes physical and psychological withdrawal symptoms to appear. These can be quite severe – from headaches, fatigue, dizziness and nausea, through anxiety, depression and insomnia, to (albeit rarely) psychosis and suicide - and must be managed by tapering off, preferably over a period of months (Horowitz and Taylor, 2019; see also Hengartner et al, 2020, for an analysis of accounts of protracted withdrawal syndrome extracted from a peer-support internet forum).

For those patients who do not respond to either therapy or anti-depressants – alone or in combination – there are essentially two remaining options: electroconvulsive therapy (“ECT”) and vagal nerve stimulation (“VNS”). ECT is exactly what it sounds like: under general anesthesia, an electric current is applied to one’s brain, triggering a brief (less than 60 second) seizure. No one

really knows why this works to relieve symptoms of an otherwise treatment-resistant depression, but after a course of such treatments (usually six), around 48% of patients go into remission (Jelovac et al, 2013, p.2468). Unfortunately, the relief is fairly short-lived for many: around 50% of successfully treated patients relapse within the first year, most within the first six months; this is despite the fact that virtually all patients treated with ECT are now given continuation treatment (a course of anti-depressants or further ECT: Jelovac et al, 2013, pp.2469-2472). As for VNS, it involves electrical impulses being applied to the vagus nerve via a small generator surgically inserted in one's chest and connected to an electrode wrapped around the vagus nerve in the neck. This is postulated to achieve an antidepressant effect through stimulation of monoamine centers in the brainstem and/or certain brain regions involved in mood regulation (Wells and Fisher, 2016, p.102). In patients with chronic or treatment resistant depression, the VNS results in improvement or remission of symptoms for around 15%. However, it would appear that the success of both therapies may once again be partly due to placebo: 30% of people subjected to "sham" ECT and 10% of those implanted with an inactive VNS also experience improvement comparable to those who receive the active versions of these treatments (Khan and Brown, 2015, pp.296-297).

### 2.1.2 Anxiety: diagnosis and treatment

Much as is the case with depression, anxiety comes in several subtypes, which, according to DSM-5 have two common features: (1) excessive fear (the emotional response to a real or perceived threat) and/or anxiety (anticipation of a future threat); and (2) related behavioral disturbances. Anxiety disorders are differentiated primarily by the "types of objects or situations that induce fear, anxiety, or avoidance behavior, and the associated cognitive ideation...the types of situations that are feared or avoided and the content of the associated thoughts or beliefs" (American Psychiatric Association, 2013, p.189). However, anxiety does not necessarily need a specific focus – generalized anxiety disorder ("GAD") is characterized by excessive and difficult to control anxiety and worry

about any number of events or activities, which persists for at least six months during which it occurs more days than not. To be diagnosed with GAD, the individual must also exhibit three of the following symptoms during the relevant time period: (1) restlessness or feeling keyed up or on edge; (2) being easily fatigued; (3) difficulty concentrating or mind going blank; (4) irritability; (5) muscle tension; and (6) sleep disturbance (American Psychiatric Association, 2013, pp.222 and 225).

The primary treatment for anxiety – GAD in particular – is virtually the same as that for depression: first-line treatments are therapy (specifically, CBT) and anti-depressants. CBT treatment in relation to anxiety focuses on providing information about anxiety to patients, along with “instruction in self-monitoring of anxiety, relaxation training, imaginal relaxation, cognitive therapy, worry behavior prevention, problem solving, and gradual exposure to anxiety-provoking stimuli,” typically in a 12-week course (Simpson et al, 2010, p.297). As with depression, both therapy and anti-depressants have been shown to be equally effective in randomized controlled clinical trials, with around half of patients having some response to each. A further pharmacological option is also available for anxiety: benzodiazepines, such as diazepam (Valium) or alprazolam (Xanax). These are essentially tranquilizers – they inhibit the ability of neurons to become excited, slowing down activity in the brain and nervous system, thus producing a sedative, relaxing effect. Needless to say, this works very well; unfortunately, their “slowing down” effect results in psychomotor impairment, as well as impairment of higher brain functions such as learning and memory, and increased risks of accident and injury (Lader, 2011, pp.2088-2089). Further, tolerance to benzodiazepines can develop, requiring larger doses, with cessation comes the return of symptoms and/or withdrawal, and the drugs can easily be fatal in overdose or when consumed with other sedatives (such as alcohol) – which is why they are not generally recommended for long term use, unless anti-depressants prove ineffective. Safer anxiolytic (non-antidepressant) alternatives to benzodiazepines – such as buspirol – have proven to be far less effective (Simpson et al, 2010, p.298).

## *2.2 Depression/anxiety: comorbidity*

While the DSM-5 places anxiety and depression into two separate categories, that distinction appears to have little to do with the reality of how the mental states that are considered indicative of the two actually manifest for, and are experienced by, individual sufferers. It is quite rare for patients to describe symptoms that can only be characterized as either depression or anxiety with any degree of confidence: usually, a variety of undesirable mental states is experienced, some of which – together with accompanying circumstances – can be matched to more than one diagnosis. Thus, for instance, 58% of people diagnosed with MDD will also at some point receive a diagnosis of an anxiety disorder, and conversely 58% people with GAD will also be diagnosed with MDD during their lifetime (Simpson et al, 2010, pp.90-91; both are also highly comorbid with other sub-categories of depression and anxiety, as well as bipolar disorder). Further, DSM-5 gives diagnosticians the option to diagnose depression with “associated features” or specifiers, one of which is “anxious distress.” In this way, a single diagnosis of depression can be made (“MDD with anxious distress”), that also accounts for mild to severe symptoms of anxiety (American Psychiatric Association, 2013, p.184).

Anxiety and depression co-occur to such an extent that a good case could be made that their collective symptoms cannot – or should not – be separated into discrete disorders: the previous edition of the DSM, the DSM-IV, did in fact include a diagnosis of “anxious depression” that, to a certain extent, reflected this line of thought. Lending strength to this idea is the fact that both respond in roughly equal measure to virtually identical treatment; as well as the finding – in the more general body of research on emotions – indicating that, even by reference to established checklists of symptoms, many people are either unable or unwilling to distinguish between feeling anxious and feeling depressed, and rarely report feeling symptoms indicative of just one of these in isolation. The jumble of mental and phenomenal states that form each sufferer’s unique subjective experience might be, at least for some, difficult to disentangle and identify as anything other than “unpleasant” (see Feldman Barrett, 2017,



Loc.161-178 on the differences in how subjects experience and are able to differentiate between different emotions).

### *2.3 The phenomenology of depression/anxiety:*

Part of the problem, as some phenomenologists have pointed out, might be that the spectrum of subjective experience of the kind of misery that might get classified as depression or anxiety is far more varied and encompasses more than the DSM-5 symptomologies are able to accommodate. The kind of experience that may be compatible with the DSM diagnosis of MDD involves “a qualitative shift in the overall structure of experience, encompassing self, agency, the body, temporal experience, interpersonal relations, and the sense of being rooted in the world.” Aspects of this shift may be indescribable and ineffable, with many sufferers finding the “the metaphors they appeal to” to describe it “ultimately inadequate to the task.” (Ratcliffe et al, 2014, p.v)

This richer account of depression contains embodied, intersubjective, and temporal dimensions. The sufferer’s experience of the lived body, for instance, is often described as typified by “heaviness, exhaustion, oppression, and general constriction,” resulting in the body being experienced “no longer as a transparent medium of one’s relation to the world but rather as a burden or an obstacle” (Fuchs, 2019, p.621; the phenomenon described is one that Fuchs calls “reification” or “corporealization,” though it can also be thought of as “hyper-embodiment” in contrast to the disembodied states one might experience in schizophrenia). Intertwined with reification, the subjective perception of time can also become altered: time slows down, and the patient may feel (as one person described it) as if their inner clock is standing still, “while the clocks of the others run on,” making the patient “unable to move forward,” as if paralyzed. This may put them out of tune with others with whom they interact – unable to respond in synch to the gestures, facial expressions and gazes that normally form part of intersubjective communication – leaving them “no longer capable of being moved and affected by things, situations, or other persons, even their relatives.” As well as affecting the intersubjective present, the slowing down of subjective time can

make it harder to generate any volition towards or anticipation of the future, leaving the person at the mercy of their past – unable to move on, endlessly regretting past mistakes and opportunities that were lost to their apathy (Fuchs, 2019, p.622-4).

Evocative illustrations of these states of hyper-embodiment, emotional flatness, and profound disconnection from the world and other persons can sometimes be found in patient and autobiographical accounts of depression. Andrew Solomon (2001) for instance describes as part of his experience, “a loss of feeling, a numbness” that “had infected all of [his] human relations;” an inability to care about love, his work, family or friends; finding “all strong emotions gone, except for a certain nagging anxiety.” His ability to feel pleasure evaporated to the point where “in erotic circumstances, [his] mind kept drifting off to shopping lists and work [he] needed to do;” he could not connect with his friends, and their own attempts to reach out to him – leaving messages on his answering machine, to which he felt he should respond – became a burden, an “impossible weight,” rather than a source of support. Time slowed down:

...depression minutes are like dog years, based on some artificial notion of time...When you are depressed, the past and future are absorbed entirely by the present moment...You cannot remember a time when you felt better, at least not clearly; and you certainly cannot imagine a future time when you will feel better. Being upset, even profoundly upset, is a temporal experience, while depression is atemporal. (Solomon, 2001, p.45-46, 53-54).

Other sufferers describe feeling that their life “contracts” – as if the world, one’s life, and things that once made it meaningful become inaccessible. Everything becomes a challenge: holding a conversation, getting dressed, having a shower, or even getting out of bed, with “routine tasks” like cooking or making tea beginning to “require enormous efforts.” The body becomes “leaden,” “tired, heavy, unresponsive;” turning into an obstacle or a trap that isolates them “from formerly meaningful surroundings” (Slaby et al, 2014, pp.27-32, citing personal accounts of respondents to a 2011 research survey). As one writer put it:

Sometimes I felt like some creature caught in a net, thrashing around and unable to get free. I didn’t know what the net was, but I knew it was there;

I didn't know what was standing between me and deep connections with other people, but that was there too. I felt it distinctly. It was a wall...I couldn't get around it, or over it. It was just there. (Thompson, 1995, p.89 in Slaby et al, 2014, p.31)

Slaby et al (2014) link the changes in time and bodily experience to the anxiety that so often accompanies – or is perhaps a part of – depression, in that they note that the “altered experience of time can give rise to violent feelings of dread and despair...regularly reported by depressed persons.” Because they are unable to act to regain meaningful connections with their lives or other people, they remain tied to the state of affairs in the present moment – but not, as the authors say, in the sense of “a blissful absorption,” but rather in what Heidegger called “a standing now,” a state of affairs typified by a “profound boredom,” which is “a wasteland of lost meaning, a desert of senseless existence that has totally transformed all of the temporal dimensions, past, present, and future.” From there, the sufferer may fearfully anticipate more of the same or worse: their sense of the future being characterized by “impending disaster and doom, leading them to expect the future to bring only more pain and misfortune, or even outright catastrophe.” Thus, respondents to a 2011 research survey reported feeling under threat, “like something bad will happen;” being “paranoid and pessimistic, convinced something bad will happen to me or others; or asserting that “[t]here are lots of threats in the world and they all seem to be about to happen, or be very likely they will happen” (Slaby et al, 2014, p.33-34). A separate account of anxiety – in an essay by a philosopher who suffers from it – portrays this sense of impending threat as an even more essential part of his everyday perspective, one that co-constructs the world he inhabits. It is, he says,

“all at once, a fever and an occupation, an affliction and a constitution...a lens through which to view the world, a coloration that grants the sufferer's experiences their distinctive hue...Things and persons and events fall into focus depending on their interactions with our anxieties: that man in the corner becomes threatening, this chair becomes unstable and unbalanced, that food becomes the agent of a fatal illness, my family – my wife, my daughter – appear as targets for cruel twists of fate (Chopra, 2018).

Depression and/or anxiety on a more phenomenological account – both as investigated by scholars and described in the accounts of sufferers – are thus not only the cognitive and behavioral problems that the DSM symptomology portrays them as. Rather, they appear to be much more complex phenomena that affect, or even help to construct, the sufferer’s entire sense of being – the way they perceive the world, time and other people, as well as their experience of their embodied self – resulting in subjective experiences that are unique to the individual sufferer, even as they partake in the common features described above.

### **3. Depression/anxiety in psychedelic research**

Following on from the discussion above, this chapter will examine the recent discoveries concerning the effect that psychedelics might have on mental health, specifically on the mental and phenomenal states that constitute depression and/or anxiety. It will start with a brief discussion of what is meant by “psychedelics,” and the research that has been conducted on these substances in the past; before moving on to summarizing modern research on psilocybin specifically; and finally, examining the role that a particular form of an altered state of consciousness – the so-called mystical experience – plays in alleviating symptoms of depression/anxiety. This will lead into the discussion of what conclusions can be drawn about the nature of depression/anxiety from the therapeutic effect of mystical experiences.

#### *3.1 Psychedelics: definition and a brief research history*

In general, “psychedelic substances” or “psychedelics” are those substances, both natural and artificial, that significantly alter one’s experience and perception of reality. A more precise definition can be a matter of some disagreement given the widely varying pharmacological effects of substances that could conceivably be embraced within this category – from alcohol through hallucinogens to even coffee – but one of the best and most comprehensive descriptions of the class of substances this paper is concerned with can be found

in Grinspoon and Bakalar, 1979, p.9: a psychedelic is a “drug which, without causing physical addiction, craving, major physiological disturbances, delirium, disorientation, or amnesia, more or less reliably produces thought, mood, and perceptual changes otherwise rarely experienced except in dreams, contemplative and religious exaltation, flashes of vivid involuntary memory, and acute psychosis.” Within this class, two general types of drugs can be accommodated, distinguished by the structural category of their psychoactive agent: tryptamine-type drugs, such as psilocybin (the active component of “magic mushrooms”), lysergic acid diethylamide (LSD), and dimethyltryptamine (DMT); and the phenethylamine-type, including mescaline, the main psychoactive ingredient of peyote. While other compounds - mainly cannabinoids, ketamine and methylenedioxymethamphetamine (MDMA or “ecstasy,” as it is more commonly known) – are frequently labeled “psychedelic” and have also aroused considerable research interest, their effects only partially resemble those that are generally agreed to be the “classic” psychedelic substances (Johnson et al, 2019, p.84).

The use of psychedelic substances by human cultures has an ancient pedigree, with evidence for ritual importance of psychoactive compounds in a number of cultures around the world dating back to at least 6000 BCE (see for instance, Akers et al, 2011 and Guerra-Doce, 2015). However, until the late 19<sup>th</sup> century, such use appears to have been exclusive to religious and/or healing practices of indigenous societies. Experimental research on these substances can only be traced back to the discovery of peyote by North American and European scholars in the 1890s, starting with Arthur Heffter’s isolation of mescaline as its active component in 1897 (Johnson et al, 2019, p.85), and the first report of the effects of its ingestion published in the British Medical Journal (Mitchell, 1896). Research interest – specifically concerning the potential therapeutic application of psychedelics in psychiatry - picked up significantly following Albert Hoffman’s discovery of the psychoactive effects of LSD in 1943 (a compound he had first synthesized in 1938), through first accidental then deliberate self-experimentation (Hoffman, 2013, pp.18-21).

The 1950s and 1960s, as well as the early 1970s, witnessed the accumulation of promising research showing the effectiveness of psychedelic substances in alleviating psychological distress (particularly end-of-life and cancer-related) and treating addiction (Johnson et al, 2019, p.85). Unfortunately, beginning in mid-1960s in the United States, the backlash against the recreational uses of these substances resulted in drug control laws that rendered them increasingly illegal. The drive towards criminalization culminated in the 1971 Convention on Psychotropic Substances adopted by the United Nations, which placed psychedelics in the same category as harmful drugs that have no therapeutic use (such as heroin) – contrary to all of the scientific evidence available at the time of this classification. As a result, nearly all scientific investigation into psychedelic substances ceased for decades, with the earlier research concerning their efficacy against mental distress essentially being forgotten.

This hiatus ended in 2000, when Dr. Ronald Griffiths at Johns Hopkins University managed to obtain regulatory approval to work with psychedelic substances. The result of his subsequent work was a landmark study, published in 2006, on the safety and enduring positive mental health effects of psilocybin use (Griffiths et al, 2006). Thirty volunteer adults who had never taken any psychedelics before, but who regularly participated in religious or spiritual activities, were administered two to three doses of psilocybin at two-month intervals. The participants reported a general improvement in their attitudes and behaviors following their psychedelic experiences; but more significantly, 67% of the subjects rated their psychedelic experience as either the most meaningful or one of the five most meaningful experiences of their lives – comparable to the birth of their first child or the death of a parent. These results kicked off what became known as a “psychedelic renaissance” in mental health research: at the moment, all of the classic psychedelics, as well as psychedelic-adjacent substances such as MDMA, cannabis and ketamine, are being studied with some intensity for their potential in treating a number of conditions (in addition to depression and anxiety) – from addiction, through PTSD and anorexia to cluster

headaches, Alzheimers and inflammation. The following section will examine the research concerning the efficacy of psilocybin in alleviating symptoms of depression and anxiety, and discuss how these effects may be achieved in the course of the drug's operation.

### *3.2 Psilocybin in the treatment of depression/anxiety*

#### 3.2.1 Research so far:

When administered in supportive settings, psilocybin has been shown in clinical trials to have a significant and lasting anti-depressant and anxiolytic effects, in both healthy volunteers and subjects diagnosed with depression/anxiety type disorders. In particular, psilocybin has been shown effective in three groups of depressed/anxious persons: those with a diagnosis of life-threatening or advanced stage cancer who meet the criteria for depression/anxiety (as measured by standard diagnostic scales); patients with treatment resistant MDD; and those diagnosed with MDD.

In relation to cancer patients, a recent meta-analysis (Castro Santos and Gama Marques, 2021), examined the results of three randomized, double blind, and placebo controlled studies that together administered high-doses of psilocybin to 92 subjects. Results indicated immediate and enduring anti-depressant and anxiolytic effects in majority of the patients, persisting for up to six months (the longest period of follow up). No serious or enduring adverse effects were reported in any of the studies. The study with the shortest follow up (five weeks), reported that 92% of patients given a high dose of psilocybin had a clinically significant anti-depressant response (defined as a 50% or greater reduction in symptoms measured by the relevant diagnostic scales) at that time, as compared to 32% of those given the placebo (a low dose of psilocybin), with symptom remission reported for 60% of the high-dose group and 16% for placebo. In terms of anxiety, 76% of patients in the high-dose group reported a clinically significant response and 52% went into remission, as compared to 24% and 12% respectively in the placebo group. In another study, at seven weeks, 83% of patients in the psilocybin group had a clinically significant anti-depressant

response, with 85% going into remission; as compared to 14% and 15% respectively in the placebo group (given niacin). The clinically significant response for anxiety was 58% in the psilocybin group versus 14% in the placebo group (Castro Santos and Gama Marques, 2021, pp.2 and 6).

Only the smallest study (12 patients) reported depression score reduction at six months – the eight patients who completed the follow up reported a mean reduction from baseline of around 45%. However, the two larger studies included a crossover (where the patients given placebo in the first round were later given an active dose of psilocybin), and for one of them, a long-term follow up study was recently published (Agin-Liebman et al, 2020). Of the 29 patients in the original study, 16 were still alive at the time of the subsequent study and 15 agreed to participate (although one of them died from cancer-related complications during the follow-up period). Two long term follow-up (“LTFU”) assessments were carried out, at an average of 3.2 years and 4.5 years from the participants’ ingestion of psilocybin in the original trial. “At the second LTFU point, 57% of participants showed a clinically significant anxiolytic response,” while 71% reported “clinically significant reductions in global psychological distress” on the diagnostic scale that combines measures for anxiety and depression. In addition, “percentages of clinical responses for depression...ranged from 57-79% and depression symptom remission rates ranged from 50-79%.” In terms of secondary outcomes, patients reported “significant reductions in hopelessness, demoralization and death anxiety...relative to baseline” (Agin-Liebman et al, 2020, p.159).

In relation to treatment-resistant depression, Castro Santos and Gama Marques’ meta-analysis looked at two small open-label studies, in which the second was essentially the follow-up to the first with an increased number of participants. The first study administered two doses of psilocybin (low dose first, then a high dose seven days later) to twelve patients with moderate to severe MDD who have shown no improvement after two “adequate course of antidepressants from distinct pharmacological classes.” Follow up assessments were carried out at one, two, three and five weeks, as well as three months. “All



patients showed reduced depression severity 1 week...and 3 months...after the high dose session, in comparison to baseline...8 patients achieved complete remission 1 week after treatment. Furthermore, 7 patients continued to meet criteria for response (defined as a 50% BDI – Beck Depression Inventory - score reduction vs baseline) 3 months after treatment, from which 5 were still in remission at this point.” Anxiety scores for these patients were also significantly reduced. (Castro Santos and Gama Marques, 2021, p.6). In the follow-up study, the sample size increased to twenty patients, of whom 19 completed all assessments. In this group (which included the original twelve from the first study), 18 met the criteria for severe or very severe depression; the mean of lifetime failed medication was 4.6 (with a maximum of 11); and the mean duration of depression was 17.7 years, with the range of 7 to 30 years. Of the 19 patients who completed the assessments, “all showed some reduction in depression severity at 1 week and these were sustained in the majority for 3-5 weeks,” based on a variety of measures. For instance, on the BDI measure, the mean baseline prior to treatment was 34.5; at one week, the mean reported score was 11.8 (a reduction of 22.7), though it then increased to 19.2 at three months and 19.5 at six months. Scores on the suicide part of the measures were also significantly reduced, with 16 of the 19 patients scoring zero at one week post treatment (Carthart-Harris et al, 2018; Castro Santos and Gama Marques, 2021, p.6).

It should be noted that ten of the patients were still, based on their scores, depressed following treatment – albeit not severely, as on the BDI, scores from 10 to 18 indicate mild to moderate depression, with 19 to 29 being moderate to severe and over 30 indicating severe depression. Only nine of the patients went into remission (with scores below even the mild depression threshold), with six of them maintaining that response at the six month follow up. Carthart-Harris et al also note that some of the patients started additional treatment at around the three-month mark: six went on a new course of antidepressants after that point, five received psychotherapy shortly before or after, and five enterprising souls managed to get their hands on more psilocybin (“without sanction from the study

team”) between the three-month and six-month follow up. Even so, given the severity of depression and treatment resistance in this group, these results are quite promising; with the rate of relapse no worse than could be expected from conventional treatments supported by a maintenance phase. Further, in a follow up, semi-structured interview, all twenty patients considered their psychedelic experience preferable to all other kinds of treatment they have previously tried (Watts et al, 2017, pp.526, 542-553).

With regards to MDD, a randomized and waiting list controlled trial with 24 participants diagnosed with moderate to severe MDD was recently published, documenting “substantial rapid and enduring antidepressant effects of psilocybin-assisted therapy.” One week after the psilocybin session, 71% of participants (17) retained a clinically significant response (equal or greater to a 50% reduction in the measurement score), and this was maintained at four-week follow up; with 58% of participants (14) meeting the criteria for remission at week one and 54% (13) at week four. The authors note that this decrease in depression measures from baseline occurred within a day of treatment (when it was first assessed), with no serious adverse effects for the participants. The anxiolytic effects were also noted to be significant (Davis et al, 2021, p.486).

### 3.2.2 Comments on the research so far:

There is no doubt that more research is needed: the studies summarized above together encompass only 136 subjects, and it is possible that in larger and more varied participant samples, the effect size might diminish. However, viewed in the larger context of research on tryptamine-type psychedelics (to which psilocybin belongs, and which have very similar effects and mechanisms of action), there are three reasons why the results might be expected to hold in larger populations. Firstly, the results from psilocybin studies are congruent with both earlier and modern research on LSD and Ayahuasca (a traditional ceremonial brew with DMT as the active ingredient), in which LSD was found to be effective for depression/anxiety related to a diagnosis of life-threatening disease, and Ayahuasca was shown to substantially reduce symptoms of

depression, including recurrent and treatment resistant depression (Johnson et al, 2019, pp.90-91). Secondly, a meta-analysis of all studies that administered psilocybin, LSD or Ayahuasca to either healthy volunteers or those with mental health difficulties – 549 participants in total – noted “large and statistically significant effects were detected for targeted symptoms,” with effects “on par or larger than achieved by psychotherapy relative to waitlist... and antidepressants relative to placebo” (Golberg et al, 2020, p.2661). Finally, the use of any of the classic psychedelics has been significantly associated with lower rates of mental health problems in large surveys of the general population, including “decreased likelihood of psychological distress and suicidality” and “a decreased risk of opioid abuse and dependence” (summary of studies in Johnson et al, 2019, p.89).

It should also be noted that, aside from success in treating depression/anxiety related to life-threatening illness (for which antidepressants and therapy have proven in meta-studies to be of little use: Agin-Liebes, 2020, pp.155-156), psilocybin has also shown three advantages over conventional treatment overall. The first is absence of any lasting or significant side effects: while minor and transient adverse effects such as headaches, nausea, paranoia and emotional distress were reported during or shortly after treatment, nothing more significant was associated with ingestion of high dose psilocybin. Secondly, compared to antidepressants, psilocybin is both safe and non-addictive: there are no reported cases (not just in these studies, but also in any available research on drugs in general) of any fatalities associated with its use, and it rapidly stops working if one takes doses too closely together in time, so it is not possible to become dependent. Finally, the antidepressant and anxiolytic effects are immediate: there is no weeks-long wait to see whether the treatment is going to work (as in antidepressants) or the power and effort needed to show up for and follow a course of therapy. Thus, of the available interventions, even if subsequent studies fail to replicate effect sizes as large as reported so far, psilocybin would still enjoy a significant advantage over its conventional rivals.

### 3.2.3 What psilocybin does to your brain:

Psilocybin, broken down in the body into psilocin, is a 5-HT (serotonin) agonist: its binding to and activation of the serotonin 2A receptors (5-HT<sub>2A</sub>) is what appears to initiate the acute psychedelic effects. The activation of the 5-HT<sub>2A</sub> receptors excites neural activity, enhancing global connectivity but weakening established modular connections that in ordinary waking consciousness organize the activity of the whole system. In simplest terms, neurons that do not usually communicate form new connections all over the brain, while the established channels of neural activity disintegrate – which might be why one might have synesthesia-like experiences on high doses of psychedelics, as normally separate sensory pathways start to mingle, leading to, for instance, music being experienced as a tactile, as well as auditory, phenomenon.

In particular, the default mode network (“DMN”) – implicated in a number of high-level brain functions, including self-consciousness, metacognition, counter-factual thinking, and moral judgment – becomes severely compromised under the effects of psilocybin. This has led some researchers (notably, Carthart-Harris) to suggest the DMN as the neural basis of the Freudian ego, given the correlation between its dissolution and the “ego-death” experience frequently reported on psychedelics (see discussion in Carthart-Harris and Friston, 2019, pp.322-323; Carthart-Harris, 2019; and Muthukumaraswamy, 2013). The disintegration of modular/enhancement of global connectivity correlates with, and is thought to produce, the subjective effects of psychedelics – the altered states of consciousness typically experienced under their influence, including altered visual and auditory perception, time distortion, complex imagery, synesthesia, and mystical experiences; but also anxiety, dread, paranoia and other unpleasant sensations. What kind of altered states are produced depends in a large measure on the “set and setting” of the psychedelic trip: the mindset of the subject and their social and physical environment, which might be thought about as the internal and external stimuli that steer the neural activity into particular directions. Once the psychedelically active phase is over

(in five to six hours), modular connectivity is re-established and normal waking consciousness resumes: there is even some tentative fMRI evidence that modular connectivity might be somewhat strengthened post-psychedelic, with the DMN trending towards increased functional connectivity one day after ingestion of psilocybin (Carthart-Harris, 2017).

It is notable that anti-depressants, although they are not direct agonists, also affect the serotonergic system: they inhibit the reabsorption of serotonin from the synapses, so that more serotonin in general becomes available to bind to its various receptors. As discussed above, it is not clear how or why this may have any anti-depressant/anxiolytic effect – the fourteen known serotonin receptors between them play a role in a huge range of biological functions, from aggression, through appetite to blood pressure and respiration, and what an increase in the availability of serotonin may or may not do to all of them (let alone how) is difficult to establish. In any event, psilocybin does not increase serotonin levels, it just binds to serotonin receptors while it is available in the form of psilocin: that is, for the duration of the psychedelic experience, which lasts around six hours on a high dose. That action is strictly temporary – it therefore cannot explain any enduring anti-depressant/anxiolytic effect, as most of the drug is eliminated from the body within 24 hours (Dinis-Oliveira, 2017). The question therefore is what *does* produce that effect?

### *3.3 The mystical experience as key to the therapeutic effect*

A number of researchers have observed that the strength and endurance of the therapeutic effect is strongly correlated with the occurrence and intensity of a particular set of mental and phenomenal states that are reliably produced following ingestion of a high dose of psilocybin (as well as other psychedelics). This set of altered states of consciousness, which is profoundly meaningful and potentially transformative for the subject, came to be known as a “mystical experience,” given that outside the psychedelic context, it has been noted to appear more frequently, although not exclusively, in religious or spiritual settings. In research, the intensity of a mystical experience can be measured by scales

developed on the basis of its common or universal components, which have been identified by studying accounts of its spontaneous occurrences, and validated for reliability and reproducibility by psychology of religion scholars (see, for instance, Barrett and Griffiths, 2017, pp.6-7 regarding the Hood Mysticism Scale). For instance, the altered states of consciousness questionnaire (“ASC”) measures such items as experience of unity, spiritual experience, blissful state, and insightfulness.

Research on psychedelic substances, including psilocybin, has in many instances included administering the ASC – and other relevant questionnaires, such as the Hood Mysticism Scale or the mystical states questionnaire (“MEQ”) - to subjects after the acute psychedelic phase has passed, to gauge whether and with what intensity a mystical experience has occurred. A high score on this measure has been consistently predictive of long-term therapeutic outcomes, including alleviation or abatement of depression/anxiety symptoms. As no such specific correlation has been found between other elements of a psychedelic trip (for instance, altered visual and auditory perceptions, which also typically occur) and improvements in well being, Roseman et al (2017) have suggested that these results indicate that “the therapeutic effects of psilocybin are not a simple product of isolated pharmacological action but rather are *experience dependent*” (Roseman et al, 2017, pp.2 and 6, emphasis in the original).

### 3.3.1 The phenomenology of a mystical experience:

Accounts of mystical experiences can be found in spiritual and religious literature all over the world. Reported by saints, prophets, and mystics from a variety of world religions, sects and practices, all mystical experiences appear to share a common core of “phenomenological features that are independent from the interpretation of those experiences.” The common core was comprehensively distilled from a variety of sources by Stace (1960), who identified “a sense of unity or the experience of becoming one with all that exists” as its crucial feature. That sense of unity can be “extrovertive” – a “recognition of the oneness of all, in which one finds unity at the core of the inner subjectivity or

inner reality of all things despite the diversity or apparent individual identity and separation of all things;” or it can be “introvertive” – unity devoid of content, “an experience of complete dissolution of the self, loss of the notion of ‘I’ and loss of all boundaries, such that there is no separation or individual identity” (Barrett and Griffiths, 2017, pp.4-5; the introvertive kind is also often referred to as “ego death”). Participants in psilocybin trials appear to experience both kinds of unity as part of their mystical experiences - one participant, for instance, struggling to put it into words, said: “I was everybody, unity, one life with 6 billion faces, I was the one asking for love and giving love, I was swimming in the sea, and the sea was me.” For another, echoes of this sense of unity lasted for weeks – “I was absolutely connected to myself, to every living thing, to the universe” (Watts et al, 2017, p.535).

In addition to the sense of unity or oneness, common features of a mystical experience include: (1) sacredness – a sense of holiness of the experience, feelings of awe, reverence and wonder; (2) noetic quality – the sense that one is encountering the ultimate reality, more real than everyday reality, gaining meaningful insights and realizing truths; (3) transcendence of time and space; (4) deeply felt positive mood – blissfulness, tranquility, peace, ecstasy; (5) ineffability and paradoxicality – the inability to adequately describe the experience, and the sense that to do so, one would have to describe the existence of mutually exclusive states or concepts (Barrett and Griffiths, 2017, pp.4-5; Roseman et al, 2018, p.2). For a few, the experience coalesces into feeling the presence of a god, or becoming one:

“Not God in some dogmatic way, a God-like archetype within your psyche, that is real and within you. I know this exists, I directly experienced it. I was suddenly taken in a rapture and I was floating in midair, with my eyes wide open and my mouth open, completely in a state of awe and ecstasy” (Watts et al, 2017, p.535).

What is striking about the phenomenology of the mystical experience is that it seems to be, in many important respects, the exact reverse of the phenomenology of depression/anxiety, reported by its sufferers (see 2.3 above). The constricted hyper-embodiment of depression that traps and isolates the

sufferer, disconnecting them from the world and others can be contrasted with the dissolution of boundaries and recognition of oneness and unity inherent in the mystical experience; the emotional flatness and anhedonia with the joyful bliss and deeply felt tranquility; the senselessness of existence with meaning, reverence, wonder and awe. This contrast has not gone unnoticed by either the participants or the researchers involved in psilocybin studies. For instance, participants in the psilocybin for treatment resistant depression studies (described above), who had felt their depression to be a mental prison, experienced a dramatic change under the influence of psilocybin: “It was like a holiday away from the prison of my brain, I was a ball of energy bouncing around the planet, I felt free, carefree, re-energised.” Some felt as if their “brain was rebooted” or that the experience was “like the light switch being turned on in a dark house” (Watts et al, 2017, pp.528-529).

Re-connection – to their senses, their selves, others, the world and nature - was a major theme of the experience for most, and reverberated for weeks or months afterwards. Many – including those who had previously reported their senses as shut down or deteriorated - reported intense, even overwhelming, sensations during the psychedelic trip: “pure sensory, tactile, sexual bliss,” a “mental orgasm, a state of pure bliss and ecstasy that went on for hours and hours,” [t]he blissful feeling got more intense, really overwhelming, the glow grew until I was just that feeling, I had become bliss” (Watts et al, 2017, pp.530 and 538). Some also claimed that the sensory experiences during the session “led to long term improvement in sensing” - increased ability to enjoy music or a regained aesthetic appreciation. One of the participant, who had previously been unable to enjoy the beauty of her orchids said:

“A veil dropped from my eyes, things were suddenly clear, glowing, bright. I looked at plants and felt their beauty. I can still look at my orchids and experience that: that is the one thing that has really lasted” (Watts et al, 2017, p.530; semi-structured interview six months after the experience)

In addition to reconnecting with their senses, for many participants, the lasting effect was a renewed ability to connect with a new sense of their own self



and with others. This included not only realizations of self-worth and self-compassion – realizing that one is a “good person,” “nurturing and protective,” feeling “confident, more resilient” – but also a strengthened bond with others that endured beyond the experience, along with an expanded emotional repertoire. For instance, one person enjoyed a dinner with his wife for the first time in six years; another reported “a general sense of ease and well-being when socializing with friends in situations that might have previously caused anxiety and discomfort;” other participants felt a “deep connection to everyone” including strangers and all of humanity. Further, the experience also resulted in the participants being simply more interested in and engaged with their lives overall – rediscovering their enthusiasm about old hobbies, picking up new activities (getting new jobs, volunteering with refugees, starting dance classes, traveling) adjusting their lifestyles to reflect a new appreciation for their bodies (adopting a healthier diet, starting to exercise, etc.), and even adjusting their social circles “to allow for the changes within themselves” – establishing firmer boundaries and seeking out new friends who shared their values (Watts et al, 2017, pp.531-534).

Gaining meaningful insights was an important part of the mystical experience for many, reinforced perhaps by their noetic quality – feeling of “more real than reality” – that lent these realizations a profound ring of truth. In addition to reporting new perspectives on themselves and their relationships with others – seeing them “clearly as if for the first time” or seeing “things as they really are” – some also made considerable progress concerning issues they considered directly related to their mental health. One person was able to adopt a new perspective on a traumatic incident of childhood abuse perpetrated by his mother - he was able to re-frame the incident, perceiving his mother as no longer the embodiment of “an all powerful world and universe against me,” but rather a deeply unhappy person for whom he felt compassion (Watts et al, 2017, p.533). Others reported realizations around how their experiences of trauma informed their present difficulties: one person, for instance, recalled his parents scolding him for crying in the wake of a grandparent’s death, and realized not only how their attitude shaped his emotional habits but also that: “it’s not [a] weakness to

be emotional, that's an unhealthy attitude" (Watts et al, 2017, p.539). Many participants found a new acceptance of their emotions, even those that they saw as negative, that persisted beyond the experience even when their symptoms returned:

"I took away from the experience that I used to get angry about having anxiety, now I think I can have the anxiety, I can just feel it and it will go, I don't have to have the fear or run away" (Watts et al, 2017, p.541).

In light of the above accounts, it appears that the transformations of consciousness inherent in the mystical experience play a fundamental role in the therapeutic effects of psilocybin, continuing to exert a beneficial influence over the lives of sufferers long after the experience itself has ended. But can this account accommodate the dramatic changes in neural activity observed during the course of a psychedelic trip? The following chapter will discuss how the transformative effects of the mystical experience could be reflected in the neural activity from which consciousness and the self arise. It will then examine how the account of depression/anxiety as part of the conscious self accommodates the evidence of the transformative effects of the mystical experience, and consider some objections to this view.

#### **4. Mental disorders as part of selfhood**

While theories of consciousness remain, in many respects, still in their infancy – leaving unanswered a number of fundamental questions, including how physical matter can produce subjective experience – it is nevertheless possible to draw some meaningful correlations between the operations of the brain and the emergence of the conscious self. The discussion in this chapter will first focus on a theory of consciousness that seeks to explain how subjective experience might be produced by neural activity, in order to illustrate how such regular processes can also produce the kinds of mental suffering we know as depression/anxiety. The alterations in consciousness typical of a mystical experience, and what the effect of those alterations on symptoms of

depression/anxiety means for the nature of mental illness, will then be analyzed in light of that theory.

A note about terminology: “consciousness” and “self” can have a number of meanings, and a detailed exposition of them all is beyond the scope of this paper. For present purposes, “consciousness” and “subjective experience” will be used interchangeably to indicate all aspects of conscious experience (for a summary of different concepts of consciousness in neuroscience, see Atkinson et al, 2000). The “self” or “selfhood” – in as much as it is a concept distinct from consciousness - can be taken to be, or be constructed from, the flow of conscious states. It broadly encompasses two dimensions. The first, the minimal or core self is the most basic, implicit and pre-reflective form of selfhood, one “that is present in every experience without requiring introspection,” and remains intact even if narrative memory is lost. It encompasses the embodied and temporal dimensions, and is “bound to the background feeling of the body, mediated by proprioceptive and kinesthetic awareness.” The second dimension of the self, the extended or narrative self is the autobiographical and intersubjective form of selfhood, embracing a number of higher-order capacities such as introspection, perspective taking, and the ability to feel self-reflective emotions such as shame or pride (Fuchs, 2010, pp.549-551).

#### *4.1 How consciousness can arise from neural connections:*

Scientific theories of consciousness generally proceed on the assumption (shared by this author) that all aspects of subjective experience arise from neural activity. A number of theories aim to explain this process: some focus on a particular aspect of consciousness (such as Baars’ and Dehaene’s global workspace theory, which seems to primarily explain conscious awareness), while others are more holistic in trying to account for its implicit and explicit dimensions, as well as consciousness without awareness. The major division seems to be between those theories that seek to explain consciousness as dependent on a module, neural pathway or process that specializes in its creation; and those that posit that it may arise from a specific process that may

take place anywhere in the brain (for a mapping of the different theories of consciousness, see Atkinson et al, 2000). One of the latter theories, that nevertheless attempts to accommodate the former type, is Carrara-Augustenberg's Endogenous Feedback Network ("EFN") theory, which will be adopted here as an illustrative example of how consciousness may arise as a product of neural activity.

The EFN theory considers consciousness as emerging on a continuum, "ranging from complete inaccessibility to full awareness." The mechanism of that emergence can be summarized as follows: an internal or external stimulus (sight, sound, sensation, etc.) is detected by the sensory cells of the nervous system; this detection changes their firing rate, resulting in a signal that is forwarded both to specialized brain areas for cognitive and emotional processing, and across what is theorized to be a distinct neural network – the EFN. The EFN is not involved in the signal's processing; rather, it spreads the signal rapidly in a global broadcast across the whole network, potentially triggering certain responses based on a prior pattern of experience with similar stimuli. The assessment of the stimulus is thus not solely performed by the specialized areas responsible for processing it, but is affected by (and affects) the predictions about the stimulus made across the EFN network, forming an interactive loop that produces a "perceptually unified but actually composite flow of information:" that is, consciousness (Carrara-Augustneborg, 2013, pp.2-4).

The level of that consciousness is determined by the level of overall neural activity: only stimuli that reach a certain magnitude make it all the way into explicit conscious awareness. This might be because they are particularly salient (sabre tooth tiger, leaping right at me!) or because they are amplified by the arousal of the EFN network (the brain already has a lot of information specific to the stimuli), or both. How and whether we subjectively experience something is thus determined to a significant extent by not only how much it grabs our attention, but also by how much we already know about it (Carrara-Augustenberg, 2013, pp.2-4). Further, the continuous feedback loop of integration of new stimuli with patterns of responses based on past experience

means that, on this view, our consciousness forms an incredibly complex, self-adjusting system, unique to each person: continually modifying and re-organizing its network of neural interactions based on a particular pattern of prior experiences and reactions, as well as the current state of the system (Carrara-Augustenberg, 2013, p.6).

This system might be thought of as the basis for the individual self – with the minimal or core self-dimension corresponding to the more tacit levels of consciousness, and the expanded self perhaps conceptualized as closer to full, explicit conscious awareness. That is not to say that our consciousness and our selves can simply be reduced to patterns of neural activity – there is nowhere near sufficient empirical evidence to make such an assertion, particularly as no one has any real idea of the mechanism through which neural activity might translate into the felt phenomenal quality of our experience of consciousness. However, the correlations established between neural activity and subjective experience are sufficient to say that whatever the latter is, it reflects and is reflected in the former. The EFN’s “self-adjusting system” model provides us with one explanatory framework for how consciousness and the self develop and are structured on the level of neural connections, in a way that accounts for the full spectrum of conscious experience.

#### *4.2 Depression/anxiety as a part of the conscious self*

The development of depression/anxiety can easily be accommodated within the regular operations of such a self-adjusting system, without any need for dysfunction or abnormality. Conscious experience of any kind relies on existing neural patterns established by a prior history of activation in response to stimuli already encountered, to process and predict responses to a new stimulus; but the new stimulus – if particularly salient and/or encountered often – will also cause the existing patterns to shift, and the system to alter. The development of depression/anxiety could therefore be seen as simply the build-up and reinforcement of particular neural patterns of responses that shape consciousness in a certain way. This could happen slowly, over the course of

many years of small adjustments that build up to a first episode of major depression; or it could be brought about by a dramatic alteration of the system through a particularly salient event (such as trauma), where the alteration becomes strengthened or fixed by the pattern of behaviors, emotions, sensations and cognitions that follow in its wake. Depression/anxiety can be seen on this view as a particular configuration of the conscious system – a part of the conscious self - that builds up and becomes firmly established, shaped by the particular history of the sufferer: their propensity to respond a certain way to events or other stimuli, their prior experiences, habits, social and physical environment, etc. This appears congruent with the current thinking on how depression/anxiety (or any other mental disorder) develop - through a complex combination of genetic propensities, social and cultural context, and the particular history and personality of the individual sufferer.

If this view is right, it would explain both the therapeutic effects of the mystical experience and why these effects prove lasting for some, but not all, sufferers. As set out above (at 3.2.3), the occurrence of the mystical experience dramatically alters the landscape of neural connections – disabling existing pathways that normally regulate activity and allowing a great number of new neural connections to form, shaping conscious experience in a way that appears to be (based on the accounts set out above) opposite from that experienced in depression. Given the emotional and personal intensity of the mystical experience, these new patterns would appear to be highly salient: the view of consciousness as a self-adjusting system would therefore predict that they would have a substantial impact on the whole system as they become integrated within it. When normal waking consciousness resumes, the new patterns of connections would remain part of the prior history of activation on the basis of which incoming stimuli are assessed, continuing to have an impact on subjective experience. However, their impact would depend on two factors: first, how well the new connections are integrated with the rest of the system (perhaps through recalling the experience, writing about it, sharing it with others informally or in therapy - which are all activities generally recommended in the wake of the

mystical experience); and second, how well the new pattern is reinforced, as opposed to returned to its former depressive form, in the weeks and months that follow the mystical experience. This might be why the beneficial effects do not last for some of the sufferers: the return to their usual habits, behaviors, and lifestyles might continue to activate much of the pre-treatment neural pattern, strengthening and re-establishing it and, on the subjective level, causing the depression/anxiety to return.

#### 4.2.1 Can competing accounts of mental suffering explain the effects of the mystical experience?

Described both at the level of subjective experience and at the level of neural activity, the therapeutic effect of the mystical experience can be explained as achieved primarily through a transformation or alteration of the conscious self, supporting the “self-model” of mental suffering. But can competing models – the medical model of discrete disorders or the social model of disorders as mere social constructs – also explain these beneficial effects?

In my view, both would struggle to do so. On the version of the medical model in which mental disorders are caused by some organic dysfunction or abnormality, it is difficult to see how a single, transient psychological phenomenon – however intense – could achieve much to transform the organic basis upon which the disorder is purportedly based. It is also unlikely that the therapeutic effect could be attributed to the biochemical agent – psilocybin – through the operation of which the mystical experience is initiated, given that the drug in question is active for only several hours. A version of the medical model in which some mental states are in themselves considered disordered (without any need for reference to an organic abnormality) might be able to account for the effects of the mystical experience: the mental states in question would also have neural correlates, which would be affected by the global increase in neural connectivity and disengagement of established neural networks during a psychedelic trip, in a way that might modify the disordered states in question. However, this argument is conceptually unattractive: on the one hand, one would

have to assert that such disordered states can be disassociated from one's conscious self, yet on the other propose that they are altered as part of a phenomenon in which the whole conscious self is profoundly transformed. It seems to me that any admission of the latter would substantially weaken the argument for any boundary between one's self and one's mental disorder.

The social account of mental illness would seem to fare even worse. As previously mentioned, the strong version of anti-psychiatry conceptualizes mental disorders as oppressive social constructs: thus the effects of an entirely mental phenomenon such as a mystical experience, which does not operate in the social sphere, seem unlikely to be explained by such an account. Even if we take a weaker version of this view – in which painful mental states are shaped primarily through social and cultural factors – given that those social forces remain unaltered by the mystical experience of an individual sufferer, this type of account is still not promising as an explanatory framework for the therapeutic effects in question.

#### *4.3 Objections*

There are two main objections that can be put to the thesis pursued in this paper. First, the basis for the argument is that the therapeutic effects of psilocybin are due to the mystical experience that occurs during the acute psychedelic phase of the drug's operation. While, as set out above, this is supported by a correlation established in empirical research carried out so far, when more extensive research is completed, the correlation may disappear; or some other mechanism for achieving the therapeutic effect may be discovered. There is already at least one researcher (Olson, 2021) who argues that it is psychedelics' ability to promote neural plasticity, rather than any alterations in conscious experience, that may be the main mechanism through which the therapeutic effect is achieved – he proposes administering psychedelics to subjects under anesthesia to test whether they will still experience comparable relief in symptoms of mental disorders without going through the mystical experience. Advancing the contrary view in response to Olson, Yaden and



Griffiths (2021) argue – on the basis of the correlation already discussed - that the subjective effects are in fact necessary for the therapeutic effects of psychedelics to be produced; though they agree with Olson that administering psychedelics to anesthetized patients might be needed to definitively settle this dispute. If Olson proves to be correct, or if some other therapeutic mechanism of psilocybin is discovered, the argument presented by this thesis will naturally need to be either abandoned or substantially revised. However, at the moment, there is no empirical research to that effect; further, given that the correlation in question is so specific – relating the therapeutic effects of psychedelics not to just any and all of their subjective effects but rather, specifically to the mystical experience – it seems unlikely that Olson is correct.

The second objection that could be put forward is that this argument might not generalize to other types of mental suffering, including other disorders categorized by the DSM. It could be that depression/anxiety is a special case, and other mental disorders cannot be conceptualized as part of the conscious self. I consider this very unlikely, in light of the high comorbidity between mental disorders and other evidence (including from genetic studies: see for instance, Howard et al, 2019) that shows that much of what we consider mental illness has common developmental roots – there is therefore little reason to suspect that depression/anxiety is not representative of mental illness overall. Further, other researchers have already advanced convincing arguments in favor of the self-model of mental illness for other mental disorders, including schizophrenia – Sass and Parnas (2003), for instance, persuasively argue that schizophrenia should primarily be understood as an alteration, or disturbance in the structures that underpin minimal or core selfhood (ipseity).

## **5. Conclusion**

Having only recommenced in the last two decades, empirical research on psychedelic substances, such as psilocybin, has already made good progress towards not only establishing a new treatment paradigm for mental disorders, but also in helping to answer the question that is central to philosophy of mental

health: what is mental illness? The fact that the therapeutic effects of psilocybin in alleviating symptoms of depression and anxiety can be traced clearly to the intensity of a particular type of altered state of consciousness experienced during the currency of the acute psychedelic phase, indicates that depression and anxiety – and perhaps, all mental illness – is primarily a part of the conscious self, rather than a pathological invasion of it or the product of oppressive social forces. There appears to be nothing other than a profound alteration of consciousness that could account for the therapeutic effect of psilocybin: the drug itself ceases to have any effect in a matter of hours; and the neuronal hyper-connectivity it excites on the level of the brain returns to normal around the same time.

The accounts of those who had undergone the “mystical experience” on psilocybin testify to its transformative power: in particular, the phenomenological descriptions of the experience by depression/anxiety sufferers seem to clearly attribute any lasting therapeutic changes to the profound intensity of sensations and insights gained during the course of the mystical experience. Further, it seems that the changes seen in neural connections during the acute phase of psilocybin may be able to effect longer-term re-configurations in the neural networks from which consciousness emerges, through the ordinary mechanisms that shape the conscious self. It therefore seems that the evidence at both subjective (mind) and objective (brain) levels is that the therapeutic effect can be accounted for solely, or primarily, by the transformation of consciousness; and if that is so, it would support the idea that depression/anxiety should be conceptualized as part of the conscious self – however painful, disturbing or alienating it may be.

### *5.1 Suggestions for future research*

In terms of future research, at least two directions can be suggested. First, while this paper has operated under premise that what can be said of psilocybin in relation to depression/anxiety is likely to be broadly applicable to all classic psychedelics in relation to many other forms of mental illness, more in-

depth research is needed to test this assumption. In particular, the relationship between schizophrenia and psychedelics should prove particularly interesting, given that, on the one hand, the similarities in phenomenology might make psychedelics unsuitable as a therapy for this set of mental states, while on the other, the common genetic underpinnings between depression and schizophrenia might suggest that the same therapeutic mechanism should work for both.

A second direction one might take in future research is to explore the implications of viewing depression/anxiety – and any other mental illness – as part of the conscious self. For instance, if mental illness is conceptualized as a particular configuration of, or within, the conscious self, is that self pathological or otherwise ill in some way? On the one hand, the depressed person suffers just as much, if not more, as anyone with a physical ailment, and it seems that should somehow be recognized. On the other, in the absence of a strongly principled basis upon which to make the distinction between “healthy” and “ill” when it comes to mental health, illness assumes a dangerous role in attaching to persons, rather than just impersonal biological or psychological processes, tainting with sense of abnormality those aspects of a person’s selfhood that society finds uncomfortable or otherwise normatively deviant. Another problem that could be explored in further research is the ethical implication of this view for medicating mental distress with psychoactive drugs, such as anti-depressants, that might temporarily suppress symptoms, but fail to deal with root causes.

**Abstract:**

This paper examines the implications of the recent research on psychedelic substances and their effects on mental health. Specifically, the paper analyzes the findings concerning the correlation between a particular state of consciousness reliably induced by ingestion of psychedelics – the so-called “mystical experience” – and long-term improvements in mental health. The central thesis pursued is that the “self-model” of mental suffering – the view that mental illness should be understood primarily as part of that flow of subjective experience that human consciousness and selfhood are grounded in – best accommodates the evidence from psychedelic research, which indicates that the therapeutic effects of psychedelics are achieved through a profound alteration in the conscious self.

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