

Responding to question 1a: *How can medical geographers contribute to the clarification and public policy formation regarding the use of psychoactive drugs/chemicals be they naturally occurring or synthetic? Is or are there spatial dimensions that are of use in this regard?*

Medical geographers are in a pivotal position to clarify the context surrounding the use of many currently prohibited psychoactive chemicals/drugs. While medical geographers could investigate any subset of these, nowhere is contextual clarification more needed than with regards to the use of Schedule I substances. These psychoactive substances fall into the 35-year-old Congressionally mandated policy category reserved for natural and synthetic substances that have *officially*, on pain of lengthy prison sentences, been found to be of no medical use/benefit, of high abuse potentials, and of unacceptable safety levels. While much is known about the risks of these substances, little is known about their benefits due to tight control of research in this area. Medical geographers can contribute a great deal to our understanding of the officially non-existent benefits of these psychoactive substances—be they medical, health-promoting, or wellness promoting—by investigating ‘safe spaces’ where such beneficial uses are practiced and self-regulated. They can also help to guide future humane policymaking by elucidating human rights abuses present in the existing medical-legal framework by highlighting the creation of safe spaces for using Schedule I substances that people move into and inhabit in order to escape or reduce structural violence.

The Schedule I psychoactive substances I will focus on will largely be *Cannabis spp.* and to a lesser extent hallucinogenic plants, plant products, or their congeners such as psilocybin-containing fungi, ayahuasca and other DMT containing plants and infusions, *Tabernaemontana iboga* and ibogaine, saffron root-derived products such as MDMA,

*Claviceps purpurea*-derived alkaloids such as lysergic acid diethylamide, and mescaline-containing cacti such as *Lophophora williamsi* and *Trichocereus spp.* (I am not including opium poppies or coca leaves, both of which are Schedule II.) Medical geographers can vitally contribute to our understanding of the reasons people use these substances by investigating their use in clandestine or semi-clandestine ‘safe’ spaces that people create for themselves within the existing prohibitive medical-legal framework and in official and semi-official safe spaces that have been created through judicial, legislative and democratic actions that allow sanctioned use of psychoactive substances within certain parameters. Medical geographers can observe, look across, and step across, *within ethical limits*, both political and legalistic research-stifling obstacles and boundaries to answer questions such as: What new clinical knowledge has been gleaned regarding conditions treatable by the medical use of cannabis in California and in other states that allow its use? What types of self-care medical/health/wellness benefits do people experience through their use of psychoactive substances in their clandestine and semi-clandestine safe spaces, and how do people respond when these safe spaces are violated? How can the fields of integrative medicine, transpersonal medicine/psychiatry, pain medicine, and palliative medicine, along with findings in relevant biomedical scientific literature, help us to understand how cannabis and hallucinogenic compounds and plants are being used beneficially by people in these spaces? How can the benefits of so-called “recreational” use of cannabis and hallucinogenic compounds be understood vis-à-vis other activities—such as sex, masturbation, social conviviality, sports, art, music, “social” drinking, and gambling—all of which are promoted or considered non-pathological in moderation in wellness living/health promotion/stress-reduction

discourses advanced in psychiatry and primary care? In certain cases, are there psychotherapeutic medical benefits underlying some individuals' seemingly "recreational" use patterns?

Understanding such benefits and the consequences of their current curtailment would greatly assist public health-driven policymaking in the area of psychoactive substance regulation aimed at achieving the dual goals of harm reduction and benefit maximization. Harm reduction (Denning 2004) refers to public policies and medical practices that are aimed at reducing the harms associated with substance use, both to individuals and society, and benefit maximization refers to public policies and medical practices that allow for the maximal benefit from substance use, both to individuals and society. When people create truly safe spaces to use cannabis and hallucinogens, they are likely also making sure to protect against any potential damaging harms of psychoactive substance use through self-regulation and diligence. How are such spaces constructed? Elucidating these practices will help to guide future public health policy and harm prevention education. I believe that many of the harms currently experienced by cannabis and hallucinogen users are a result of structurally violent policies based on the model of absolutist prohibition rather than on one of regulation and 'informed consent'. Medical geographers, when working towards the normative goal of achieving respect for human rights universally and when sensitive to the claimed health and wellness benefits of cannabis and hallucinogen use, can additionally clarify the harms that must be reduced in the current system by highlighting extant human rights violations and abuses stemming from cannabis and hallucinogen prohibition. Geographers can 'see' human rights abuses and violations by observing how people maneuver to safe spaces to minimize or escape

violence, both structural and direct, by movement, migration, community building, and democratic and cultural resistance.

Through exploring and describing the benefits of cannabis and hallucinogen use and the nature of the spaces in which they are experienced in the field by users, medical geographers would also help to further lay the groundwork for future medical/clinical research in areas such as drug and botanical development as well as the development of novel therapeutic models and modalities using these substances. Additionally, medical geographic contributions in this area could clarify for medical practitioners what kinds of substance use can be regarded as beneficial and non-problematic for users rather than a sign of or risk-factor for underlying or emerging Substance Abuse mental disorder. Due to pathognomonic diagnostic criterion A3 for Substance Abuse mental disorder in the current diagnostic framework, any user of illegal substances is clinically judged in this way due to the A3 criterion's tacit support of prohibition substance control policies and its sole reliance on uncritical assessment of the after-effects of their continuing enforcement. Indeed, medical geography is well suited to collect evidence to test the reliability and validity of this diagnostic criterion.

The main reason that medical geography is quite well-positioned to contribute to our understanding of the benefits of psychoactive substance use is a very pragmatic one: biomedical research, clinical research, and clinical practice are systemically discouraged, deterred, and dissuaded from investigating the benefits of Schedule I substances. Modern medicine and medical research, both state-licensed and state-regulated practices, developed over most of the twentieth century within the legally and politically delimited bounds of the state that have generally made such investigations very difficult or

functionally impossible, funding-wise or otherwise, to conduct. In the recent 2005 Supreme Court case regarding state-sanctioned but federally intolerable use of medical cannabis, an *amicus curare* brief submitted to the United States Supreme Court stated: “The lack of FDA-approval of cannabis as a prescription medicine is due, in large part, to the systematic hindrance of scientific research by governmental agencies over the last several decades” (AMICUS 2004). This situation has arisen due to the fact that federal governmental agencies whose missions are to enforce drug laws and to study “drugs of abuse” have monopoly control on Schedule I substances (such as cannabis) and/or on who can and cannot have access to them for research purposes. They have a heavy political disincentive to approve research with human subjects that looks into the benefits of these legally proscribed substances.

It should be noted that in recent years there have been a very small number of officially approved clinical trials with Schedule I substances (such as cannabis, psilocybin, and MDMA to treat pain, death anxiety, PTSD, or OCD) that have been completed or are ongoing. Outside of these, medicine and medical research, by and large, are not investigating or systematically observing the benefits of Schedule I substances. Far more funding dollars go to one-sided research projects that investigate what might be the negative effects of their use. Clinicians, by and large, are not trained to understand how their patients may be beneficially using psychoactive substances and their patients who do use psychoactive substances are generally very reluctant to disclose this information to their care providers for fear of it becoming a matter of documented record. It should be remembered that the US Federal law expressly and unequivocally forbids possession by unlicensed individuals of Schedule I substances (and related paraphernalia)

that it deems of no value on the pain of lengthy prison sentences. Bodily excrement and hair residue is routinely examined in the United States for metabolic evidence of recent use of illegal substances, with hiring and firing decisions hanging in the balance. Tens of millions historically and millions currently are involved in some part of the US criminal justice system for violating prohibitionist drug laws (USDOJ 2005). In such an environment, both clinicians and patients will practice a ‘don’t ask, don’t tell’ unspoken policy when it comes to cannabis and hallucinogens, as well as with other prohibited substances. Because of this, spaces where clinical and medical research are practiced are, with few exceptions, generally not the settings in which beneficial psychoactive substance use can be learned about or easily studied.

Enter medical geography into this legally hostile and politically circumscribed research environment. Medical geography, as a subdiscipline of geography, is well suited to study phenomena that occur across or beyond boundaries, be they temporal, spatial, legal, or political. Indeed, geography is the boundary-crossing field *par excellence*. Over the last two to three decades in the United States, the legal and political boundaries that have unequivocally forbade the medical use and non-medically sanctioned use of cannabis and some hallucinogens have relaxed in some places and strengthened in others. In addition, despite the UN international treaties controlling ‘narcotics’ or ‘psychotropic substances’ which all member nations are party to, many countries interpret these treaties far more broadly than the United States and implement far less prohibitive policies with regards to cannabis and hallucinogens. For example, the medical use of cannabis is fully allowed in several countries such as Canada, Spain, the Netherlands, Portugal, Luxembourg, to name a few. But even in places across the world

where strict prohibition is in full force, there are many millions of people engaging in cannabis and hallucinogen use. The estimated 400 billion dollar per year value of the global black market trade in all prohibited psychoactive substances is a rough indication of the extent. People clearly are carving out unofficial clandestine spaces in which to use these substances; some are caught and punished, others are not. Medical geographers can look into these various places in the field and see how people are already making use of these substances for beneficial purposes; there is no need to request permission to obtain these substances for research purposes. What is lost here in terms of highly controlled studies in humans of Schedule I substances is matched by gains in terms of valuable knowledge about their use from experienced users in natural settings—practices that have been part of human culture since prehistoric times (Rudgley 1993). While many such “natural use” studies have been done in anthropology (such as Rubin and Comitas 1975) and sociology (Becker 1953; 1963), never have such studies been done in geography with the sophisticated interpretive framework for understanding benefits provided by the fields of medicine described above.

In terms of officially-created safe spaces for using Schedule I substances in the United States, the greatest shift in recent years has come with the ‘medical marijuana’ laws that are on the books in 11 states: Alaska, Arizona, California, Colorado, Maine, Montana, Nevada, Oregon and Washington (by voter initiative); Hawai’i, Vermont, and Maryland (by state legislature action). The state that has by far the largest population of “official” medical cannabis users—approximately 150,000—and the most permissible medical cannabis law, thanks to its concluding phrase “...and any other condition, which in a physician’s judgment may be helped”, is California. (For comparison, other state

totals are Alaska-185; Nevada-700; Hawaii-2,600; Colorado-891; Oregon-11,100 + 5,406 caregivers<sup>1</sup>). Throughout the past nine years since the law in California has been in place, there has been no research (that I am aware of) to investigate what has been learned clinically about the “any other” conditions that can be treated by cannabis. A medical geographer can help answer the health care access question: which unique patient populations have accessed and been helped by cannabis-based health services since the semi-official safe space protecting physician-sponsored patients using cannabis was created in California? One way to answer this would be to do a focused case series review of a patient population seen by a California physician looking for particular hypothesized indications that cannabis would be beneficial for treating (such as the triad of anxiety, stress, and insomnia) (O’Connell 2005). Another important question would be: what distances have people traveled from in order to access medical cannabis regimes? Other official safe spaces for using cannabis that could be investigated include cannabis-friendly coffee shops in Vancouver, B.C. and the Netherlands and cannabis-friendly locations in India where government shops provide cannabis. Again, important medical geographic issues such as where people are traveling from to enter into these safe spaces and for what perceived benefits could be explored through interviews and surveying.

Another major official safe space for use of Schedule I substances—the only allowed exemption currently at the federal level in the United States—are spaces within the confines of the Native American Church, a group of people (perhaps 500,000) in the United States who are allowed to use peyote as part of their religious and spiritual practices. Some work has been done on the role of peyote in healing—mainly

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<sup>1</sup> Data provided by Dale Gieringer, PhD, director of CA-NORML, personal correspondence

transpersonal—in these communities (Halpern et al. 2005). A small 130-member church in New Mexico, the O Centro Espirita Beneficiente União do Vegetal (roughly translated from Portuguese: Charitable Spiritual Center for Union with the Vegetable), is currently seeking a similar religious exemption for their use of a hallucinogenic (or entheogenic, more accurately) tea called *ayahuasca* prepared from harmaline-containing *Banisteriopsis caapi* and DMT-containing *Psychotria viridis*—plant species native to Amazonia. UDV went before the US Supreme Court on 11/1/05. This group is actively contesting for official safe space to continue using their Schedule I sacrament. Medical geographers can make a comparative study with the Native American Church's use of peyote and the UDV church's use of ayahuasca. In both cases, transpersonal and integrative medicine frameworks could help to shed light on how each group uses their respective sacraments beneficially.

Insight into the beneficial use Schedule I psychoactive substance in official safe spaces importantly can help to shed light on the use of the same class of substances amongst those in unofficial clandestine or semi-clandestine safe spaces. Medical geographers can practice ethnography and qualitative research to uncover the benefits people experience with the use of these substances in these tenuously safe spaces. Ethical guidelines would be essential in conducting such research so that the privacy and anonymity of individuals is sufficiently safeguarded. Anyone willing to participate in such a study in any location could be recruited. Special consideration should be given to those whose safe use spaces have been most egregiously violated resulting in bodily harm, injury, or extreme distress. The plight of such individual can be most informative with regards to the human rights abuses present under the current system.

In summary, medical geographers are well suited to contribute to the clarification and public policy formation regarding the use of psychoactive chemicals/drugs, especially with regards to describing the benefits of Schedule I-forbidden substances such as cannabis and hallucinogens used in spaces that are often beyond the researchable boundaries of biomedical research. Medical geographers can also describe what happens when prohibitionist policies violate safe use spaces and undermine the beneficial psychoactive substance use patterns. The ensuing human rights violations stemming from structural violence and the mitigating geographic maneuvering people practice must be brought to light so that such harms can be abolished from current medical practice and public policy.

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