SKINNER, MASLOW, AND PSILOCYBIN

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Summary

This article describes a personal experience of altered consciousness as a result of ingesting "magic mushrooms" (psilocybin). It also briefly notes the reactions of Fred Skinner and Abraham Maslow to a report to them of this experience made by the author when he was a graduate student 30 years ago. Familiarity with the effects of hallucinogens may facilitate communication with terminally ill individuals, and such substances may serve as efficacious tools for actualizing visionary potential.

For several years after completing graduate school, I subscribed to only two journals not sponsored by the American Psychological Association—the *Journal of Humanistic Psychology* and the *Journal of the Experimental Analysis of Behavior*. I suppose that some enterprising clinical psychologist might scan both subscriber lists to identify the few overlapping individuals as a means of locating a population predisposed to multiple personality disorder.[1] Thus far, I have not cracked. Indeed, I feel comfortable that I have landed, not of my own conscious doing, in the rich interstices of behavioral and humanistic traditions.[2] I am indebted to Fred Skinner, Abraham Maslow, and psilocybin ("magic mushrooms").

Because most of us know the epistemological methods advocated by Skinner and by Maslow, and because they wrote so extensively

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and persuasively, I will speak here only on behalf of the mushroom. That is, I will give a report of my responses to an occasion of using psilocybin as a graduate student 30 years ago and some of its subsequent impact. I have handwritten notes and audio recordings that document my experience. The following is a fragmentary account of one session.

PSILOCYBIN EXPERIENCE

One half hour after ingesting 4 mg of psilocybin in a darkened room, I noticed, when I closed my eyes, the commonly reported sequence of kaleidoscopic neon-glowing webs undulating in an inky iridescent plasma. I never had dreams this vivid. Nonetheless, after 20 minutes, I found the moving wallpaper of imagery rather boring.

Fortunately, this frivolous entertainment was superseded by a purposefully initiated process of kinesthetic exploration. I recall fidgeting about, twisting and turning on a large recliner chair, repeatedly jiggling my feet and legs, walking about, rolling slowly on the floor, standing and stretching. I thought to myself, "If someone were to see a film of this, it would look pretty crazy." An observer would likely describe my behavior as "agitated." I was not, however, uncomfortable or hallucinating. I observed no objects outside the boundary of my skin that a community of observers would not be able to see. I had no ataxia. Everything I did was intentional and voluntary to the extent that I could easily describe to another person what I was about to do, or to what contingencies (inside or outside of my body) I was responding.

For example, one of three observers asked me about my agitated behavior. I do not recall my verbal response, if any, but I do recall a flash of irritation at the naïveté of the question. Heavens! Why do kids jump around, teenagers ride skateboards, young adults frenetically dance for hours? The simple and trivial answer is, "It's fun; it's reinforcing." Movement is intimate to life.

Subjectively, I was enjoying and exploring a mild "full-body itch." When I stretched, I seemed to be 10 feet tall; when I squeezed my legs against my chest, I seemed to be just 6 inches thick. The fun was in the process, not in the accomplishment of a socially valued task. (Dancing, for example, is a very *in*efficient way of getting from one place to another.) The fun consisted of—I know

my words are not accurate here—embedding self-conscious, nonspacial thought into the physical dimensions of my body. In ordinary consciousness, I think to myself, "I will put my right foot into the shoe," and I do it within such a well-established routine of proprioceptive clues that the idea and the act are firmly linked or completely congruent. In the altered mental state, I set the same task for myself, but the *process* felt different. My usual nonverbal muscle commands resulted in exaggerated proprioceptive and interoceptive sensations. When I stretched and contracted, the boundaries of my body felt rubbery. Externally, my movements might be similar, but subjectively I was giving different commands. The reafferant rules that I used to navigate in the physical world were changed. I felt childlike. I sensed that my body was a system of gelatinous propensities that could be sequentially stiffened into physical positions. This process parallels the manner in which, on a slower time scale, a city's master plan eventually materializes into homes, parks, and business areas.[3]

With psilocybin, talking and writing seemed thin and colorless. I thought, "Why should our customary symbol surfaces be limited to paper (or, now, computer screens)? Couldn't we have a 'deeper' symbolic medium—perhaps a kinesthetic language based on internal resonance frequencies, with its own syntax and grammar?" Such a language would not mimic Braille, which itself mimics written language, nor sign language, which mimics auditory language.

It seemed to me that our present verbal language and iconic representations might transmit *ideas* satisfactorily, but they felt comparatively feeble for communicating *emotions*. That is, our verbal community is more skilled at verbalizing a pattern of relationships between publicly observable events than it is at expressing our subjective collateral responses to such events. In intense emotional states, words tend to fail us. On one occasion with a higher dose of psilocybin, I cried much of the time, and could not seem to express adequately my sorrow for having hurt a friend out of petty jealousy. The next day I wrote a poem (which I almost never do) about a bird with burned wings. But the poem was an after-the-fact metaphoric record of what had already passed, not a live communication.

At lunch a couple of months later, I described this event to Maslow. He said it was a "peak experience." Although the mushroom had induced a profoundly novel experience in me, it was not

what I had understood by that term. The label comforted me, but was not intellectually energizing. Skinner's response to my report was even less helpful. Drug reactions, he asserted, were not gateways to personal actualization nor to social utopia (an interest that many of us had in the 1960s).[4] Drugs were physiological surrogates for environmental variables. Skinner (1969) mentioned this interpretation of drug reactions in a later book: "A drug changes an organism in such a way that it behaves differently. We may have been able to make the same change by manipulating standard environmental variables, the drug now permits us to circumvent that manipulation. Other drugs may yield entirely new effects. They are used as environmental variables" (p. 283). Perhaps by meditating or fasting I could have had an experience similar to psilocybin, but I was intensely interested at the time in the benefits and risks of magic mushrooms, not in knowing about possible equivalents.

Decades have passed, but not the impact of my early psilocybin experiences. Today, as then, the use of psychoactive substances is surrounded by numerous psychological and social policy questions. Should perceptual changes induced by drugs be summarily dismissed as merely another bauble on the Christmas tree of consciousness? Or worse, could the altered perceptions be meaningless perturbations of neurochemistry that result in a jumbled mess of sensory sludge? In my case, what I perceived with psilocybin were coherent sensory patterns, meaningfully organized and intellectually significant. Inspired by my experience, I later hired an engineering group to design transducers sensitive to resonant frequencies of body structures. I described these as a "Sonic-Tactile Communication System" in a subsequent patent disclosure (U.S. #050625).

As I approach my 59th birthday, there are little hints that my body is disintegrating. I think more about death. I wonder when and how it will happen. Hence my motive for volunteering with a local hospice organization three years ago was quite selfish: I wanted to learn what reasonable options I might have to die comfortably, perhaps even blissfully. I have discovered that my psilocybin experience has helped me communicate with terminally ill people who occasionally experience novel states of consciousness. This might be best illustrated by describing in some detail an incident involving Fred, a 68-year-old retired air-conditioning contractor.

STRANGE INTERLUDE

About 9:30 pm on a balmy May evening, Fred's wife, Helen, called my home and asked somewhat apologetically if I could come right over. Fred was "out of control," she said. I didn't ask for details, knowing that the situation would probably be all too obvious when I got there.

Nonetheless, I was totally perplexed as I drove the four or five miles to their smallish, ultra-clean suburban home. I had seen Fred briefly that morning; he was lethargic with yellowish, bloodshot eyes and shiny-thin skin stretched over bony limbs. How could a person like this be "out of control"?

Colon cancer had metastasized to his liver and lungs. In the weeks past, he reported that his gut felt like it was filled with concrete. Often he had an insistent urge to have a bowel movement but could not. A colostomy had not helped, nor did codeine. Therefore, to relieve this persistent misery, he was prescribed "Brompton's cocktail." The standard cocktail developed decades ago at the Brompton Chest Hospital in London consists of morphine, ethyl alcohol, chloroform, water, sugar syrup, food flavoring, and (now very rarely) cocaine.

As I got out of the car, I had no idea what I would see, and even less what I might do to help. The porch light was on. Helen and her 12-year-old granddaughter, Susan, were holding open the screen door. Walking up the crescent-shaped concrete driveway, I thought to myself, "Okay, smart guy, this is where the rubber hits the road."

Other than "hello," they said nothing. I was ushered in a businesslike manner down a hallway, past the master bedroom (Fred is not in his usual spot), past the bathroom (the place in the home where most people die), through the kitchen, and into the living room.

Suddenly a friendly greeting: "Hi, Bob, come in and watch TV!" Both of Fred's scrawny arms rose up in a large awkward gesture that motioned me in. He sat in a brown leatherette recliner, alert and smiling. Now everyone talked at once—Fred telling me about a funny episode on TV; Helen complaining that he wouldn't follow orders and go back to bed; the granddaughter wanting to know if gramps is going crazy or getting better.

Gradually the details got sorted out. Fred was given Brompton's cocktail for the first time as a nighttime analgesic. Shortly there-

after he demanded, for no apparent reason, to be helped out of bed so that he could walk around the house. When Helen told him he was supposed to sleep, he started ripping up the bed. She finally assisted him to the living room recliner where he sat laughing, telling stories of early experiences, making comments about (and *to*) characters appearing on TV. He also asked for the telephone so that he could call old acquaintances (some of whom were no longer alive).

The most frightening aspect of Fred's behavior was not any physical or verbal threat to his family. He was too frail and, indeed, too jovial. The threat was psychological. Yes, he was "out of control," which meant, in short, that he was not eating, sleeping, and dying according to plan (*our* plan).

For the next few hours I sat with him, and I participated as best I could in his world of altered perception. Never before had he seen "nondream visions." The images on TV became "alive," not quite as flesh and blood people, but as "solid light" emerging from the pixeljeweled fabric of electronic molecules that took on the shape, texture, and depth of almost-tangible entities. Equally amazing to Fred was that most, but not all, of this could be controlled voluntarily simply by his *intention*, the way a toddler discovers that she can more or less control walking, or the way we "see" faces or objects in clouds in the sky by merely intending to find a pattern.

Fred's altered perception caused time to collapse into translucent layers of events that could be viewed almost simultaneously. Thus he would see a single human face but almost immediately, and by logical implication, also see that person's face through all of the stages of life from newborn to senior citizen. A crude analogy would be putting a lifetime of pictures of a person's face on a deck of flexible, clear plastic cards, and then riffling through the deck. Some of the faces would "bleed through" into the picture in front of it. This is possibly related to the commonly reported near-death experience wherein a person sees his or her life flash past in a few seconds.

Fred watched this carnival of visions in his own living room. Even a few deceased relatives came to visit. He asked me if I saw them. I said, "No, but tell me about them." He would then do so. However, there were times of long silence (up to 10 minutes). I sat close to him and watched his eyes move, presumably following images invisible to me. I wondered, if I took Brompton's cocktail, whether I would be able to see the same images.[5]

A few of the images were frightening, such as rats running around the outside edge of a picture frame. But most of the visions were convivial relatives. Occasionally Fred would respond to the visions by nodding his head or saying "Yes," "Unh-huh."

One time he mumbled a short phrase. I asked him what he said. He became irritated, and told me not to interrupt his conversation! (Apparently the phantom entities had come with a message, and who was I to interrupt this special event?) Fred noticed my surprise at his angry response, then mockingly offered to introduce me to the entity which he knew I couldn't see. He thought that this was a great joke to play on a psychologist with fancy academic degrees, and laughed gleefully at his one-upmanship.

Helen and Susan became quite bored by all this seeming nonsense. Perceiving no immediate physical danger, they left us alone to babble with the spooks.

After almost three hours of visionary escapades, Fred said that he was tired. Enough for one day; maybe one lifetime. Fred's oncologist[6] (contacted by telephone) and Helen agreed that Fred would get no more Brompton's cocktail. Back to bed and the standard time-release morphine capsules.

The next day I stopped by to see if there was a sequel to his phantom carnival. Fred looked normally bad. He was back to his yellow-eyed, uremic, dopey-dull self. He roused slightly when I entered the bedroom, but said nothing. Our conversation went something like this:

Bob: Do you remember last night?
Fred: Yeah.
Bob: What do you think about it?
Fred: It was weird.
Bob: Sometimes people get this kind of reaction when they take a heavy dose of opiates.
Fred: Well, it was good.
Bob: You mean you liked it?
Fred: Oh yes! Why didn't someone tell me about this stuff before? . . . I'm too sick now to do it. (long pause) Why didn't someone tell me??! (closes his eyes, long pause again) Oh, Jesus.

He looked as though he might cry, but was too proud or too tired. I slowly picked up one of his bony hands and put it between the two of mine. I said nothing. I couldn't think of a good answer. I was tearful and helpless.

Of all the hospice visits I have made to various patients, I recall most clearly what I felt when I left that house that day. It was a sunny afternoon, and clear enough to see the blue-grey peaks and crevasses of nearby mountains. As I closed the door of my cocoon-like Volvo, I was intensely grateful for being healthy and, I must admit, for being able to escape the house of pain, medical smells, and imminent death. (Fred died the following week.)

On the way home, I kept thinking about Fred's question and about the fact that I might be in a situation like his in not too many years. I also envisaged a new legal right that might be added to the Preamble of our Constitution. It would read simply:

> No citizen shall be deprived of the opportunity to experience the full range of human consciousness.

This new right would evolve slowly in the form of medical technologies, social rituals, and religious institutions. I realize that my suggestion will not get a cordial reception among most policymakers and politicians. Our society is confronted with the serious problem of widespread drug abuse. The "wrong" people (e.g., children and adolescents) are using the wrong substances (e.g., heroin and cocaine) for the wrong reasons (e.g., escapist entertainment) in the wrong way (e.g., excessive doses of unknown mixtures in haphazard settings). Unfortunately, our warlike response to this abuse means that the "right" people (e.g., clergy, terminally ill persons) are not using the right substances (e.g., marijuana, psilocybin) for the right reasons (e.g., spiritual enhancement) in the right way (e.g., pharmaceutically pure material in controlled settings).

Nature has provided ready-made compounds (e.g., psilocybin, peyote, ayahuasca) that can allegedly deliver premonitions of the fantastic to almost anyone who is properly prepared. Such assertions should not go unchallenged or unexplored. If a "consciousness amendment" were enacted, claims of nonordinary ability could be personally verified or refuted by anyone who had a sincere desire to actualize his or her visionary potential. Maslow would have liked that.

> And pluck 'til time and times are done,
> The silver apples of the moon,
> The golden apples of the sun.
>
> —William Butler Yeats

NOTES

1. Actually, I made an inquiry similar to this in 1967, and was informed that only 2 people of the approximately 600 members of the American Association for Humanistic Psychology were also on the roster of the 800-member Division 25 (Experimental Analysis of Behavior) of the American Psychological Association (Carol Guion, personal correspondence, July 21, 1967).

2. For an example of an articulated compatible relationship between radical behaviorism and existentialism, see Day (1969) or Fallon (1992).

3. I served as a teaching assistant for Maslow for a year. After I was comfortable enough to believe that he would not discover that he had made a terrible mistake, I asked him why he selected me, a young behaviorist, as his TA. His response, paraphrased, was something like this: "I'm an old man. All I have time to do is sketch the broad plans of what psychology ought to be. I'm like an urban planner who says, 'Put houses here, and the park over there; and across the river, put the industrial area.' To get from the houses to the industrial area, there has to be a bridge built across the river. And for the bridge to be actualized, grubby little engineers and construction workers have to put one brick on top of another. Bob, you're one of those grubby little engineers." It made perfect sense to me. I happily accepted, and still accept, my role as a technician in some possible Grand Scheme of which I am quite unaware.

4. During a seminar, Skinner mentioned that he had never read *Walden Two* because he was not interested in utopias—he already had his own. (The editors at Macmillan Publishing Company assembled the book from rough drafts of a novel Skinner wrote years before.) A student asked him if he would mind telling us what that utopia was. The expectation among some of the students was that we would hear a florid, Leary-esque account of a drug trip. Quite the contrary. What we got was a typically bland description of the office in the basement of his house where he would escape from the noise of his daughters and had his writing behavior under control of carefully arranged discriminative stimuli (e.g., large newsprint drawing pads used for outlining manuscript ideas).

5. My curiosity was prompted, in part, by assertions such as those by McKenna (1991): "All psychedelics appear to be the same psychedelic at low doses, doses just over threshold. But as larger doses that are still pharmacologically safe are taken, differences appear. Exotic synesthesias occur, including the generation of three-dimensional languages; a situation where, using voice, one can create three-dimensional colored modalities that have linguistic content. This visible language can be displayed to a partner who is in the same state" (p. 53). For similar claims, see Wolf (1991). This is the kind of stuff I would not believe even if it were true, but what makes it worth our attention, in my opinion, is that it meets the scientific requirement of being empirically falsifiable.

6. Due to a typing error in an earlier draft of this paper, Fred's oncologist was referred to as his "ontologist." I am indebted to Thomas Greening for pointing out this error, as well as noting that an ontologist would have

probably been of more help. Unfortunately, no ontologists are listed in the local Yellow Pages.

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