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The phenomenology of psychedelic therapy

The colossal egotism of anyone who thinks he can write an LSD report! It can't be done, not with all the languages in the world!

Jane Dunlap, *Exploring Inner Space: Personal Experiences under LSD-25*.

3.1 Introduction

The most basic implication of psychedelic research is that there is far more in the human mind than is dreamt of in much of our philosophy (Sjöstedt-H 2015). Psychedelic experiences, by many accounts, can be among the most remarkable and meaningful available to human beings (Huxley 1954, Shanon 2002, Griffiths et al. 2006, Yaden et al. 2017). Unfortunately, there are two major obstacles to describing such experiences. The first is that the effects of psychedelics are far more variable than those of other drugs, being strongly influenced by 'set and setting': the psychological state of the person taking the drug and the environment in which they take it (Johnson et al. 2008, Studerus et al. 2012, Haijen et al. 2018). The second reason is that psychedelic experiences are commonly held to be ineffable: many subjects say the state is unlike anything in their prior experience and words cannot do it justice.

Nonetheless, there are certain themes that occur frequently in both quantitative and qualitative studies of psychedelic phenomenology. In this chapter, I will survey some of the most common alterations of consciousness reported by subjects who take moderate-to-high doses of psychedelics in structured, controlled settings such as clinical trials or religious rituals. I make no attempt at an exhaustive or systematic survey. First, I describe various typical features of the experience relatively briefly, before focusing in more detail on patients' experiences of the therapeutic process: their impressions of how the experience benefited them psychologically. Of course, subjective impressions of transformative mechanisms may be mistaken, but they provide intriguing *prima facie* evidence, especially when there is considerable unanimity. In any case, they form part of the *explanandum*: subjects' verbal narratives require explanation as much as any behavioral or clinical change. I focus here on attempts in recent qualitative studies to probe subjects' impressions of the therapeutic process directly (reviewed by Brekke et al. 2020). The findings of these studies will play an

important evidential role in Chapter 4, where we consider multiple theories of how psychedelic therapy works.

As I have noted, the topic of this book is the type of transformative process that often occurs when psychedelics are administered in structured clinical or religious settings. Therefore, I largely neglect some of the more exotic effects that may result from different dosages and routes of administration, or in different contexts. For instance, high-dose intravenous or smoked N,N-dimethyltryptamine (DMT) is reputed to have a distinctive phenomenology (Strassman 2001, Tramacchi 2006) but may be less therapeutically useful because of its brevity and overwhelming intensity.¹

I will use direct quotation liberally, for the obvious reason that those who have undergone psychedelic experiences are best qualified to describe them. It bears emphasising that detailed narrative accounts come closest to conveying a real sense of what psychedelic experience is like. Anyone interested in a detailed appreciation of psychedelic phenomenology should consult the classic sources such as Huxley (1954), Dunlap (1961), Watts (1962), Masters and Houston (1966), Cohen (1970), Grof (1975), Strassman (2001), Shanon (2002), and Pollan (2018), as well as online repositories such as Erowid (www.erowid.org), which contain many thousands of experience reports by users of legal and illegal drugs.

3.2 Perception

Unusual perceptual experiences, especially in the visual modality, are the most famous effect of psychedelics; think of the colourful, swirling, tie-dye psychedelic aesthetic of the 1960s. Visual effects can be grouped loosely into three categories: intensification, alteration, and novelty. Subjects often report a general intensification of their visual experience: colours appear brighter and more vivid; lines, edges, and depths clearer and sharper than usual. Aldous Huxley describes the intensification of colour in his famous account of mescaline experience: ‘Mescaline [*sic*] raises all colours to a higher power and makes the percipient aware of innumerable fine shades of difference, to which, at ordinary times, he is completely blind’ (Huxley 1954, p. 27). Often attention to visual detail is described as being greatly enhanced. Looking at a simple natural object such as a leaf, or a mundane artificial object such as a pair of trousers, a subject may marvel at hitherto unnoticed features and patterns, registering all manner of fine detail and gestalt structure that ordinarily would be completely overlooked:

... the depth of light and structure in a bursting bud go on forever. There is time to see them, time for the whole intricacy of veins and capillaries to develop in consciousness, time to see down and down into the shape of greenness, which is not green at all, but a whole spectrum generalising itself as green—purple, gold, the

¹ Although some recent evidence hints at therapeutic utility for the at least equally brief and intense experiences occasioned by smoked 5-MeO-DMT (Davis et al. 2019, Uthaug et al. 2019, 2020).

sunlit turquoise of the ocean, the intense luminescence of the emerald. I cannot decide where shape ends and color begins. The bud has opened and the fresh leaves fan out and curve back with a gesture which is unmistakably communicative but does not say anything except, 'Thus!' And somehow that is quite satisfactory, even startlingly clear.

(Watts 1962, p. 27).

Mention of gestalt structure brings us to the borderline between intensification and alteration. Pareidolia—the perception of patterns in ambiguous stimuli—is common: subjects may experience the phenomenon of seeing faces in clouds, for instance, in a much more vivid and realistic fashion than usual. I call this 'alteration' because real aspects of the external environment are being perceived, but the perception is not merely more intense than usual: its contents are qualitatively different. Other types of alteration include seeing stationary objects as morphing or moving, as in the common experience of 'walls breathing', and seeing objects overlain with simple or complex geometric patterns (perhaps a borderline case between alteration and novelty). One fascinating species of alteration occurs when subjects see other people, or their own reflections, in various guises: for instance, they may see the supervising therapist, or themselves, in the visual guise of mythical or archetypal figures, or with features emphasised and altered to present the appearance of belonging to a particular culture or time period (Masters and Houston 1996, Shanon 2002).

The most common type of visual novelty, or stimulus-independent imagery, consists of 'closed-eye visuals', which often take the form of elementary or complex geometric patterns, usually coloured and dynamic, seen with the eyes closed:

I soon discovered in my visual field the emergence of an exquisitely beautiful, multidimensional network of intricate, neon-like geometric patterns, drawing my attention ever more deeply within. I could see this display with open eyes, but found that when I closed my eyes it was even more vivid and sharply focused. I recognised life within the undulating designs and began to feel as though I somehow could enter into the energy flowing within them. Soon, I felt immersed in incredibly detailed imagery best described as Islamic architecture and Arabic script, about which I knew nothing.

(Richards 2015, p. xix).

Sometimes completely novel percepts are seen with the eyes open, integrated with the rest of the environment. This is a peyote subject describing a fireball that he saw in the room during the onset of the drug effects:

It drifted, swaying a little from side to side, while moving toward me ... when the ball of fire had come close enough I poked at its centre with my finger. It then exploded, a lavish shower of multicoloured sparks cascading and dropping on the rug at my feet.

(Masters and Houston 1966, pp. 7–8).

This fireball and its behaviour were part of the subject's visual experience, but had no obvious basis in the actual objects and events of his physical environment.

The following report exemplifies many typical changes to visual perception:

I lay on my stomach and closed my eyes and brilliantly colored geometrical patterns of fantastic beauty collided, exploded, raced by. Other things too: teeth and pearls and precious stones and lips and eyes. Outside of the window the branches of the tree were gigantic arms with transparent muscles, now threatening, now embracing. Glasses started rolling on the table, the bookcase was full of swimming books, the door bulged like a balloon, the carpet in the other room was full of thousands of little green snakes. The dial on the telephone was a huge pearl-studded wheel. The shapes and colors of objects got more and more intense, the outlines etched with luminous clarity and depth. Anything with a polished metal surface turned into gleaming gold or silver . . . The faces of other people became clear and beautiful and open. At one point all faces were colored green.

(Pahnke and Richards 1966, pp. 185–186).

More elaborate stimulus-independent imagery is also common. With the eyes closed, subjects may see remarkable things: vivid and intense visions of ancient civilisations or alien landscapes, animals, deities, and natural scenes:

I became the joyous white Pegasus accompanied by my beloved stallion. Together we galloped through the exquisite golden light of space while celestial music of inexpressible beauty seemed to make the rhythm of the universe, of its melody and of our movements one. We crossed one and then another and another of the millions of Milky Ways which fill infinity.

(Dunlap 1961, p. 76.)

When the [ayahuasca] had its effect, I found myself presented with pure enchantment. The forest was full of animals—both natural and phantasmagoric; notably there were dragons, felines, and big birds. The dominant colours were green and blue. I was sitting viewing the forest as if it were a stage. It was as if a screen were raised and another world made its appearance. At moments, however, it seemed to me that even though I was sitting here on the bench, my own self was over there in the forest and I was dancing with the various creatures in it. It was all blissful, and very real. And I saw it all with open eyes.

With the second cup I was offered, the scene changed. What now presented itself to me was an enchanted city, a city of gold and precious stones. It was of indescribable beauty. And again, so very real.

(Shanon 2002, pp. 6–7).

Sometimes subjects behold, and may become participatively immersed in, visionary sequences presenting parables or metaphors for specific situations in their own life or general themes in human life:

I opened my eyes and there was a picture over the mantle

... There seemed to be in front of this picture many veils hanging and I pushed each veil aside one by one, knowing that as I got the last veil aside I would finally see God ... Finally the last veil was to be removed. I knew it was the last veil and tried to prepare myself for the great experience of seeing God. I raised my hand over my head and then leaned backwards to make myself more receptive in order to feel the full force of God. And finally the last veil was pulled aside and there were my three children crying for their father ... Before me was going all the selfish feelings—all the selfish attitudes that I had had throughout my entire married life.

(Pahnke and Richards 1966, p. 187).

The phenomenon of parable illustrates the artificiality of analysing psychedelic experience into a list of ostensibly distinct phenomenological components. Visual parables and metaphors constitute an alteration to perceptual experience, but also an experience of apparent *insight* (a phenomenon we will return to shortly): they engender novel understanding or comprehension, or at least feelings thereof. Indeed, the blurring of boundaries between normally distinct experiential modalities is a general and distinctive feature of the psychedelic state. The most obvious example is synaesthetic-like interactions between sensory modalities, to which I return shortly. But the vivid perceptual representation of abstract concepts and psychodynamic insights, as in the preceding quotation, could also be seen as a quasi-synaesthetic phenomenon.

While visual effects are most common, auditory perception can also be a significant locus of unusual experience. Intensification is common: subjects report that they appreciate music more intensely than usual, apprehending details and patterns to which they would normally be oblivious, and responding emotionally to the music very strongly:

The various pieces of music were wonderful, because they were multi-dimensional. I could hear tiny variations and subtle changes and shadings in the voices and instruments, as if I were inside the mind of the composer as HE heard it. There was the sense of the composer touching the divine and channeling its perfection down to the human level, so that other people could be aware of it and uplifted, too, but simultaneous awareness of the impossibility of the task, as imperfect human beings, imperfect instruments, and imperfect voices are involved. Somehow all of that imperfection was also woven into the perfection the music was channeling. I was inside the music, the composer, the players, the singers, the shaft of the woodwind, the metal keys of the woodwinds, and the finger pressing the keys.

(Richards 2015, pp. 66–67).

Music plays a key role in structured psychedelic sessions: it is an important part of traditional psychedelic rituals and of modern clinical trials (see O'Callaghan et al. 2020 for a review). In many trials, subjects are asked to lie on a comfortable couch, wear eyeshades to block external distraction, and listen through headphones to a selection of music intended to enhance the experience and mirror its natural dynamics. The standard instruction is to 'let go', listen to the music, and open to inner experience. Subjects have stronger emotional responses to music while on psychedelics (Kaelen et al. 2015) and most report that the music played a central role in their experience (Kaelen et al. 2018). Moreover, subjects' self-reported emotional response to the music correlates with the degree of both mystical-type and insightful experiences (Kaelen et al. 2018).

This emphasis on the importance of music may seem in tension with the idea that psychedelics sometimes induce 'introvertive' mystical experiences of pure being or consciousness, in which all perceptual experience is absent.² However, the apparent tension dissolves when we note that psychedelic experiences have distinct temporal phases. A typical psilocybin experience, for example, might last for 4–6 hours. It would be possible for a subject to enjoy a period of apparently pure or contentless awareness during this time, while the 'ascent to' and 'descent from' this peak of the experience involved intense perceptions of music, visual imagery, emotional and insightful experiences, and gradual alterations to the sense of self.

In the auditory modality, the line between intensification and alteration blurs. One psilocybin subject, for example, described hearing his own breathing as though it were the sound of a waterfall (Malitz et al. 1960, p. 10). Straightforward novelty is fairly common too. The peyote subject quoted earlier heard music that was being played by characters in a vision he observed (Masters and Houston 1966, p. 9). Hearing 'celestial music' or 'music of the spheres' is sometimes reported on ayahuasca (Shanon 2002, p. 153). Auditory verbal hallucinations, or hearing voices, can also occur at high doses (Masters and Houston 1966).

Synaesthetic-like interactions between sensory modalities are commonly reported. However, it is questionable whether these constitute genuine synaesthesia: some studies suggest that they fail to meet established criteria (Luke and Terhune 2013, Terhune et al. 2016). Auditory-visual interactions are especially common, with subjects reporting that their closed-eye visual imagery changes in time with the rhythm of the music, and that its content is significantly affected by the emotional tone of the music and the associations evoked (Kaelen et al. 2018):

Music had become something much greater and more profound than mere sound. Freely trespassing the borders of the other senses, it was palpable enough to touch, forming three-dimensional spaces I could move through ... the music formed a vertical architecture of wooden timbers, horizontals and verticals and diagonals

² I am grateful to Miri Albahari for pointing out this apparent tension.

that were being magically craned into place, forming levels that rose one on top of the other, ever higher into the sky like a multistoried tree house under construction ... So it went, song by song, for hours.

(Pollan 2018, pp. 247–248).

Tactile, gustatory, and olfactory perception are perhaps less notable sites of perceptual changes than vision and audition, but dramatic intensification in these modalities is very common:

Sensations were acute. I heard, saw, felt, smelled and tasted more fully than ever before (or since). A peanut butter sandwich was a delicacy not even a god could deserve ... To touch a fabric with one's fingertip was ... to experience intense touch-pleasure.

(Masters and Houston 1966, p. 10).

Reports of perceptual distortion or novelty in these three modalities are relatively rare. Intensification and apparent enhancement seem to be the main effects of psychedelics on touch, taste, and smell (Cohen 1970, p. 49).

Changes to spatial and temporal experience are common in the psychedelic state. We can group these, loosely, with 'perceptual changes'. Changes to spatial perception, in particular, often play out in the visual modality. Perceptions of distances can be greatly distorted: objects may seem closer or farther away than they really are, and relative proportions of objects may be altered. Sometimes subjects feel as though their own body has expanded or diminished, resulting in Alice in Wonderland-type experiences:

S-1, a twenty-six-year-old male ... ingested about 80 micrograms of LSD. He ... reported that he felt himself to be six inches in height. Curiously, the objects in the room underwent a similar and proportionate transformation, while the guide and another observer retained their normal dimensions, appearing to him to be giants. Although an inch taller than the guide, S tilted his head back to look up at her, stating that he felt as David must have felt looking up at Goliath. He also compared himself to Alice after she had taken a drink from the bottle. At one point S was given a box filled with many miniature Japanese figures. He greeted these with expressions of delight announcing that they were more his own size. Then he clutched the figures to him as if they might help to protect him from the onslaughts of the giants.

(Masters and Houston 1966, pp. 70–71).

Alan Watts went so far as to single out time dilation and ego dissolution as the two definitive effects of psychedelics: 'there are certain types of change which are usual enough to be considered characteristic of psychedelics: the sense of slowed or arrested time, and the alteration of "ego boundary"' (Watts 1964). An example of time

dilation is provided by the British MP Christopher Mayhew, who took mescaline on live television:

At regular intervals, about twice every five minutes at the peak of the experience, I would become unaware of my surroundings, and enjoy . . . a state of complete bliss, for a period of time which, for me, did not end at all . . . I would be aware of a pervasive, bright, pure light, like a kind of invisible sun snow. For several days afterward I remembered the afternoon not as so many hours spent in my drawing room interrupted by these kinds of excursions, but as countless years of complete bliss interrupted by short spells in my drawing room. But to the film team, and to Dr Osmond [the supervising psychiatrist], the excursions lasted no time at all.

(quoted in Durr 1970, p. 54).

Another subject describes an experience of extreme time dilation:

Time. Each second separated by infinity. The Camera has stopped, and the world is caught in a silly snapshot pose. To see it so is enough to make one burst into laughter . . .

(Cohen 1970, p. 124).

Although time may seem to move more quickly or more slowly than normal, the latter is much more common. The peyote subject quoted earlier described feeling as though he had been smoking a cigarette for hours, then looking down to see that the first ash was still on it, implying that he had been smoking it for less than a minute (Masters and Houston 1966, p. 9). As with many phenomenological features, the experiences of time dilation and spatial alteration reach their apex in the 'transcendence of time and space' that is definitive of the mystical state.

3.3 The sense of self

Despite the salience of perceptual changes, the popular conception of psychedelic experience as primarily perceptual, associated with the term 'hallucinogen', is an oversimplification at best. Perceptual effects may predominate at low doses, but at moderate-to-high therapeutic or transformative doses, many of the more salient effects involve changes to emotion, thinking (including feelings of creativity and insightfulness, altered perspectives, and religious or philosophical ideations), attention, salience, meaningfulness, and the quality of consciousness itself (Shanon 2002).³

³ This may seem in tension with my insistence on the importance of music in the previous section, but again this tension is merely apparent. My point is this: Often, what subjects emphasise most is not perceptual changes in and of themselves as purely aesthetic phenomena. Rather, they tend to emphasise profound emotional, existential, and noetic changes. In such accounts, perceptual experiences such as listening to music or visual imagery assume importance insofar as they act as a vehicle for experiences of this kind.

Of course, as we have noted, these other changes are often deeply intertwined with perceptual alterations. Some of these other changes figure centrally in patients' retrospective accounts of psychedelic therapy, which I will examine in the next section. First, however, let us consider that quintessential, philosophically provocative effect of psychedelics: alterations in the sense of self.

Here is a fairly representative example from a 22-year-old psychology student who volunteered for an LSD study in the 1960s, out of curiosity about the drug's famous *visual* effects:

The strangest thing happened on the way to me this day. I met myself and found that I'm really not me after all. Or perhaps I should say that I have found out what it is like to exist. For that's all there was left that instant ... when feeling, thinking, being, all were caught up into one ebbing unity; a unity which was me, but not me, too. A me-not me which stood there nakedly and pointed back at itself in a sorrowful joy, and asked 'Why?' ... But then the 'why' didn't matter and it just *was* ... Have you ever felt like all that existed was you, and that suddenly the reason for your 'you-ness' was knocked out from underneath you? ... from now on I'm going to feel a little different about the kind of language we use to describe psychotics and their 'little worlds'. I'm going to look a little closer at what the mystics are trying to tell us; at what the philosophers have to say about this ... I think others feel the same way, with or without the damned drug, and I think maybe they've struggled with what to do with it all and what to make out of it all ... The world looked to me like it must to a little child, all big and beautiful. And I was experiencing it without the imposed controls that we have to slap on the world in order to become adults ... I was, literally, experiencing the world as a child would ... I was almost drunk with rapture and I felt like bursting ... I notice the physical boundaries of my body coming back and the same thing is happening to my mind. But does it have to be this way? Do we have to live alone?

(Cohen 1970, pp. 18–19).

For this subject, as for many others, the importance of perceptual changes (at least in a narrowly aesthetic sense) was eclipsed by dramatic, existentially significant changes to the sense of self, as well as to thinking, attention, and emotion.

The psychedelic-induced experience of an absent or diminished sense of self has gone by many names. In the recent literature, it is usually called 'ego dissolution' (Nour et al. 2016). Ego dissolution is standardly understood to be a central component of the mystical-type experience, a corollary of the sense of profound unity that is definitive of this state:

Thus, although perceptual and emotional/existential/noetic changes are intertwined, the importance of the former often derives greatly from their intertwinement with the latter.

Although consciousness of self seemed extinguished, I knew that the boundaries of my being now had been dissolved and that all other boundaries also were dissolving. All, including what had been myself, was an ever more rapid molecular whirling that then became something else, a pure and seething energy that was the whole of Being. This energy, neither hot nor cold, was experienced as a white and radiant fire. There seemed no direction to this whirling, only an acceleration of speed, yet one knew that along this dynamic continuum the flux of Being streamed inexorably, unswervingly toward the One.

At what I can only call the 'core' of this flux was God, and I cannot explain how it was that I, who seemed to have no identity at all, yet experienced myself as *filled with God*, and then as (whatever this may mean) *passing through God* and into a Oneness wherein it seemed God, Being, and a mysterious unnameable One constituted together what I can only designate the ALL. What 'I' experienced in this ALL so far transcends my powers of description that to speak, as I must, of an ineffably rapturous Sweetness is an approximation not less feeble than if I were to describe a candle and so hope to capture with my words all of the blazing glory of the sun.

(Masters and Houston 1966, p. 308).

There were profound feelings of unity, first with a red tulip, and then with a rose of the same color. When looking at the rose as an object, it seemed to come alive before my eyes. Its petals seemed to breathe as, slowly and gracefully, they unfolded, seeming to express the ultimate in beauty. Fascinated, I watched these movements of cosmic gentleness until, suddenly, I *knew* the rose; that is to say, I somehow became One with the rose, no longer existing as an ego passively viewing an object in its environment. Although in the objectivity of my critical mind I knew there were no physical changes in the flower, subjectively I seemed to see it in a totally new perspective, one which elicited tears and deep feelings of reverence. The rose seemed to stand out in naked beauty, as though it were the only thing existing in the world. Supporting the ancient monistic school of thought, I expressed the philosophical insight that 'we are all the same thing'. Once I sought to express my experience by speaking of 'becoming one with the very essence of Roseness.' Another time I commented that, 'There is more to beauty than we know.'

(Richards 2015, pp. 65–66).

There are two points worth making here. The first is that 'ego dissolution' and 'mystical experience' are not synonymous. There are many types of psychedelic alterations to the sense of self, some of which involve no sense of unity or religious/spiritual content. Benny Shanon describes some varieties of altered self-experience under ayahuasca:

The first phenomenon is a dissociation between the self and the mental material that one experiences. Content is passing through my mind, but I am not experiencing myself as being the source that generates it. Instead of being the generator of the thoughts that I am entertaining, I feel that I am a channel that receives them. The source of the mental material may or may not be given a particular identity ...

The second phenomenon has to do with control. Experientially, the feeling is that one is no longer in full control of the thoughts one entertains. Rather, one feels that other people or agents are controlling one's thoughts.

(2002, pp. 198–199).

In the parlance of recent philosophical psychopathology, Shanon is describing a loss of the *sense of agency* over thoughts (Graham and Stephens 1994, Gallagher 2000).

The second point is that ego dissolution is not always welcomed as pleasant or desirable. Even when the experience is ultimately positively valenced overall, the loss of the sense of self may be preceded or accompanied by fear (Griffiths et al. 2011). And if the subject is unprepared or attempts to resist the experience, it can become a dysphoric 'bad trip'. Indeed, one of the most commonly used psychometric scales in psychedelic research has three main factors, one tracking perceptual changes ('Visionary Restructuralisation'), another tracking positively valenced ego dissolution, including unitive and mystical experiences ('Oceanic Boundlessness'), and another tracking negatively valenced, stereotypically psychotic ego dissolution ('Anxious Ego Dissolution'; Dittrich 1998). Here is an example of the latter:

I had an excited feeling in the pit of my stomach ... However, soon I had the feeling of being choked from inside. I had difficulty breathing. Then I began to feel nauseated and restless. I said to the psychologist, 'I don't feel good at all.' Suddenly the tightness in my throat increased and I began to feel as if my body were on fire both inside and outside. My neck and back felt very tense. I became very frightened and had the feeling of acute panic. I was being swirled and sucked down, down, down, into oblivion ... I fearfully cried out, 'How long will this last? Will this go on all the time? I don't like this. I want out!' The fear was overwhelming me as I was thrust down into blackness. My body was burning up and I began to sweat ...

The indescribable feeling of being swirled and thrust into some place else was easing somewhat. It seemed that I had been in this torment for weeks. After it had eased up, I knew beyond a doubt that I was in another world. I felt it was no use telling the psychologist about it because he wouldn't understand. I remember thinking, 'This is what the psychotic feels like.' That feeling of panic and terror had left me tremulous and weak.

(Cohen 1970, p. 99).

One of the most philosophically controversial issues is whether there can be conscious states, induced by psychedelics or otherwise, that completely lack any sense of self (Millière 2017, Millière et al. 2018, Henriksen and Parnas 2019, Millière and Metzinger 2020, Letheby 2020, Millière 2020, Sebastián 2020, Fink 2020). Most experience reports are somewhat ambiguous on this point. However, some reports seem to describe a total loss of self-consciousness. These often come from users of the short-acting psychedelic 5-MeO-DMT (Millière et al. 2018). The following example from Pollan also exemplifies the dysphoric variety of ego dissolution:

I felt a tremendous rush of energy fill my head . . . Terror seized me—and then, like one of those flimsy wooden houses erected on Bikini Atoll to be blown up in the nuclear tests, ‘I’ was no more, blasted to a confetti cloud by an explosive force. I could no longer locate [myself] in my head, because it had exploded that too, expanding to become all that there was. Whatever this was, it was not a hallucination. A hallucination implies a reality and a point of reference and an entity to have it. None of those things remained.

(Pollan 2018, pp. 276–277).

A happier account is provided by a research subject administered intravenous DMT:

I immediately saw a bright yellow-white light directly in front of me . . . I was consumed by it and became part of it. There were no distinctions—no figures or lines, shadows or outlines. There was no body or anything inside or outside. I was devoid of self, of thought, of time, of space, of a sense of separateness or ego, or of anything but the white light. There are no symbols in my language that can begin to describe that sense of pure being, oneness, and ecstasy. There was a great sense of stillness and ecstasy.

(Strassman 2001, pp. 244–245.)

Taken at face value, such reports seem to demonstrate clearly that there can, indeed, be ‘totally selfless’ states of consciousness (Millière 2020)—that is, phenomenally conscious mental states that completely lack any sense of self. However, the interpretation of such reports is controversial. I will return to these issues in Chapter 7.

Another important point is that ego dissolution is not a monolithic affair, because self-consciousness is not monolithic. On a broad level, recent theoretical discussions recognise a distinction between ‘narrative’ and ‘minimal’ forms of self-awareness (Gallagher 2000, Lou et al. 2017). Narrative self-awareness refers to the autobiographical sense of being a temporally extended entity with a specific history and personality, whereas minimal self-awareness refers to the bare feeling of being a subject of experience at a moment in time. On some accounts, minimal self-awareness arises from basic sensorimotor processes, particularly *interoceptive* processes that represent the internal condition of the body (Damasio 1999, Seth 2013).

Early clinical accounts of psychedelic states recognised this distinction, distinguishing the loss of ‘bodily ego feeling’ from the loss of ‘mental ego feeling’ under LSD (Savage 1955). More recently, Girn and Christoff (2018) have offered a more fine-grained (but non-exhaustive) taxonomy of aspects of self-consciousness affected by psychedelics. They include (i) the sense of ownership over the body and thoughts (feeling that *this is my body* or *this is my thought*), (ii) the sense of agency over actions and thoughts (feeling like the one who has initiated or authored the action or thought), (iii) the sense of self-location (the feeling of ‘being located at a particular point in space’), (iv) the minimal self (the bare feeling of being a subject of experience),

(v) autobiographical or narrative self-awareness, (vi) body image and body representation, and (vii) the sense of bodily boundaries (Girn and Christoff 2018p. 133; cf. Millière 2020).

Psychedelics can affect all of these aspects of self-consciousness. Indeed, so can meditative practices such as ‘mindfulness’ or *Vipassana*, drawn from the Buddhist tradition. One traditional aim of this practice is to radically alter the sense of self (Goleman 1972, Albahari 2014). As such, changes to self-awareness are the most obvious point of phenomenological overlap between psychedelic experiences and meditative states (Millière et al. 2018). But it is less often appreciated that meditation practice, especially under intensive retreat conditions, can induce many other stereotypically psychedelic changes to consciousness. Indeed, Jack Kornfield’s (1979) phenomenological study of intensive Vipassana meditation reads like a compendium of psychedelic phenomena. Here are the categories of unusual experiences reported by Kornfield’s informants:

CATEGORIES OF UNUSUAL EXPERIENCES REPORTED

Somatic experiences

1. Spontaneous movement
2. Alterations in body image
3. ‘Energy’ flow experiences
4. Other proprioceptive changes such as temperature, weight, etc.
5. Unusual breathing patterns
6. Unusual experiences during walking
7. Changes in perception of pain

Visual experiences

8. Eyes open
9. Eyes closed
10. Auditory experiences
11. Gustatory and olfactory experiences

Mental experiences

12. Strong emotions and mood swings
13. Rapture and bliss
14. Psychological insights
15. Equanimity
16. Insights into basic mental and physical life processes
17. Dream changes
18. Time changes
19. Concentration changes
20. Effortless awareness
21. ‘Out-of-the-body experiences’
22. Other general perception changes including creativity and psychic phenomena

(Kornfield 1979, pp. 44–45).

Some examples include feeling one's body divided in half or one's torso expanding; feeling one's body 'heavily pulled in all directions', or feeling as though floating when one was really 'stone still'; experiencing one's body growing 'huge, then tiny, tiny'; seeing 'still objects moving', 'colours more intense', 'hallucinations while walking', and 'LSD melting-like visions'; and seeing 'camera-like flashes of light', '[visions] of Buddha', and 'images of body cells [and] organs' (Kornfield 1979, pp. 46–47). In addition to such 'unusual' experiences, practitioners also routinely reported:

visual thoughts, dream-like images, mental pictures—moving and still—and patterns of colours and visions, from simple subjects to complex visual mandalas. Also, it is commonly reported that certain visual themes appear regularly in meditators' minds, such as visions of Buddha or Christ or various religious imagery, or for some, visions of bodies and corpses and death. For others, spontaneous visions of violence or of lustful scenes and other vivid visual material is often reported as associated with strong emotional discharges.

(Kornfield 1979, p. 47).

Clearly, none of these phenomena would be out of place in a psychedelic experience report. As Kornfield emphasises, to speak of a 'meditative state' is, strictly speaking, a misnomer: meditation amounts to a body of practices or techniques, which can induce many different states of consciousness. However, there is an undeniable overlap between these states and those that psychedelics typically induce in controlled conditions.

Returning now to psychedelics' effects on self-consciousness: in this book, for the sake of simplicity, I will operate mainly with a coarse-grained distinction between minimal self and narrative self. By the former, I mean synchronic aspects of self-consciousness that do not involve any autobiographical information: most notably, the sense of being an experiencing subject at a point in time, an entity who *owns* or *undergoes* occurrent perceptual, bodily, and affective experiences. This is sometimes referred to as the 'mineness' of experience (Guillot 2017). By the latter, I mean diachronic aspects of self-consciousness that involve autobiographical information: the sense of being a specific individual who was present in past experience and who may be present in future experience, who has a distinctive personality and trajectory through life. Simplifying, we could think of the minimal self as the immediate pre-reflective feeling of subjectivity, and the narrative self as a richer self-*conception*. Note that I am using the terms 'minimal self' and 'narrative self' in purely phenomenological senses, to refer to experiences *as of* having or being a self. I remain neutral for now on the ontological question as to whether any selves or subjects actually exist. (I will also use the terms 'self-consciousness' and 'self-awareness' interchangeably—again, in a purely phenomenological sense).

Users of psychedelics often report altered bodily experience, including the dissolution of bodily boundaries and feelings of disembodiment. One cancer patient administered psilocybin reported: 'I didn't have a body ... I was just like this soul, this

entity' (Belser et al. 2017, p. 368). Another patient in the same study said: 'my consciousness, or my soul, or whatever, was flying out of my body' (Belser et al. 2017, p. 368). This might seem to suggest that the experience of 'ego dissolution' is primarily a disruption to the minimal or embodied self (Millière 2017).

However, some subjects distinguish, without prompting, between the narrative self and the minimal self, and describe a specific, liberating type of experience in which the former is absent while the latter remains:

Two related feelings were present. One was a tremendous freedom to experience, to be I. It became very important to distinguish between 'I' and 'Me,' the latter being an object defined by patterns and structures and responsibilities—*all of which had vanished*—and the former being the subject experiencing and feeling. My normal life seemed to be all Me, all demands and responsibilities, a rushing burden which destroyed the pleasure and freedom of being 'I'. Later in the evening the question of how to fit back into my normal life without becoming a slave of its patterns and demands became paramount.

(Durr 1970, p. 79; my emphasis).

A separate report, by a different subject:

Although I *lost all sense of 'me-ness'*, the sense of 'I-ness' was intensified unbelievably ... It was simply a sense of 'is-ness' or 'am-ness'. *I wasn't anything—I simply was*. And at these moments of really ecstatic clarity there was such a peace and rest and at the same time such exuberance and wildest joy.

(Durr 1970, p. 80; my emphasis).

Taken at face value, these reports describe experiences in which the narrative self is lost completely, while the minimal self remains. Experiences of this kind are sometimes reported, and described as therapeutically beneficial, by patients in clinical trials. It seems that the temporary absence of the ordinary autobiographical self-concept allows subjects to appreciate its contingency and mutability—to see that they can reframe their self-image in a seemingly open-ended way. We turn now to these reports.

3.4 The transformative process

Recent qualitative research has examined patient perceptions of the process of psychedelic therapy, investigating which factors are most salient and which are felt to be therapeutically relevant. The results are interesting. In some respects, these studies seem to confirm suspicions that the acquisition of non-naturalistic metaphysical beliefs is crucial to the process. However, they ultimately reveal a more nuanced picture.