Chapter 7
Integrating Psychedelic Medicines and Psychiatry: Theory and Methods of a Model Clinic

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Abstract The past two decades has seen a significant increase in both popular and scientific interest in psychedelic substances and plants as therapeutics for mental illness, addictions, and psychospiritual suffering. Current psychiatric practice privileges a biological paradigm in which the brain is considered the locus of mental illness and symptom-focused treatments are delivered to patients as passive recipients. In contrast, a psychedelic healing paradigm, constructed through examination of different ontologic understandings of plant medicines, is based on a complex multidimensional perspective of human beings and their suffering. This paradigm actively engages the sufferer in addressing root causes of illness through healing on multiple levels of existence, including spiritual and energetic domains. Numerous theoretical, methodological, and ethical challenges complicate the integration of the psychedelic healing paradigm into psychiatric practice. These include developing coherent therapeutic narratives that account for the complex processes by which psychedelic healing occurs and overcoming reductionist tendencies in the medical sciences. Tasked with overcoming such challenges, a model clinic is proposed that seeks to implement and study the psychedelic healing paradigm in a critical, interdisciplinary, and reflexive manner. Such "critical paradigm integration" would employ multimodal patient formulation and treatments, as well as a range of knowledge generation and sharing practices. Outcomes-oriented research would seek to establish an evidence base for the model, while critical dialogues would advance understandings of psychedelic substances and plants and related practices more generally. The clinic would serve as proof of concept for a new model of studying, conceptualizing, and treating mental illness.

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Introduction

How can the use of psychedelic substances and plants[1] help alleviate human suffering? What are the barriers to these medicines becoming part of mainstream mental health treatment? What models could be used to both treat mental disorders with psychedelics and conduct research on their therapeutic uses in a meaningful and ethical way? This chapter attempts to provide some preliminary answers to the above questions. First, it will discuss key differences between current psychiatric treatment and a proposed paradigm of psychedelic healing. Next, it will examine relevant theoretical, methodological, and ethical challenges in integrating the two paradigms. Lastly, it will outline how an integrative psychedelic healing approach could be implemented in a model clinic utilizing "critical paradigm integration."

Psychedelic Medicines in the Era of Biological Psychiatry

My training in psychiatry at Yale University has emphasized a "biopsychosocial" approach to diagnosis and treatment (Engel, 1980), in which biological, psychological, and social factors are thought to contribute to a person's mental illness or suffering. Accordingly, treatment interventions are meant to address problems in each of those domains. The model is fairly comprehensive and often quite effective when a person is able to access and make use of the various possible treatments, such as medications, evidence-based individual and group psychotherapies, and social interventions. Unfortunately, this is too often not the case due to resource limitations and, I would argue, to an overprivileging of biological perspectives and technological interventions in the field of psychiatry in recent decades (Bracken et al., 2012). This shift has occurred for several reasons, including (a) helping psychiatry take its place among other specialties of medicine grounded in the biological sciences; (b) destigmatizing mental illness and addictions by reframing them as chronic treatable illnesses, like diabetes or heart disease, rather than as moral failings or resulting from weak character; and (c) promoting pharmaceuticals as the primary means of addressing mental illness and alleviating everyday suffering (Carlat, 2010; Moynihan & Cassels, 2006).

In the current era of biological psychiatry, mental illnesses like depression and schizophrenia, as well as addictions, are primarily conceptualized as brain diseases resulting from aberrant neural circuitry and chemical imbalances. To address brain-

[1] A note about terminology: There are currently debates about how psychedelic substances or molecules are similar to or different from plants or plant-based preparations containing psychoactive (as well as other) compounds. The latter are commonly referred to as "plant medicines" by enthusiasts and some academics. The nuances of this debate are beyond the scope of this chapter, which will give preference to the more neutral and inclusive term "psychedelic substances and plants," as most points being made about psychedelic healing apply to both.

based pathology, psychiatrists commonly prescribe medications and deliver other interventions, such as electroconvulsive therapy (ECT) or transcranial magnetic stimulation (TMS), that primarily target brain circuits and neurotransmitters.[2] The sufferer is largely a passive recipient or consumer of such treatments and, without additional psychotherapy or lifestyle modification, is positioned as a relatively helpless victim of a diseased brain. Evidence-based forms of psychotherapy, which conversely require the active engagement of the sufferer in his or her own healing, are too often unavailable, unaffordable, or not sought out by people suffering with mental disorders. This is largely due to the current structures of insurance coverage and financial incentives for mental health practitioners in the United States and has resulted in a rise in the proportion of patients receiving pharmacotherapy only (Olfson & Marcus, 2010).

Moreover, most pharmacological treatments currently available in psychiatry target symptoms, rather than root causes of psychiatric illness. This is due, on the one hand, to a lack of understanding of the precise biological etiologies of mental illnesses and, on the other, to the inability of conventional pharmaceuticals to address psychological, social, and spiritual or energetic[3] causes of suffering. Symptoms also constitute the focus of most psychiatric or "medication management" patient encounters. This reflects the way in which mental health service provision and reimbursement are currently based on categorical or descriptive diagnoses, which cluster symptoms into disorders. In such a system, mental health providers must elicit symptoms from patients in order to make a diagnosis (as is generally required for reimbursement) and focus treatments on diminishing those symptoms. The result of this approach is often chronic drug administration, associated side effects, partial treatment effectiveness, and patient dissatisfaction (Goff et al., 2017; Samara et al., 2016; Warden, Rush, Trivedi, Fava, & Wisniewski, 2007). This in turn has led to the rise of new paradigms, such as the recovery movement and strengths-based or resilience-based approaches, and to a rapid expansion of complementary and alternative medicine (CAM) in the West (Tindle, Davis, & Phillips, 2005).

Different Ontological Understandings of Psychedelic Medicines

Psychoactive plants have been in relationship with humans for thousands of years (El-Seedi, Smet, Beck, Possnert, & Bruhn, 2005; Torres, 1995), playing various roles in society, culture, religion, and medicine over time. Reflecting this complex

[2]Effective clinicians may also imbue these treatments with additional meaning and target patient expectancy in order to boost the placebo effect of the intervention.

[3]By energetic, I refer to Eastern conceptions of physiology and pathophysiology involving energetic channels, meridians, and centers (or chakras), such as in traditional Chinese medicine or Ayurveda, as well as shamanic notions of energy.

historical relationship, there are numerous different ways that psychedelic substances and plants are understood and characterized by different groups of people and academic disciplines. Before outlining tenets of a psychedelic healing paradigm, I will first consider these different "ontologic understandings" (Tupper & Labate, 2014) in order to shed light on different possible ways that psychedelics may exert their therapeutic effects.

Ayahuasca will make a useful example here, given its long history of use among indigenous peoples and more recent expansion into a variety of cultural, spiritual, and scientific contexts. An anthropological or indigenous perspective of ayahuasca may view the brew as a "plant spirit" or "teacher" with which a person or shaman interacts to bring about a desired effect (Luna, 1984). Meanwhile, ayahuasca could be described in strict biomedical terms as a collection of alkaloids and other chemical compounds, primarily a serotonin 2A receptor agonist and monoamine oxidase inhibitor (MAO-I), which alter brain network connectivity and neuroplasticity (Domínguez-Clavé et al., 2016). Perhaps between these views are psychological perspectives of the brew as a "psychedelic" or "cognitive tool" (Tupper & Labate, 2014) capable of eliciting non-ordinary states of consciousness, manifesting aspects of the subconscious, and bringing about insights and change.

There are multiple other ways of conceptualizing ayahuasca that continue to evolve as its use becomes more widespread. Spiritual or religious perspectives may classify it as an "entheogen" or "sacrament," capable of catalyzing profound spiritual or mystical experiences (Richards, 2015). More recent discourses consider ayahuasca to be an "evolutionary tool" that can help our species evolve or live more harmoniously with nature. Finally, ayahuasca and other psychedelic plants are often endearingly called "plant medicines" by contemporary users wishing to highlight their healing effects.

From Ontologies to a Psychedelic Model of Healing

Although different ontologic understandings of psychedelic plants may be based on different modes of knowledge (i.e., empiric scientific investigation versus experiential or intuitive understanding), I do not see them as separate or incompatible. Rather, I would argue they reflect different "mechanisms of action" by which psychedelic medicines exert their effects on the human organism. Unlike with traditional psychopharmaceuticals, psychedelics and psychedelic-assisted therapies are described by the various ontologies as impacting multiple layers of existence (i.e., biological, psychological, social, spiritual, and energetic) both during the acute experience and afterward. Thus, accounting for the various ontologic understandings of psychedelics points toward a particular way of conceptualizing the human condition, namely, that we exist as complex multilayered beings, with brain-minds, bodies, hearts, and spirits, all of which are connected to each other and to our natural and social environments.

The next task is to translate this psychedelically informed perspective of human existence into a healing paradigm. With an eye toward integration of psychedelic healing into mainstream medicine, I believe this could be achieved through revision and expansion of the well-known biopsychosocial model of diagnosis and treatment discussed earlier. First, a psychedelic healing model would level the playing field between the biological and the psychosocial; it would reaffirm psychological and social interventions as valued and worthwhile means of healing. More uniquely, it would expand the model to more explicitly include emotional, spiritual, transpersonal, energetic, and ecological diagnostic perspectives and therapeutic interventions.[4]

In this psychedelic model of healing, mental suffering does not just result from pathology of the brain; suffering and "disease" may arise in any of these layers of existence and can be propagated through them in complex ways. For instance, emotional trauma or chronic social stressors may become internalized throughout the body's psychoneuroendocrine immunologic (PNEI) network, resulting in a range of psychological and physical symptoms (Tafur, 2017). As a result, proper treatments must be capable of intervening on multiple layers of existence. While this ability may be inherent to psychedelic medicines, having a therapeutic effect may not be, especially in those experiencing profound suffering. This is in line with the well-established principle that the effects of psychedelic medicines are idiosyncratically dependent on "set" (psychological state) and "setting" (environment) (Leary, Metzner, & Alpert, 1995). Thus, for people experiencing profound depression or other mental illnesses, healing effects may need to be guided through one or more of layers of existence and outward into interpersonal and social domains. Without discounting the ability of a person's "inner healer" to accomplish this through careful preparation and intention, the process may be made safer and more effective by the guidance and support of a well-trained therapist, perhaps working in collaboration with a shaman, before, during, and after the medicine experience.

The continuation and propagation of healing begun during a psychedelic experience is how I define the increasingly popular term "psychedelic integration." On the one hand, biological changes induced by psychedelic substances, such as heightened neuroplasticity or altered patterns of brain connectivity (Carhart-Harris et al., 2016), may be taken advantage of following an acute experience through ongoing practices that change cognition and neurocircuitry, such as psychotherapy or meditation. On the other hand, a deep insight gained during an acute experience may initiate a process of changing one's daily habits, interpersonal relations, living environment, and relation to society and nature.

In sum, psychedelic healing is not a "magic bullet" intervention, requiring only the passive compliance of a sufferer in ingesting a medication. Rather, it actively engages the sufferer in a multilayered healing process that has the ability to interrupt deep-seated pathological patterns and processes. This targeting of root causes of illness helps explain both the popular excitement behind psychedelic healing and the

[4]Details of this approach will be discussed further in the second half of the chapter.

profound and long-lasting therapeutic benefits seen thus far in clinical trials (Bogenschutz et al., 2015; Griffiths et al., 2016, 2011; Johnson, Garcia-Romeu, & Griffiths, 2016; Ross et al., 2016).

Theoretical, Methodological, and Ethical Challenges to Paradigm Integration

Thus far, I have described different ways of understanding how psychedelics impact the human organism and proposed a paradigm of psychedelic healing premised on the profound interconnectedness of biology, psychology, and spirituality. In order to harness the full therapeutic potential of psychedelic substances and plants for the greatest number of people and problems, the field of psychedelic science needs to develop deep understandings of how they operate at each ontological or existential level and, critically, how these levels and processes interact. For instance, we need to understand how the use of music, psychotherapy, and other shamanic practices may alter the effects of a given medicine, both phenomenologically and biologically, in terms of altering neurobiology, physiology, or epigenetics. Thus, as a clinician and academic researcher, I view the primary mission of the emerging field of psychedelic science as integrating previously disconnected and conflicting modes of knowledge and approaches to healing.

This project of knowledge integration is likely to be contested at multiple sites of knowledge production, by various actors, and at various points along its path. I will now highlight pertinent theoretical, methodological, and ethical challenges to integration, especially those I have encountered in the academic setting.

Theoretical Issues Given the multiple ontologies and related terminologies of psychedelics, one primary challenge for practitioners in this field is articulating a coherent narrative or model for psychedelic healing. In my experience, "code switching" (Auer, 2013), or flexibly utilizing different idioms and paradigms to convey concepts of psychedelic healing to different audiences, is a common tactic to negotiate this problem. For instance, the explanatory model offered to scientific colleagues and funders of how ayahuasca may help promote recovery from addictions may differ in tone and terminology from that given to lay audiences or research subjects.

A more significant challenge for clinicians and researchers working in academia arises when attempting to translate the psychedelic healing paradigm into clinical trial protocols. This involves striking a delicate balance in presenting a narrative that is sufficiently scientific to satisfy colleagues and grant-awarding bodies that operate primarily in a biological framework without completely obscuring other ontologic understandings. Succeeding in this is complicated, as healing principles and interventions derived from shamanism or spiritual perspectives are largely foreign to traditional drug development research and involve introducing variables that are difficult to control (see the following section on methodological issues).

An example of this would be in rationalizing the decision to use liquid ayahuasca instead of freeze-dried capsules in a clinical trial protocol or conference presentation. Medical doctors and psychiatrists, who are not trained to see drug-induced altered states of consciousness as therapeutic and are unfamiliar with the traditional use of purgative plants, would be primarily concerned about isolating the "active ingredient," tightly controlling dose, and minimizing side effects. Thus, an explanation that the water in ayahuasca is itself considered an important ingredient for healing and that preserving its natural odor, consistency, and taste are essential for inducing beneficial purgative effects would likely be unsatisfactory. Rather than convey these unconventional ideas in a scientific protocol, one may offer a rationale around "effectiveness"—studying what occurs in the real world—as a scientific justification. Similar problems arise in explaining and operationalizing the concept of "medication-assisted psychotherapy," or in incorporating esoteric healing practices that are foreign to most clinical trials, such as the use of music during experimental sessions.

While operating within a single ontologic understanding of psychedelic medicines or focusing on a particular site of suffering may be appropriate or necessary at certain times and situations, my concern is that an unintegrated language around the use of psychedelics limits our breadth of understanding and narrows their therapeutic potential. This is especially true because differential alignment with particular ontological understandings or theoretical perspectives bias toward particular therapeutic approaches at the exclusion of others. In preparing a research protocol to investigate the therapeutic potential of psilocybin in the treatment in depression, it became difficult to rationalize embedding psilocybin administration sessions within a course of psychotherapy, as the research grant was necessarily grounded in a biological framework focused on demonstrating "target engagement" of the investigational drug.[5] Operating within a strictly biological framework leaves little room for psychological or spiritual mechanisms of action, which some team members felt could be discredited as "voodoo" or "psychobabble" by grant reviewers.

The drive to conduct clinical trials with psychedelics with utmost scientific rigor is commendable, given the risk of discrediting the entire "psychedelic renaissance" with sloppy science or bad outcomes. However, this cannot come at the expense of losing sight of what distinguishes psychedelics and the psychedelic healing paradigm as distinct from a pharmacology-first treatment model. Adherence to a strict biological paradigm risks promoting a "magic bullet" model of treatment, in which the medicine is given and allowed to do its work without need for further intervention. This has largely been the story of ketamine, a dissociative anesthetic drug with some psychedelic properties, that has recently been popularized in mainstream psychiatry as a rapid-acting antidepressant (Sanacora & Schatzberg, 2014). Characterized in the existent psychiatric literature almost exclusively through its

[5] "Target engagement" refers to verification that the intervention has had the predicted effect on the target (National Institute of Mental Health, 2013). This has recently become a requirement to receive grant money from the National Institute of Mental Health (NIMH).

neurobiologic properties, there has been little discussion of potential psychological or spiritual mechanisms of action, and ketamine's dissociative or psychedelic effects have been seen as side effects of the medication. One result of this is that ketamine treatment, unlike psilocybin- or MDMA-*assisted* treatment, has not been paired with psychotherapy, and there is minimal debriefing of the subjective experience. A concerning consequence of this has been a dramatic increase in ketamine providers throughout the United States administering the infusions without any form of integration and without formal training in supporting patients through non-ordinary states of consciousness.

Whether ketamine therapy would yield improved outcomes for mental illnesses if other ontologic understandings were brought to bear on its use, for instance, by capitalizing on its subjective effects or integrating it with psychotherapy, is a question still under investigation (Wilkinson et al., 2017). My argument is that psychedelic science should aim to develop a diverse knowledge base that enables practitioners to effectively draw on different understandings of how these medicines work in a tailored fashion in order to achieve maximal therapeutic benefits for patients.

Methodological Issues Current political, economic, and philosophical determinants will continue to pull psychedelic research and treatment in a biological direction. As I have been arguing, it is critical in this early and resurgent time for psychedelic science that researchers aim to integrate different types of knowledge and design treatment protocols that reflect complex multidimensional understandings of how psychedelic substances and plants bring about healing. This is crucial because treatment guidelines are generally based on evidence produced in clinical trials, and so the models that are designed and tested now will inform future guidelines for the use of these medicines in clinical practice.

However, there are significant challenges in applying the scientific method and typical clinical trial methodology to the study of psychedelics and the broader psychedelic healing paradigm. The primary set of limitations, in my experience, relates to the concept of scientific reductionism, or the tendency to isolate individual variables and characterize their specific (biological) effects, rather than looking at systems as a whole. As Michael Pollan points out in his critique of nutritional science, this reductionist approach "means ignoring complex interactions and contexts, as well as the fact that the whole may be more than, or just different from, the sum of its parts" (Pollan, 2007).

This becomes a practical problem when the Federal Drug Administration's process of rescheduling a substance from Schedule I to II requires that researchers demonstrate that the substance alone is responsible for therapeutic efficacy, in comparison to a placebo. In the context of studying psychedelics, the reductionist tendency does not allow for the study of complex interactions between the physical or biological properties of a medicine like ayahuasca and the metaphysical healing components that are complementary to its use, such as music, dieting, praying, being in nature, and other aspects of shamanism. Such "setting" variables either need to be eliminated, controlled for in placebo condition, or be seen as confounding variables.

In other words, contemporary clinical trial design cannot account for the complex interactions that occur between psychedelic medicines and set and setting variables.

Beyond efficacy studies that isolate the substance as the primary variable, the field of psychedelic science therefore needs to conduct studies on set and setting variables in order to answer important questions, such as: What factors make a person more or less likely to have a favorable or poor outcome to psychedelic-assisted therapy? In what setting and with whom should a person ingest a medicine like ayahuasca to achieve a given effect or outcome? Should a shaman or therapist (s) be present, and should they also ingest the medicine? Does it matter if the therapists have personal experience with the medicine being given or if they have the ability to adjust the music during a dosing session? Only through further interdisciplinary research and intercultural dialogue can we answer these difficult questions about therapeutic approach.

Another methodological problem related to reductionism is the historical tendency of biomedical science to isolate and study single molecular compounds as medicines, rather than looking at combined effects of multiple chemical compounds. The presence of multiple active compounds occurring in differing concentrations in different plant strains (e.g., marijuana) or preparations (e.g., ayahuasca), a phenomenon known as the "entourage effect" (Ben-Shabat et al., 1998), poses significant challenges for a scientific method trying to determine simple cause-and-effect relationships. However, as proponents of whole-plant cannabis or ayahuasca would suggest, the entourage effect is an understudied phenomenon of nature whose secrets hold great therapeutic potential. Fortunately, Sidarta Ribeiro (2018) discusses this important topic in greater depth in this volume. Further research into understanding the entourage effect will critically help psychedelic scientists select particular strains or preparations of plant medicines for testing in future clinical trials.

Lastly, I will only briefly mention the more widely discussed problem of blinding psychedelics in placebo-controlled trials, given their profound and unmistakable subjective effects. This issue is examined more closely in this volume by Katherine Hendy (2018), in her discussion of clinical trials conducted by the Multidisciplinary Association for Psychedelic Studies (MAPS) with MDMA.

A key point to be made before leaving this discussion is that the methodological challenges highlighted above are limitations of the scientific method, not problems inherent to plants, molecules, or complex healing practices. Psychedelic scientists are tasked with the challenge of adapting scientific tools and methods, or creating new ones when necessary, in order to adequately study these phenomenon, rather than packaging them into artificial units that are more conveniently studied by existing scientific methods. I believe that overcoming these challenges of integration represents a significant opportunity for the field of psychedelic science to contribute to the sciences as a whole and to impact the way we study, conceptualize, and treat mental illness.

Ethical Issues An in-depth discussion of the ethical issues surrounding the expansion of plant medicines outside of their original ethnocultural and ecological

contexts is beyond the scope of this chapter (please see Labate & Cavnar, 2014; Labate, Cavnar, & Gearin, 2016 for more detailed discussions). However, I would like to briefly acknowledge a number of risks inherent to the work of integrating plant medicines into more mainstream medicine, as they will inform certain design elements of a model clinic.

First is the risk of appropriation of indigenous knowledge. Bringing indigenous plants and knowledge into the gaze of Western biomedicine will undoubtedly involve changing the way the medicines are used and selectively including and excluding bits of indigenous knowledge and practice. At the II World Ayahuasca Conference in Acre, Brazil, held in October 2016, dozens of delegates from ayahuasca-using indigenous communities urged ayahuasca researchers and practitioners to respect their traditions, include them in contemporary discussions about ayahuasca use, and speak out against inappropriate uses of ayahuasca, including its commercialization (World Ayahuasca Conference, 2016). I imagine that some stakeholders will find certain forms of ayahuasca research to be upsetting, incorrect, or unjust.

The second set of ethical concerns relates to the general tenet to do no harm to patients. Treating someone with psychedelic plants and medicines, although shown to be rather safe in well-controlled settings, carries certain inherent risks to physical and psychological health (Barrett, Bradstreet, Leoutsakos, Johnson, & Griffiths, 2016; Halpern, Sherwood, Hudson, Yurgelun-Todd, & Pope Jr., 2005; Halpern, Sherwood, Passie, Blackwell, & Ruttenber, 2008; Johnson, Richards, & Griffiths, 2008; Nichols, 2016). This is especially the case when working with people suffering from significant medical or psychiatric illnesses and may require discontinuation of pharmaceutical medications before undergoing treatment. There may also be unforeseen risks to their social health through stigmatization by family, friends, or co-workers. Thus, the use of these medicines must not be taken lightly, and significant preparation and training must be ensured.

Lastly, engaging in this kind of work carries with it a high degree of social responsibility. Psychedelics currently occupy a tenuous space in society. Legally, they are considered Schedule I illegal drugs in the Unites States, meaning they have "no currently accepted medical use and a high potential for abuse" (United States Drug Enforcement Administration, n.d.). Yet, the use of these substances is widespread globally among diverse groups of people who believe their use to be beneficial. Psychedelic science is currently one of the primary mediators between governments, policymakers, and the public on the regulation of these substances. Thus, we must proceed with caution and integrity in order to avoid further prohibition or criminalization of their use and barriers to their scientific investigation. This would jeopardize the immense potential held in current and future research and therapeutic development.

Theory and Practice of a Model Clinic: Overview

Keeping in mind the various theoretical, methodological, and ethical challenges posed above, I will next turn to the task of envisioning a setting where the multidimensional model of psychedelic healing outlined earlier could both be put into clinical practice and studied in a manner that promotes paradigm integration and critical reflexivity. In light of the limitations of the reductionist mode of clinical trial research, which focuses on the substance or medication as the primary object of inquiry, the model clinic proposed here would endeavor to implement and test a *model of care* based on the psychedelic healing paradigm. In similar fashion to how the Millennium Villages Project was established to serve as a proof of concept that a holistic, intersectoral approach to sustainable development was both feasible and effective for addressing extreme poverty (Millenium Villages Project, n.d.), a model psychedelic healing clinic would serve as proof of concept that a holistic, interdisciplinary approach to mental health, including proper use of psychedelic substances and plants, is feasible and effective for treating psychiatric, substance use, and related disorders. In setting a precedent and generating evidence for a new model of practice, this project would seek to impact thought leaders and policymakers in the health sector and related fields.

In order to achieve the clinic's mission as outlined above, it would need to have the capacity to engage in the following essential interrelated activities: clinical practice, research, knowledge sharing, policy and advocacy, and funding generation. These activities are interrelated as they would generally inform or depend on one another (for instance, research would inform and be informed by clinical practice as well as other forms of knowledge sharing). Given the various aspects of the clinic's mission, the diverse staff and stakeholders that would be involved, and the need to navigate the numerous challenges described above, it would be important for the clinic to have an overarching ethos or unifying theoretical orientation. To fulfill this need, I propose "critical paradigm integration" as a central concept, in order to reflect a few basic tenets that would guide the clinic's activities:

1. Multimodality and interdisciplinary collaboration
2. Knowledge generation and dissemination across paradigms
3. Reflexivity, transparency, and openness

Each aspect of the clinic's mission will now be described in more detail.

Clinical Approach Based on Multimodality and Interdisciplinarity

A clinical approach based on multimodality and interdisciplinary collaboration is one that flexibly and creatively combines theoretical, diagnostic, and therapeutic approaches from different traditions and paradigms with the aims of achieving deep

understandings of patients' suffering and delivering safe, effective treatments. Note that in the proposed psychedelic healing model, the actual administration of psychedelic substances and plants is only one potential component of a multifaceted approach to healing. In other words, it is a "psychedelically informed" model of care, rather than one based entirely on the utilization of psychedelics.

The first way in which multimodality applies is in the process of clinical formulation or the way a clinician conceptualizes a person's problem or situation. Multimodal formulation would entail understanding patients from multiple perspectives by involving practitioners with different theoretical perspectives and orientations. Thus, the clinic would seek to recruit a team of clinicians whose backgrounds encompass psychiatry and Western medicine, different psychological schools (e.g., cognitive-behavioral, psychodynamic, transpersonal, existential, trauma-centered), forms of complementary and alternative medicine (naturopathic, holistic, traditional Chinese, Ayurvedic), indigenous shamanism, and other philosophical, spiritual, and ecological perspectives.

Bringing such collective wisdom to bear on a given person's problems could be accomplished in different ways. Two possibilities are team-based interviewing, in which a collection of practitioners interviews a patient altogether, or using a sequential stratified approach. The latter would entail an initial intake assessment with a therapist trained in the psychedelic healing model who then refers the person for additional assessments as indicated or requested by the client.

One way of integrating different clinical perspectives and ontologic understandings into a coherent therapeutic narrative would be to utilize a narrative approach (Lewis, 2011), in which clinicians and patients work collaboratively to create an "illness narrative" (Kleinman, 1988), or a shared understanding of what the problem (s) are, how they came to be, and, ultimately, how various treatments can address them. Adopting such a narrative approach should help set out an arc or trajectory back to a state of health and wellness. Similar results could be attained using other heuristics, such as a medicine wheel.

Based on a shared narrative understanding, clinicians can work with patients to formulate a customized, multimodal treatment plan that matches their understandings, beliefs, expectations, and desires, in order to maximize overall therapeutic benefits via enhanced placebo effects, treatment alliance, and ease of integration of the therapeutic experience back into their daily life. Consistent with the psychedelic model of healing outlined earlier, treatment options would target various domains or dimensions of the person's existence, drawing on different ontologies of psychedelics and plant medicines as organizing principles. For instance, some patients may feel more comfortable with biological and psychological explanations of their suffering and thus be better served by more conventional clinical interventions, while others may be seeking spiritual, emotional, and energetic healing that explicitly differs from conventional treatments received previously. The types of interventions that could be offered include:

1. Lifestyle change: nutritional counseling, implementation of exercise programs and mindfulness and meditation practices, and nature exposure.

2. Psychotherapy with or without the assistance of psychedelic substances and plants:

   A full discussion of the principles of psychedelic psychotherapy is beyond the scope of this chapter. However, as described above, clinicians would be trained in a variety of psychotherapeutic modalities that could be tailored to a patient's needs and preferences. As a general orientation, psychotherapy offered would be in line with both existing and emerging principles of psychedelic psychotherapy (e.g., W. A. Richards, 2015), which aim to help people face, accept, and cope with their difficulties and existential situations, rather than avoid them. Psychedelic psychotherapy should also seek to foster a sense of connectedness to one's self, to others, and to one's natural and social environments. Psychotherapeutic modalities that have affinity with this psychedelic approach include acceptance and commitment therapy (ACT), mindfulness-based therapy, logotherapy, and psychodynamic psychotherapy, among others.

   When the use of a psychedelic is clinically indicated, ideally, the clinic would be able to facilitate psychedelic-assisted therapies using different medicines as well as different session formats. Drug selection would be based largely on available evidence and clinical formulation. Psychedelic sessions could be either individual- and/or group-based and take place in different contexts; some could occur more in a clinical context, utilizing principles of both "psychedelic" and "psycholytic" therapy paradigms (Abramson, 1967; Grof, 1994; Sherwood & Stolaroff, 1962). Alternatively, sessions could be conducted in a ceremonial context, led by shamans or other qualified personnel with extensive experience working with psychedelic plants as therapeutics. Such ceremonies would be contextualized within the broader treatment plan and involve preparation and integration processes before and after. As mentioned above, integration would be understood as therapeutic practices that help ensure therapeutic gains made during a psychedelic experience or retreat are integrated into a person's everyday life.

   Although recent clinical trials with psilocybin, MDMA, and ayahuasca have all been implemented in highly clinical settings, I believe it is critical to incorporate ceremonial context in this proposed model for several reasons. First, I would argue that the elements involved in the ceremonial use of psychedelics, such as music, prayer, intention setting, shamanic and energetic healing, and group process, open up the possibility for healing in different and perhaps deeper ways than in a clinical context. Thus, it is in line with the psychedelic healing paradigm described above which targets multidimensional healing. Second, I believe it is important to generate an evidence base around the ceremonial use of psychedelic medicines in order to legitimize this as an important and novel therapeutic modality and also to legitimize and protect indigenous uses of these plants.[6] As the ceremonial use of plant medicines opens up an important space for

[6]This kind of work is being conducted by the Nierika Intercultural Medicine Institute (Nierika, n.d.).

collaboration and dialogue with indigenous healers, its inclusion also helps address the ethical issue of respecting indigenous knowledge and practices.
3. Group and family therapies: Various forms of group therapy may be useful in their own right and as part of the psychedelic psychotherapy process. Groups and the inclusion of family members may help create a sense of community among participants of healing retreats and could facilitate preparation and integration of psychedelic experiences.
4. Medicines: Treatment would include management of pharmaceutical, naturopathic, and herbal medicine regimens, including initiation and discontinuation of appropriate treatments.
5. Other interventions and therapeutic modalities may include but are not limited to acupuncture; art, music, and nature therapy; and forms of social, economic, and political engagement and empowerment.

In order to facilitate the implementation of these various therapeutic modalities, the clinic would be structured as a hybrid outpatient and residential facility that would allow for typical outpatient clinic visits but also multiday or 1–2 week retreats. It would have clinical spaces for group and family therapy, as well as indoor and outdoor spaces for meetings and ceremonies. It would have sufficient access to natural elements to facilitate therapeutic experiences in nature and would also utilize principles of "biophilic design" to incorporate natural elements into the aesthetic of the clinic in a manner that is mindful of the way physical spaces, materials, and light impact consciousness (Kellert, Heerwagen, & Mador, 2011; Ryan, Browning, Clancy, Andrews, & Kallianpurkar, 2014).

Lastly, it is worth noting here that the kind of clinic envisioned here would not currently be possible in most countries due to the legal status of psychedelic substances and plants. A more limited form of this clinic could be implemented in contexts where psychedelics are illegal by conducting clinical work exclusively through research protocols. Funding in this case would be limited to research grants and private donations. In a legal context, funding sources could be more varied, including sliding scale payments and eventually insurance reimbursement, as the evidence base for psychedelic-assisted therapies develops and they are shown to be cost-effective.

Knowledge Generation and Dissemination Across Paradigms

Like the clinical approach proposed, the clinic's modes of generating and sharing knowledge would also utilize an interdisciplinary approach in order to facilitate paradigm integration, or the bringing together of divergent perspectives and types of knowledge. Both research and other knowledge sharing practices, such as meetings, seminars, and trainings, would be guided by core values of reflexivity, transparency, and openness.

Research Agenda Focused on Paradigm Integration The clinic's research agenda would span the basic, clinical, and social sciences. As highlighted above, the clinic's central aim is to implement and study an integrative treatment model based on the psychedelic model of healing. Thus, the primary research objective of the clinic would be to conduct outcomes-oriented clinical research aiming to demonstrate the effectiveness of the model. Many holistic clinics currently exist throughout the world that are utilizing plant medicines, yet only a handful of observational research studies have been published on the outcomes of their work, or on the efficacy of plant medicines, like ayahuasca and ibogaine, in general (Brown & Alper, 2017; Fábregas et al., 2010; Halpern et al., 2008; Labate & Cavnar, 2013; Palhano-Fontes, Barreto, Onias, & Andrade, 2017; Thomas, Lucas, Capler, Tupper, & Martin, 2013). To be clear, the outcomes research proposed here would center the model of care as the object of study, as opposed to the substance, which is the primary variable in conventional clinical trials. This would allow the full range of healing modalities complementary to the use of psychedelic substances and plants to be utilized without them being seen as confounding variables. Treatment outcomes, such as reductions in depression, anxiety, or substance use, could initially be assessed in an observational fashion as treatments are provided to individual patients and then, eventually, in a more controlled, prospective experimental fashion. The latter would involve randomizing patients with similar baseline characteristics to either the psychedelic model of care or conventional psychiatric care.

While this form of outcomes research is not oriented toward the rescheduling of psychedelic substances or plants,[7] it would set a precedent for how the substances could be used therapeutically as dissemination occurs and also demonstrate proof of concept that the psychedelic healing paradigm is effective in its own right or in comparison to standard treatments. This would have important social justice implications, as it could pave the way for governments or insurance companies to pay for these treatments in legal contexts, thus increasing access. Amounting evidence of the safety and efficacy of these treatments may also strengthen the argument for decriminalization and regulation of the substances and plants in religious, spiritual, or recreational contexts.

While treating patients and collecting outcomes data, the clinic could simultaneously collect real-time data on treatment variables and set and setting variables. Treatment variables would include the composition of a plant medicine (the relative amounts of various alkaloids in an ayahuasca preparation), dose administered, and frequency of dosing, as well as the type and frequency of psychotherapy provided. Set variables include demographic information, personality characteristics, and baseline mental health profiles. Setting variables would account for the context and complementary practices used alongside psychedelic therapy, such as use of music, preparatory diet, individual versus group administration, and clinical versus

[7]Rescheduling of a substance requires demonstrating therapeutic efficacy through large-scale, randomized, placebo-controlled clinical trials in which the substance itself is isolated as the variable that leads to changes in therapeutic outcomes while controlling for all other variables.

ceremonial context. Retrospective analysis of these variables would help elucidate which aspects of treatment were correlated with therapeutic outcomes in different patient populations. This would importantly allow for the targeting of specific therapeutic practices to particular patient profiles and overall refinement of the treatment model. This data could also inform prospective, randomized studies to increase the quality of evidence behind psychedelic therapy, paving the way for wider dissemination of the model.

As a clinic founded on paradigm integration, quantitative empirical research would not be the only means of evaluating and refining the treatment model. Qualitative and participatory forms of research, such as semi-structured interviews with patients, clinic staff, and other stakeholders, would provide a complementary means of understanding the subjective experience of treatments, thus shedding light on their effectiveness, mechanisms, and areas for improvement. Similarly, incorporation of social sciences, such as medical anthropology and science and technology studies (STS), would generate critical feedback on the clinic's operations and practices, including how they are situated in broader theoretical, cultural, and political contexts. Both these forms of research would inform revisions to treatment protocols in a reflexive manner.

Lastly, the clinic would aim to engage in other forms of scientific research that further its mission of paradigm integration. This would include research that seeks to elucidate how plant medicines, psychedelics, and other complementary practices, such as yoga, meditation, and sound therapy, exert their therapeutic effects through complex interactions between biology, psychology, and spirituality. For instance, Robin Carhart-Harris has demonstrated how psychedelic-induced changes in brain connectivity correlate to specific subjective mystical-type experiences (Carhart-Harris et al., 2012). Undergoing such mystical-type experiences has been shown to correlate with therapeutic benefit in a number of recent clinical trials with psilocybin (Bogenschutz et al., 2015; Garcia-Romeu, Griffiths, & Johnson, 2014; Griffiths et al., 2011). Pursuing this kind of research, likely in collaboration with an academic institution, would help further our understanding of the neurobiology of consciousness and non-ordinary states. Grounding psychedelic and mystical-type experiences in neurobiology would help facilitate acceptance of spiritual and energetic "mechanisms of action" in the field of psychiatry and have the important implication of opening the neurobiology of consciousness as a legitimate treatment target.

Knowledge Sharing and Policy Engagement Beyond having a research mission based largely on the principles of Western empirical science, a model clinic would also seek to engage in other modes and traditions of knowledge generation and sharing. Specifically, the clinic would function as a center for critical dialogue on the intersection of psychiatry, traditional medicine, and other forms of healing. Embedding space for critical dialogue and dispute resolution processes would be essential, as the novel but complex work of integrating healing paradigms would undoubtedly involve significant differences of opinion, ethical dilemmas, and critiques from different stakeholders. By functioning as a place where health workers, shamans, academics, policymakers, and other stakeholders could gather for meetings, debates,

conferences, seminars, trainings, and perhaps medicine ceremonies as well, the clinic would be able to (a) rethink its design, practices, and protocols based on feedback and critique; (b) engage in best practice sharing, collaboration, and consultation with other clinics engaged in similar work; (c) advance understandings of the uses of psychedelics and plant medicines more generally; and (d) envision how the principles of psychedelic healing can be translated into nonclinical domains, such as education, environmental science, and social policy.

This last point highlights the responsibility of a clinic whose practice is grounded in the use of psychedelic plants to protect the cultures and ecological environments on which their existence depends. As a result, the clinic's final aspect of its mission would be to engage in policy and public education work promoting indigenous rights, environmental justice, and drug policy reform.

Conclusion

This chapter has sought to outline a path toward a more holistic model of mental health treatment that is premised on interdisciplinary and intercultural perspectives and healing practices. It began by highlighting some of the shortcomings of current psychiatric practice and describing ways that a psychedelic healing paradigm can improve the current state of affairs in this field. Psychedelic substances and plants are critical tools that point us toward a more integrated and holistic way of conceptualizing human suffering and, accordingly, its treatment. Their lessons argue against narrow approaches or those based on fear, avoidance, and passivity. Rather, they help bring into focus our profound and nearly incomprehensible existential condition as impermanent beings intimately connected with all other forms of life, matter, and energy. Alleviating the many forms of suffering that result from the human condition is no easy task; it requires us to draw on many forms of wisdom and knowledge and apply them creatively, often in novel ways, with the courage to face into the unknown.

The model clinic proposed here would bring together different healing modalities and modes of knowledge generation in order to better elucidate the interconnections between various domains of human existence. It would aim to apply such insights in clinical practices that endeavor to bring about deep healing. Through processes of treatment integration and knowledge generation and dissemination, the healing benefits may extend beyond individuals to families, communities, nations, and perhaps, the planet as a whole.

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