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Psychedelics

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Charles L. Raison: Elucidating the role of conscious experience in the therapeutic effects of psychedelics as a means to optimize clinical outcomes

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Charles Raison, MD, is a Professor of Human Ecology and Psychiatry in the Department of Psychiatry, School of Medicine and Public Health, University of Wisconsin-Madison. Dr. Raison also serves as Director of Clinical and Translational Research for Usona Institute, as Director of the Vail Health Behavioral Health Innovation Center, Director of Research on Spiritual Health for Emory Healthcare, and as Visiting Professor in the Center for the Study of Human Health at Emory University in Atlanta, GA. Dr. Raison's research focuses on the examination of novel mechanisms involved in the development and treatment of major depression and other stress-related emotional and physical conditions, as well as his work examining the physical and behavioral effects of compassion training. More recently, Dr. Raison has taken a leadership role in the development of psychedelic medicines as potential treatments for major depression. He was named one of the world's most influential researchers by the Web of Science for the decade 2010–2019. With Vladimir Maletic, he is author of *The New Mind-Body Science of Depression* published by W.W. Norton in 2017. We are happy to share Dr. Raison's perspectives on his life and career with our readers.

Figure 1. Charles L. Raison, MD, University of Wisconsin-Madison, USA.

Part 1: Charles L. Raison – Life and Career

Could you give us a glimpse into your personal history, emphasizing the pivotal moments that first kindled your passion for science?

My childhood was dominated by a love of science, especially astronomy. In sixth grade, I started my own stargazing magazine (with the printing help of my parents, who owned a small-town newspaper). My interest in science lapsed in my teenage years and was replaced by a search for spiritual answers to life's mysteries. My journey back toward science began not with science but in the humanities when I discovered psychoanalysis not in a clinical context but while working on a Ph.D. in English. Spurred on by this and a first encounter with the power of psychotherapy in my own life, on Christmas Eve 1984, I had a "road to Damascus" type experience on a forlorn highway in South Texas when I suddenly decided that I should change my life's direction and become a psychiatrist. This required that I return to school to complete all the pre-med-type classes I had studiously avoided as an undergraduate. The beauty of physics ravished me, and I might have stepped away from my medical plans had I the talent; however, lacking the requisite mathematical gifts, I did become a doctor and a psychiatrist. But I was still a ways away from spending a life in science as my early years after residency were spent as a full-time clinician.

It is interesting how life brings things back around. My long-term interest in spiritual traditions launched my life in science. In the mid-90s, I had the good fortune to befriend the Dalai Lama's sister, who, in turn, introduced me to several brilliant Tibetan Buddhist monks. These gentlemen taught me much about esoteric meditation practices, which fascinated me. I became obsessed with understanding what these practices did to the brain and body from a Western scientific perspective. I was especially interested in the effect of these practices on body temperature, as raising body temperature is central to these techniques, as odd as that sounds from our Western perspective.

As wonky as these considerations sound, they motivated me to leave a clinical faculty position at UCLA, throw caution to the wind, and move to Emory University in Atlanta in hopes that I could leverage the university's strengths in Tibetan Buddhist studies and mind-body medicine to pursue the studies I wanted to commence.

Just as life brings things back around, so does it move forward in paradoxical ways. I became a researcher at Emory under the tutelage of my friend and mentor, Andrew Miller. However, I could never conduct the studies of advanced Tibetan Buddhist meditation practices that had been my initial impetus for retooling my career toward research. A pivotal moment came early on at Emory when I was still trying—but struggling to do the work I wanted to do—when Andy said, "While you are fiddling with this meditation stuff, how about doing some real science in the meantime?" This was his offer to join him in studying how inflammation affects the brain and body to produce depression. I was interested in thermoregulation and body temperature because of my

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Figure 2. Charles L. Raison volunteering to "beta test" an EEG protocol.

interest in a meditation technique called tummo (made somewhat famous recently by Wim Hof). Inflammation increases body temperature, so I thought, "Why not?" and joined Andy's research team. Had I said "no" and insisted on my more narrow focus, I would never have been gifted with a life in scientific research. This is an important point and a profound challenge for young scientists. On the one hand, you do not want to go so far away from your interests that the work is tedious; however, if you are too rigid, tremendous opportunities will sail past.

My experience has been that research is like following a fascinating trail of breadcrumbs through the forest. If one maintains a felt sense of what one is looking for, things often circle back. Although I never did the studies I had initially hoped to do, over the years, I have been fortunate to conduct meditation studies and, in the last decade, studies that harken back to my long-term interest in body temperature/thermoregulation and mood.

We would like to know more about your career trajectory leading up to your most relevant leadership role. What defining moments channeled you toward that leadership responsibility?

My leadership roles, such as they are, were something other than what I actively pursued. I realized many years ago that I prefer to occupy a "vice president" type role, being second in command in a research group. I was never more productive than when I existed in this type of relationship at Emory University with Andy Miller. I am an excellent "wingman". But years pass one ages, and over time, one is faced with a choice to either step into leadership or step aside. I have generally stepped in. I have had several leadership positions over the last decade, but I will focus on two here. In 2017, George Grant, MDiv, PhD, asked me to become the Director of Research on Spiritual Health for the Woodruff Sciences Center at Emory University. Because my primary academic position is—and was then—at the University of Wisconsin-Madison, I realized early on that the best way I could lead from a bit of a distance was to bring in as much research talent as possible and then disperse leadership amongst these researchers. I consider this one of my primary leadership accomplishments because I have been remarkably successful (if I can brag) at bringing remarkable younger scientists to Emory as faculty working in Spiritual Health. More recently, a defining moment in the last several years occurred when I was invited to take on the role of Director of the new Vail Health Behavioral Health Innovation Center, a new institute situated within a larger consortium that has been established between UW-Madison and Vail Health. I took this position because it promises to bring many of my research interests and colleagues together into one place to explore the implementation of novel treatments for depression, anxiety, and substance use disorders.

Please share with us what initially piqued your interest in your favorite research or professional focus area.

I have always had two deep interests that have formed an undercurrent in all my work. One of these is the ability of the body to influence mental states. The other is the potential of particular mental states to promote profound and sustained wellbeing. These two are—of course—related: the body can be used to drive the mind into certain mental states, and certain mental states can profoundly affect bodily function. As I described above, I came into research because I was fascinated by the possibility that certain esoteric Buddhist meditation practices might be equivalent to deep brain stimulators to induce profoundly positive mental/emotional states. More lately, my work with psychedelics has induced in me a profound interest in the question of whether consciousness has actual causal power in the world (as opposed to being epiphenomenal to more basic non-conscious brain processes).

What impact do you hope to achieve in your field by focusing on specific research topics?

On a more fundamental science level, I would like to use psychedelics to explore the question of whether consciousness has causal power. On a clinical level, I hope to conduct studies that identify and optimize novel treatments for depression and anxiety, especially those that build upon ancient practices that are often also adaptive stressors.

Please tell us more about your current scholarly focal points within your chosen field of science.

I am currently up to my eyeballs in five major studies for which I have primary responsibility. Four of these studies focus on trying to understand better the role of conscious experience in the therapeutic effects of psychedelics and, via this understanding, to optimize outcomes. One of the studies focuses on whole-body hyperthermia. This study seeks to understand whether the therapeutic effect of heat can be expanded by combining heat with cold exposure. This study also seeks to follow up on prior work that has identified a potential immune-based antidepressant mechanism of action of whole-body hyperthermia.

What habits and values did you develop during your academic studies or subsequent postdoctoral experiences that you uphold within your research environment?

A primary value is never to set out to prove what I already know to be true—a trait that is too often present in people who study mind-body type interventions like meditation or novel treatments like psychedelics. Years ago, I was told by a wise person, "If you are scared of the truth, get out of science," and I have taken that to heart. I start studies with hypotheses but am always ready to abandon these and listen to what the world is trying to tell me through the actual results of a study. The most exciting studies I have done have been those that disproven my initial hypotheses.

At Genomic Press, we prioritize fostering research endeavors based solely on their inherent merit, uninfluenced by geography or the researchers' personal or demographic traits. Are there particular cultural facets within the scientific community that warrant transformative scrutiny, or is there a cause within science that deeply stirs your passions?

I have become increasingly concerned about data falsification within science, as it has become sadly and increasingly clear that this is a real issue. As much as anyone, I understand the terrible pressure researchers are under to produce positive "catchy" results. Nevertheless, the entire edifice of science is built upon our ability to trust results. Failed studies do not add much to one's career in any straightforward sense. However, my best ideas generally come from results that contradicted my easy initial hypotheses.

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What do you most enjoy in your capacity as an academic or research leader?
I enjoy the opportunity to devise and implement studies that attempt to address questions that most interest me and are essential for human wellbeing.

Outside professional confines, how do you prefer to allocate your leisure moments, or conversely, in what manner would you envision spending these moments given a choice?
I take a "Swiss Cheese" approach to work and leisure. Because of my many responsibilities, I work all the time, meaning I start the day with work, and late into the evening, it is usually the last thing I do. Nevertheless, like Swiss Cheese, I leave holes in the constant work stream to do fun things with family and friends. So I work, off and on from 7 a.m. to 10 p.m., but during that period, I will also take a couple of walks with my partner or kids. When I travel for work, I often try to leave a few extra hours open for what I have called "targeted travel," a brief excursion that transforms a work trip into something fun and memorable. If I had more of a choice in my time, I would eliminate email. Far too much of my time is spent just culling through all the details that emailing makes it so easy to become bogged down.

Part 2: Charles L. Raison – Selected questions from the Proust Questionnaire[1]

What is your idea of perfect happiness?
I want to explore somewhere new and fascinating on a perfect summer's day with the people I love.

What is your greatest fear?
Dying after the people I love.

Which living person do you most admire?
I greatly admire many people. But I know my partner Christine Whelan best and admire her most.

What is your greatest extravagance?
Green Chartreuse.

What are you most proud of?
The wide variety of amazing people I have been honored to know as friends, colleagues and family.

What is your greatest regret?
Not meeting my partner sooner in my life.

What is the quality you most admire in people?
Highly competent/talented people who don't toot their own horns.

What do you consider the most overrated virtue?
Over the years, people have complimented me on being a risk-taker, which I appreciate because, in fact, I am rather cautious and conservative at heart.

What is your favorite occupation (or activity)?
Walking in a new and exciting place with my partner.

Where would you most like to live?
Walnut Creek, CA

What is your most treasured possession?
My copy of "The Handbook of the Yokuts."

When and where were you happiest? And why were so happy then?
I am the happiest I have ever been right now. Later in life, I met the love of my life, and we have five children together who are the light of my life. My work is stressful but fascinating and meaningful.

What is your most marked characteristic?
Wide-ranging curiosity about life and the world we find ourselves in.

Among your talents, which one(s) give(s) you a competitive edge?
Ability to public speak and write.

What do you consider your greatest achievement?
Raising my two teenage boys.

If you could change one thing about yourself, what would it be?
I would be more organized.

What do you most value in your friends?
Kindness, intelligence, passion, and vision.

Who are your favorite writers?
John Spivey (The Crying Dance, The Great Western Divide), Rilke, Whitman, TS Eliot (Four Quartets).

Who are your heroes in real life?
Franklin Delano Roosevelt, Eleanor Roosevelt, Buddha, Samuel Johnson.

What aphorism or motto best encapsulates your life philosophy?
"Old men ought to be explorers
Here or there does not matter
We must be still and still moving into another intensity
For a further union, a deeper communion."

Charles L. Raison, MD[1]
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[1] In the late nineteenth century various questionnaires were a popular diversion designed to discover new things about old friends. What is now known as the 35-question Proust Questionnaire became famous after Marcel Proust's answers to these questions were found and published posthumously. Proust answered the questions twice, at ages 14 and 20. Multiple other historical and contemporary figures have answered the Proust Questionnaire, such as Oscar Wilde, Karl Marx, Arthur Conan Doyle, Stéphane Mallarmé, Paul Cézanne, Martin Boucher, Hugh Jackman, David Bowie, and Zendaya. The Proust Questionnaire is often used to interview celebrities: the idea is that by answering these questions an individual will reveal his or her true nature. We have condensed the Proust Questionnaire by reducing the number of questions and slightly rewording some. These curated questions provide insights into the individual's inner world, ranging from notions of happiness and fear to aspirations and inspirations.