

Psilocybin Studies and the Religious Experience:

## An Interview with Roland Griffiths, Ph.D.

By David Jay Brown with Louise Reitman



**ROLAND GRIFFITHS, PH.D.** is a psychopharmacologist and professor of behavioral biology at Johns Hopkins University in the Departments of Psychiatry and Neuroscience. Although Dr. Griffiths' psychopharmacology research has been at the cutting-edge of neuroscience for over thirty-five years, he is well-known for having led the landmark study with psilocybin, published in the August, 2006 issue of *Psychopharmacology*, under the title, "Psilocybin can occasion mystical-type experiences having substantial and sustained personal meaning and spiritual significance." This study confirmed what many people had long suspected, and it also helped to join Dr. Griffiths' two most passionate personal interests—neuroscience and meditation. I interviewed Roland on December 18, 2009. Roland was very gracious, reflective, and appeared to choose his words carefully. We spoke about his research with psilocybin, his interest in spiritual experiences, and how psychedelics may provide help for people who are dying.



Roland Griffiths, Ph.D., rgriff@mail.jhmi.edu

Photo by Dennis Dreiner

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**David: How did you become interested in doing psilocybin research?**

Roland: I'm trained as a psychopharmacologist. I was trained in both experimental psychology and pharmacology. For the past thirty-five years, I've been doing work in both the animal lab and the human lab, characterizing the effects of mood-altering drugs, mostly drugs of abuse. About fifteen years ago, I took up a meditation practice that opened up a spiritual window for me, and made me very curious about the nature of mystical experience and spiritual transformation. It also prompted an existential question for me about the meaningfulness of my own research program in drug abuse pharmacology.

On reflecting about the history of psychopharmacology and the claims that had been made about the classical hallucinogens occasioning mystical and spiritual experience, I became intrigued about whether I could turn the direction of some of my research program toward addressing those kinds of questions. Through a confluence of interactions and introductions, I first met Robert Jesse of the Council of Spiritual Practices, and he introduced me to Bill Richards, who had a long history of working with these compounds from the 1960s and 70s. We decided that we would undertake a research project characterizing the effects of psilocybin.

The initial study that we undertook was really a comparative pharmacology study aimed at rigorously characterizing the effects of psilocybin using the kinds of measures that have been developed in clinical pharmacology over the last fifty years – measures that we had used extensively in our past research. However, we added another piece to that study, which came from my interest in spirituality. It really provided an opportunity for me to start reading about the psychology of religion, and looking closely into kinds of measures that might tap those type of experiences.

So the final publication of that first study, which came out in 2006, really reads as though it were intended to focus exclusively on mystical experience. The title of that paper, “Psilocybin can occasion mystical-type experiences having substantial and sustained personal meaning and spiritual significance,” underscores the most interesting finding from the study. But, in fact, I went into that study, although very curious about spirituality, completely agnostic about the outcome of the study. I didn’t believe, necessarily, that psilocybin would occasion compelling mystical experiences of the type that I had become so interested in through meditation.

**David: How did the findings from the first study motivate you to do additional research, and can you talk a little about the more recent psilocybin studies that you’re involved in?**

Roland: After completing our first study and then publishing a 14-month follow-up report, we conducted a psilocybin dose-effect study in healthy volunteers that we have yet to publish. Currently, we have a study in anxious cancer patients that’s ongoing ([www.cancer.org](http://www.cancer.org)), and, with Matt Johnson, Ph.D. we are also conducting a small pilot study examining psilocybin-facilitated cigarette smoking treatment. We also just initiated a study that will focus on psilocybin and spiritual practices. We will be giving psilocybin to people who are interested in undertaking meditation, and spiritual awareness practices, to determine how a psilocybin experience impacts their engagement with those practices.

Let me back up just a little bit. The first study showed that psilocybin can, with high probability, occasion mystical-type experiences that appear virtually identical to naturally-occurring mystical experiences which have been described by mystics and other religious figures throughout the ages. We knew that these mystical-type experiences spontaneously occurred occasionally, although unpre-

dictably. It seems that the frequency of such experiences increase under conditions when people fast, meditate, or engage in intense prayer or other kinds of ritual or spiritual practice. However, these experiences still occur at a relatively low rate.

What our studies are showing is that such experiences can be occasioned at relatively high probability. In the most recent study that we conducted, more than seventy percent of our volunteers had complete mystical experiences as measured by psychometric scales. An important implication of demonstrating that we can occasion these experiences with high probability is that it suggests that such experiences are biologically normal. Another important implication is that it now becomes possible, for the first time, to conduct rigorous prospective research, investigating both the antecedent causes as well as the consequences of these kinds of experiences. With regard to antecedent causes, it becomes possible to ask what kind of personality, genetic, or disposition characteristics increase the probability of these experiences. We described some of the consequences of the mystical experience in our first study, and certainly they’ve been well described in the broader literature on religion, mysticism, and entheogens. These involve shifts in attitudes and behavior, and some cognitive functions that appear quite positive.

Our interest in examining the effects of psilocybin-occasioned mystical experience in anxious cancer patients was that it appeared to be an immediately relevant therapeutic target. It’s very common for patients with cancer to develop chronically and clinically significant symptoms of anxiety and depression that have a significant negative impact on quality of life. The existing pharmacological and psychological treatments for depression and anxiety in patients with cancer and other terminal illnesses, are currently very limited. Epidemiological data show that spirituality has a protective effect on psychological response to serious illness. We also know that spiritual well-being is negatively correlated with hopelessness in cancer patients, and that cancer patients are interested in addressing issues of spirituality.

Importantly, there had been substantial previous work in cancer patients in the 1960s and early 1970s with LSD and other classical hallucinogens. Research had been done by Bill Richards, Ph.D., Stan Grof, M.D. and others at the Maryland Psychiatric Research Center. In

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fact, Bill's Ph.D. thesis research focused on this topic. So there was a very good clinical sense that cancer patients would be an interesting target group. Also, having personally looked closely at the spiritual experiences that people in our first studies had reported, it seemed obvious to me that psychologically distressed cancer patients were a very appropriate group to study.

**David: Have you seen anything in your sessions that influenced your understanding of, or perspective on, death?**

Roland: The hallmark feature of the mystical experience, that we can now occasion with high probability, is this sense of the interconnectedness of all things – a sense of unity. That sense of unity is often accompanied by a sense of sacredness, a sense of openheartedness or love, and a noetic quality suggesting that this experience is more real than everyday waking consciousness. I believe that the experience of unity is of key importance to understanding the potential existential shifts that people can undergo after having these kinds of experiences.

Within the domain of the psychology of religion, scholars have described two variations of this experience of unity – something called “introverted mystical experience” and another called “extroverted mystical experience.” The extroverted version of this sense of unity was assessed by items in one of the spiritual questionnaires that we used, the Hood Mysticism Scale. I'll read you a couple of items. One is, “An experience in which I felt that all things were alive.” Some of the others are: “An experience in which all things seem to be aware.” “Realized the oneness of myself with all things.” “An experience where all things seemed to be conscious.” “An experience where all things seemed to be unified into a single whole.” “An experience in which I felt nothing was really dead.”

So this feature of mystical experiences points toward the nature of consciousness, and an intuition that consciousness is alive and pervades everything. From there, it is not a great stretch to contemplate the possibility of the continuity of consciousness – or, more traditionally, immortal soul. Such an experience can break down a restrictive sense of being defined by your body, in a total materialistic framework. So I think that it's these subtle and not-so-subtle perceptual shifts that could be at the core to rearranging someone's attitude about death.

**David: Is this why you think that psychedelics can be helpful in assisting people with the dying process?**

Roland: It's very common for people who have profound mystical-type experiences to report very positive changes in attitudes about themselves, their lives, and their relationships with others. People often report shifts in a core sense of self. Positive changes in mood are common, along with shifts toward altruism – like being more sensitive to the needs of others, and feeling a greater need to be of service to others. It is not difficult to imagine that such attitudinal shifts flow directly from the sense of unity and other features of the mystical experience – a profound sense of the interconnectedness of all things packaged in a benevolent framework of a sense of sacredness, deep reverence, openhearted love and a noetic quality of truth. So it's quite plausible that the primary mystical experience not only underlies changes in attitude toward death specifically, but also changes attitudes about self, life, and other people in a way that's dramatically uplifting.

**David: What sort of promise do you see for the future of psilocybin research?**

Roland: I'm trained as a scientist, so I'm very interested in all of the scientific questions that can be asked of this experience. I'm interested in the neuropharmacology of the experience. I'm interested in the psychological and physiological determinants of this kind of experience. And then I'm interested in the consequence of this kind of experience – not only for healthy volunteers, but also for distressed individuals who might have a therapeutic or clinical benefit. Now, whether or not unpacking those scientific questions will lead to approval of psilocybin as a therapeutic drug, I don't know – and, in some ways, it's not important one way or another.

For me, what's most important is understanding the mechanisms that occasion these kinds of experiences. So I will not argue the future is with psilocybin per se. But it does appear to be an amazingly interesting tool for unlocking these mysteries of human consciousness. As we get a better understanding of the underlying neuropharmacology and neurophysiology, it may be that better compounds or nonpharmacological techniques can be developed that occasion these experiences with even higher probability than we can right now with psilocybin.

Frankly, I can't think of anything more important to be studying. As I've said, the core feature of the mystical experience is this strong sense of the interconnectedness of all things, where there's a rising sense of not only self-confidence and clarity, but of communal responsibility – of altruism and social justice – a felt sense of the Golden Rule: to do unto

others as you would have them do unto you. And those kinds of sensibilities are at the core of all of the world's religious, ethical, and spiritual traditions. Understanding the nature of these effects, and their consequences, may be key to the survival of our species.

**David: That was precisely the point that I was trying to make when I edited the MAPS Bulletin about ecology and psychedelics. Psychedelics have played such an important role in inspiring people to become more ecological aware.**

Roland: Yes, that follows from the altruistic sensibility that may flow from these types of experiences. Ecology can become a big deal with these experiences. If you really experience the interconnectedness of all things and the consciousness that pervades all things, then you have to take care of other people and the planet, right? And to bring this back around to death and dying, if everything is conscious, then death and dying may not be so frightening. There is a big and mysterious story here. •



Willow Aryn Dellinger  
edellinger89@nyu.edu

*Willow is an English major at the University of California, Santa Cruz.*

## Reflected Bits of Light

By Willow Aryn Dellinger

I shook the moon with my fingers  
as the sky chuckled beneath me.  
When I lifted my hand from the river water,  
the ridges of cream against black  
fluttered back to its whole -  
the perfect circle that rests on the  
cusp of dishevelment in puddles  
and rivers and seas across the world.  
I feel the stirred river blossom into  
drops off my fingertips as I  
rearrange the molecules of night air,  
just passing through.  
I imagine what the passage of death must be -  
perhaps something like a spontaneous night walk;  
or maybe, one's life could be the quivering pallor of a reflected moon -  
only momentarily disturbed before becoming  
whole again -  
as though we're all reflected  
bits of light,  
and life is an ephemeral illumination  
of one another  
for introducing color  
to all the dark places,  
until everything is light ...