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RESEARCH INTERESTS:

medical geography, political ecology of health and disease, social pharmacology, structural violence and international human rights, germplasm-enclosures, harm reduction, biomedical ethics, health-related quality of life, sustainability, subjective medicine, cannabinoid medicine, pain.

Dissertation successfully defended on August 22, 2008. Read complete dissertation: "The Medical Geography of Cannabinoid Botanicals in Washington State: Access, Delivery, and Distress" [here](#): <http://sunilaggarwal.net> Video of July 25, 2008 Public Dissertation Defense [here](#): <http://youtube.com/phaedrus7777777> Current status: Conducting medical geographic dissertation field research. "Cannabinoid Medical Geography of Washington State: Health Access and Germplasm Delivery in Convenience Samples." Approvals secured from my Doctoral Supervisory Committee, the UW Human Subjects Division, and Certificates of Confidentiality issued by the NIH division NCCAM (National Center for Complementary and Alternative Medicine).



Dissertation Research Proposal
Department of Geography
of Washington

Sunil Aggarwal University
3/30/07

The political ecology of medical marijuana germplasm access and delivery: therapeutic cost-effectiveness and death penalty apportionment*

***for a qualifying patient group in Washington State undergoing physician-authorized treatment with a clonal line of *cannabinergic hempen* botanical medicine from the global commons**

Biotic prohibitions: politicizing human—non-human ecological contact through genogeographic ownership-bans

In a seemingly legitimate public health program to prevent and control drug abuse, state governing bodies the world over have taken ownership of entire species of naturally-occurring, pharmacologically-active life from the plant and fungal kingdoms and criminalized their consumption outside of narrow, official channels. Ten species that evolved on Earth's biosphere are currently at the heart of this policy: *Papaver somniferum* L., *Erythroxylum coca* Lam, *Cannabis sativa* L., *Lophophora williamsii* J.M.C., 186 Psilocybine fungi spp., *Catha edulis* Vahl, *Tabernanthe iboga* L., *Banisteriopsis caapi* C.V.M. & *Psychotria viridis* Ruiz & Pav, and *Salvia divinorum* Epling & Játiva. More commonly, these are known as opium, coca, cannabis, peyote, mushrooms, khat, iboga, ayahuasca, and salvia. Of these, the first three—opium, cannabis, and coca—have the longest standing ownership-bans

in the modern era with the most far-reaching consequences. Those who civilly disobey these regulations by consuming or facilitating consumption of banned biota are, in effect, stealing from world governments. Global biotic prohibitory regulations extraprocedurally grant legitimate, monopoly ownership of botanical biota—or more precisely, species' germplasm—wherever they may occur and at whatever generational age of the species—to state authorities while forcefully prohibiting billions who are unauthorized from safe access. The institution of bans on non-human nature requires a historical act of biocolonialism: a prior political call of species-wide, genogeographic ownership. It is this historical act that gives the past tense to the word 'control' in the phrase 'controlled substances'. These bans essentially amount to the legalized theft of nature from the global commons.

The points in space of interaction between *Homo sapiens* and banned non-human nature are points of material and semiotic significance; their geographies are shaped by ecological and sociopolitical forces and thus easily lend themselves to the analytic frame of political ecology, itself a fusion of political economy and cultural ecology. When a human being comes into contact with a banned botanical life form in her or his environment, experienced psychosocially at this most localized, microgeographic level is the rule of structurally violent international and national prohibition laws which historically have been shaped by forces of power, influence, and authority—basic issues that concern political economy. Contact with banned biota is also cultural ecologically mediated through the organic distribution of living species, mutual adaptation (e.g., health-related behavior), and co-evolution (e.g., cultigenesis), which influence how often and in what context human and non-human species will come into gross and “deep” consumptive contact, the latter being mediated through the logics of pharmacology, physiology and metabolism. It is readily apparent, then, that the overall effects of the consumption of banned biota wherever they may occur, such as those related to psychoactivation, are never determined solely by material or biophysical forces alone; rather, agency, culture, context, and psychological set play equally vital roles.

Biogeographic state ownership and control of whole species of life in the service of drug abuse prevention and control has a qualitative policy parallel only in the arenas of biological weapons control and endangered species preservation. In the former category, unauthorized persons found in possession of entire species of life (or quasi-life) such as plague (*Yersinia pestis*), tularemia (*Francisella*

tularensis), *Ebola* virus, or processed derivatives of these and other species are subject to criminal sanctions. In the latter arena, unauthorized persons found in possession of threatened or endangered species of life such as the Salt Creek tiger beetle (*Cicindela nevadica lincolniana*), the African violet (*Saintpaulia ionantha*), and the White Rhinoceros (*Ceratotherium simum*) are also subject to criminal sanctions. Exceptions are commonly granted in both cases, and criminal penalties are rarely delivered. Governments' exertion of authoritative biogeographic control and/or prohibition over potentially mass violence-causing biological agents and species threatened with extinction has not led massive civil/political unrest or strife, mainly because these policies do not undermine basic social goals of peace, development, and sustainability. In essence, there is no valued benefit to exposing people to highly virulent pathogens or to wiping out endangered species that is being undermined.

On the other hand, the banning of ten biota out of the hundreds with psychoactive potential, while heavily and yet often duplicitously enforced, has led, over the course of several decades, to a significant amount of corruption, chaos and instability, structural violence, direct violence, morbidity (e.g., rampant HIV and HCV spread from criminally inaccessible clean injection equipment), mortality, lengthy mass incarceration, execution (including summary and extra-judicial), and opportunity cost globally. At root, this is because bans on psychoactive botanical biota, regardless of whatever 'hidden agendas' may additionally be at work, undermine longstanding medicinal, cultural, and religious practices and foolishly attempt to politically suppress the universal human drive for psychoactivation through categorically forbidding natural substances and policing populations for compliance (Siegel 2004; Weil 1986). This policy, often called a 'war on drugs' or 'drug abuse prevention and control' is therefore more appropriately seen as a low-grade, persistent, prisoner-taking war on the acquired human drive to psychoactivate steeped in an ideology of pharmacologicalism in which some substances are allowed and encouraged for psychoactivation (e.g. tobacco, alcohol, caffeine, sugar, cacao) and others are morally forbidden. Pharmacologicalism is

that matrix of centralized powers and discursive practices whose evolved social function is to reinforce an essentialism of drugs, of angels and demons, and in doing so, to obscure the sociocultural, political, and economic structures that shape both drug understandings and drug effects. (DeGrandpre 2004)

In this highly reductionist system drugs have moral attributes that stem not from social and psychological forces but rather from the sphere of molecules. As a result, pharmacologicalism

dictates that the moral status of a drug exists as a purely scientific question that can be documented and classified once and for all, not as a societal one that must be considered and reconsidered across time and place. Society, culture, and history can be ignored...Pharmacologicalism thus provide[s] a scientific foundation for the moral ordering of drugs, which then allow[s] for a disparate, compartmentalized treatment of them as angels (Ritalin) or demons (cocaine). (DeGrandpre 2006)

Through this ideology, which ultimately makes no distinction between drugs that are of biotic or abiotic origins, numerous substances (292 in the United States Code) have come under the globalized system of differential prohibition. Since human drives must prevail for life to go on, there will always be a demand for these officially prohibited substances as long as there is information available about their effects; by creating a regulatory vacuum, drug prohibitions essentially ensure that the human drive to psychoactivate will be met by and large in the most exploitative and damaging manner—maximizing harm and minimizing benefit.

The United Nations Special Rapporteur on the Human Right to Health has highlighted “the indispensable role of health professionals in the promotion and protection of the right to health.” In this regard, the ethical and phronetic orientation of this medical geographic dissertation research will be towards the promotion and protection of the human right to health. The Committee on Economic, Social, and Cultural rights has acknowledged that the human right to health “is closely related to and dependent upon the realization of other human rights, as contained in the International Bill of Rights, including the rights to food, housing, work, education, human dignity, life, non-discrimination, equality, the prohibition against torture, privacy, access to information, and the freedoms of association, assembly and movement.” The human right to health, as enumerated in international law, implies certain freedoms and entitlements such as “*the right to control one’s health and body...and the right to a system of health protection which provides equality of opportunity for people to enjoy the highest attainable level of health*” (emphasis added). The right to determine food and drug preferences ought to be seen as a natural consequence of human dignity, especially viz. the human right to health, and the legitimate role of public policy ought to be harm minimization and benefit maximization as related to these preferences (Nutt et al. 2007). This should apply equally well to drugs or substances which are preferred for intoxication or other practices that are associated with psychoactivation. UCLA psychopharmacologist Ronald Siegel has written in his book *Intoxication: The Universal Drive for Mind-Altering Substances*

(2004) that

the medical purpose of intoxication is easier to understand if we think of intoxicating drugs as *adaptogens*. Technically, an adaptogen is a substance that helps people adjust to changes in their physical or psychological environments...Intoxicating drugs medicate the needs of the fourth drive for a change in state or mood...the pursuit of intoxication serves a legitimate medical purpose. The solution to the drug problems of our species begins when we acknowledge the legitimate place of intoxication in our behavior. (308-9)

I concur. Satisfying the acquired human drive for psychoactivation is a health issue and must be examined with ethics, reason, and patience—not with the usual hilarity and flippancy that dominates much discussion of this topic as a result of discussants' reliance on tropes from popular culture, on memories of past embodied experiences or future sought-out experiences of levity, or on unexamined privileged positions of distance from the excesses of structurally violent drug enforcement regimes. To summarize, prohibitionist drug laws are, at root, a violation of the right to control one's health and body—essential pillars of the human right to health. Thus, the consumption of any drug per se cannot be understood as a criminal act; rather, the *criminalization* of drug consumption must be seen as a criminal act by states insofar as it violates their obligation to respect, protect, and fulfill the human right to health. Other violations of states' obligations to respect the human right to health are manifest through their “deliberate withholding or misrepresentation of information vital to health protection or treatment; the[ir] suspension of legislation or the adoption of laws or policies that interfere with the enjoyment of any of the components of the right to health.” By adhering to and promoting a rigid system of pharmacologicalism in domestic and international policy, state actors such as the United States government are routinely guilty of withholding and misrepresenting information about the actual nature of drug effects and of suspending legislation and adopting policies and laws that violate the right to health.

It is only geopolitical institutions that have created this unique biotic constellation—this genogeographic catalogue of ten different types of banned germplasm, deliberately carved out with pseudo-public-health-aims in medico-scientific legalistic language in US Code and International Treaty Law. That these germplasm are members of a common class is strictly historical artifact and not due to any natural grouping. Authority-holders' extra-procedural enactment of biotic prohibitions has created an il/legal genogeographic mapping of the environment for nearly every world citizen in which whole

species and sub-species of botanicals have become bounded up and encircled by prohibitionist-pharmacologist borders that were drawn without participation or due process. Each species so bounded has a unique ecology, unique consumption-related efficacies, a unique environmental and human utilization history; and each encircling biotic prohibition into non-human nature is a unique 'map feature' that presents distinct 'lost opportunities' for medicine and health care delivery, nutrition, religion, chemurgy, and safe psychoactivation—all of which remain virtually inaccessible to law-abiding citizens and society at large who are taught 'thou shalt not unlawfully trespass' the extra-procedurally drawn environmental boundary lines that have been mapped out for them ('Chemurgy' is a branch of applied chemistry that is concerned with preparing industrial products from agricultural raw materials.). The vast majority of citizens will not want to *openly* disobey these rules by crossing the il/legal geogeographic boundaries for fear of arrest and associated penologic social, civil, and bodily death threats—pain delivery—that is ongoing and virtually omni-present within the structurally violent sociopolitical environment. As a result, nearly all boundary-crossing is done clandestinely under the cover of a 'black' or underground half-trillion dollar market (alone worth perhaps 10%+ of total global market exchange) or through private non-commercial land use and exchange.

As we move into a post-drug war era, we will need a fuller understanding of the penal pain inflicted en masse by the current system per banned substance. In order to maximize consumer-related health protection and safeguards in public policy while at the same time realizing their fullest potential in medicine, each of the ten banned botanical species will require a separate medical geographic treatment through the lens of political ecology, as each presents unique health justice policy issues and challenges. For example, with coca, a longstanding Andean medicinal and sacramental plant, comes issues related to the concentration and isolation the alkaloid cocaine, which occurs naturally as 0.1% by weight of the leaf, and its conversion to crack cocaine with the addition of baking soda (sodium bicarbonate) and heat. Additionally, with opium, also an invaluable medicinal plant with cross-cultural roots, comes issues related to the concentration and isolation of morphine, which is about 10% by weight of dried poppy juice, and its conversion to heroin (diacetyl morphine) with the addition of dry vinegar (acetic anhydride) and heat. A political ecology of coca and opium poppy germplasm, which

will not be addressed here, must necessarily attend to these concentrates and the contexts in which they are produced from the mature botanicals, distributed in an underground economy, and consumed.

Daylighting the medical geography of local cannabis germplasm collection, maturation, and utilization

Increasingly, throughout North America, South America, Europe, Australasia, and South Asia, transcontinental, genogeographic biocolonial-prohibitionist-pharmacologist borders encircling natural, non-human germplasm are being openly challenged and crossed in word and deed by hundreds of thousands who are making empowering claims to their human rights to health and religious freedom and taking direct action in the name of peace and social justice. Nowhere is this more apparent than in the 'medical marijuana' social movement, a grassroots, liberation struggle to fully reclaim peaceful civil society ownership over the globally distributed, free germplasm of cannabis, a.k.a. hemp, specifically those varieties that cheaply mature into cannabinergic hempen botanical medicine, a sustainably produced, therapeutically valuable, natural flowering herb whose unconstitutional, illegal, homicidal, and unconscionably enforced international ownership ban instituted via extraprocedural-en masse-dispossession arguably lies at the heart of the criminal drug war institution's political economy in the United States and around the world. This open theft of a therapeutically efficacious, naturally occurring botanical from the global commons is predicated on an extremist pharmacologist ideology that calls for all-out suppression with deadly force of the healthy, acquired human drive for cannabinergic psychoactivation. It is responsible for the enforced banishment from the Earth's surface of the unparalleled deforestation-halting and fossil-fuel-replacing chemurgic land use opportunities agroeconomically achievable with large-scale farming of stalk-selected varieties of the hemp plant's germplasm—a willful neglect tantamount to ecocide. This same policy also suppresses the development of highly nutritious hemp seed (achene) based food-products, which are forced to remain grossly undercultivated and underutilized in this era of worldwide hunger and food shortage. Sustainable medicine, food, energy, and industrial raw materials production are the major opportunities for human development that are illegally imperiled by the twentieth century pharmacologist ownership-bans on cannabis—one of humankind's oldest and most widely cultivated plants.

In the spirit of hastening the arrival of a post-drug war era, the topic of dissertation research that

I propose is a political ecology of health that focuses on the cost-effectiveness of delivering cannabinergic hempen botanical medicine to a group of qualifying patients under Washington State Law (RCW 69.51a) through facilitating the maturation of local, environmentally-accessed and clonally propagated germplasm samples that nevertheless remains encircled by a structurally violent ownership-ban upheld ultimately by the United States DEA (Drug Enforcement Administration). This ownership ban, which has become ingrained in numerous social structures, delivers pain in the name of 'cannabis abuse disorder prevention and control' to all those involved in this type of botanical medicine access and delivery. What I am aiming for with this dissertation research is a 'daylighting' of the medical geography of this somewhat underground, health-driven, pain-ridden human-environment relationship in a local setting using a political ecology of health focus.

Conducting such a political ecological study requires reflection about my geographic positionality that has been shaped by my own experiences interacting, intersecting, and contacting biocolonial boundary lines in my environment and the viable hempen germplasm they encircle. This reflexivity demands that I give a meaningful accounting of my own gross and deep consumptive contact with hemp, and in particular, cannabinergic hempen botanical medicine, a cultural ecologically framed discussion that relies not only on the phenomenological methodology of radical empiricism and an existential account of self-care, but also how these personal understandings are in dialectical interchange with the social construction of cannabinergic botanical medicine consumption in cultural and sociomedical practice. This latter proposal is drawn from DeGrandpre and White (1996, 57-59) who took Bourdieu's concept of habitus and tailored it to a practice-based as opposed to pharmacologicalism-based understanding of drug effects. Reflexivity also demands that I give a meaningful accounting of my own embodied experience of living within a structurally violent system that enforces illegal ownership-bans on cannabinergic hempen botanical medicine germplasm. Some of this qualitative data will come from my experiences in the Netherlands, where hempen cannabinergic botanical medicine consumption is allowed to occur in a de facto legal way—the one substantial place of exception in the globalized criminal drug war that 'defines the rule'. This data will also be shaped by my experiences as being a member of a human-right-to-health, civil society based, peace and justice social movement that envisions a world free of one or more botanical ownership-bans in the global commons through the

abolition of illegal, human rights violating policies of consumption criminalization. These reflections should help describe the local-global linkages within the locales and place-based communities in which this dissertation research will be conducted, a necessary ingredient for any political ecology study. They will help to situate me, the researcher, and my research subjects, within the shared social world that we inhabit and in a broader geographic context—thereby helping to better understand the experienced lifeworlds of study participants and the perspective that I bring as an embodied medical student health-researcher.

With my positionality so defined, the method of approach I intend on taking towards describing the political ecology of cannabinergic hempen botanical medicine germplasm access and delivery is a highly localized one. I propose to document and follow a sample of germplasm collected from the local environment as it is clonally propagated, matured, and delivered to a group of qualifying patients who are allowed biocolonial-boundary-crossing access under Washington State law because their treating physician's have, in writing, recommended or not objected to their use of cannabinergic hempen botanical medicine (aka medical marijuana). I intend on measuring or estimating the cost involved at every step in this arc of environmentally-procured botanical medicine delivery, from origin to terminus, and building a spatial model that conveys this information geographically.

For this group of patients, whose identity will be protected, I also intend to ascertain health-related quality of life as a function of their botanical medicine dosing history. The qualifying patients enrolled in this study will all have been diagnosed, under state law, by a physician to have at least one or more of the following medical conditions: cancer, human immunodeficiency virus (HIV), multiple sclerosis, epilepsy or other seizure disorder, or spasticity disorders; or intractable pain, limited to mean pain unrelieved by standard medical treatments and medications; or glaucoma, either acute or chronic, limited to mean increased intraocular pressure unrelieved by standard treatments and medications; Crohn's Disease with debilitating symptoms unrelieved by standard treatments or medications; Hepatitis C with debilitating nausea and/or intractable pain unrelieved by standard treatments or medication; or any disease, including anorexia, which results in nausea, vomiting, wasting, appetite loss, cramping, seizures, muscle spasms, and/or spasticity, when these symptoms are unrelieved by standard treatments or medications. Using interviews, self-report, survey instruments, medical records review, and perhaps

interviews with their authorizing physicians, I intend to measure the effectiveness of medical marijuana treatment for each study participant. Survey instruments would ideally be used at multiple time points. Ones that I am considering using are those proffered by the Seattle Quality of Life Group (<http://depts.washington.edu/yqol/instruments/>) such as The World Health Organization Quality of Life Scales (WHOQOL) or The Perceived Quality of Life Scale (PQOL). Data collected on quality of life will then be combined with the aforementioned botanical medicine dosing regimen procurement costs to arrive at measures of therapeutic cost-effectiveness. Separate inquiries will be made regarding cost savings related to study participants' discontinuation or reduction of other medicines and therapies as cannabinergic botanical medicine utilization was increased and/or maintained. An attempt will be made to compare the costs of medical marijuana therapy with average costs related to comparable conventional therapy over the same time frame.

Death penalty apportionment is specified through United States Code 18 USC 3591(b) which empowers the federal government to put to death one or more individuals involved in a substantial resource-delivering 'enterprise' with 60,000 or more 'marihuana plants' or 60,000 or more kilograms of a 'mixture or substance containing a detectable amount of marihuana'. 'Marihuana', which is legally equivalent to the term 'marijuana' (a Mexican-Spanish-Portuguese slang term likely derived from the word 'mariguango', meaning 'intoxication'), is a so-called 'Schedule I substance' prohibited from general use in medicine. Its name is a technical legal term carved out in US federal law since 1937 as the following:

The term "marihuana" means all parts of the plant *Cannabis sativa* L., whether growing or not; the seeds thereof; the resin extracted from any part of such plant; and every compound, manufacture, salt, derivative, mixture, or preparation of such plant, its seeds or resin. Such term does not include the mature stalks of such plant, fiber produced from such stalks, oil or cake made from the seeds of such plant, any other compound, manufacture, salt, derivative, mixture, or preparation of such mature stalks (except the resin extracted therefrom), fiber, oil, or cake, or the sterilized seed of such plant which is incapable of germination. (21 USC 802)

This definition clearly encompasses cannabinergic hempen botanical medicine and its viable germplasm as the therapeutically active cannabinoids are in the medicinal plant's resin. A federal administrative ban continues to exist in the US for cultivating *Cannabis sativa* L. for any reason, including hempen fiber, cellulose, or seed. Nevertheless, a stereoisomer of d-9-tetrahydrocannabinol, widely recognized as the most psychoactive chemical component of cannabinergic cannabis, is allowed to be sold suspended

in sesame seed oil as a Schedule III substance. At the international level, as per the 1961 Single Convention Treaty on Narcotic Drugs, despite the fact that cannabis cannot properly be termed a narcotic, both cannabis and cannabis resin are included in the most restrictive category of international control but are nevertheless allowed for 'medical use' whereas 'non-medical' use is forbidden. Bruun, Pan, and Rexed, in *The Gentleman's Club: International Control of Drugs and Alcohol*, identify the years of 1954 and 1955 as the crucial years during which the then-named "Commission on Narcotic Drugs" made the decision to include cannabis in the most restrictive category (Schedule IV) of the Single Convention Treaty, which was only in draft form at the time (197). As should be expected, "The U.S., the primary force, mobilized all the control organs concerned" (203). One of the major propagandists who lobbied international control organs on behalf of the US was Federal Bureau of Narcotics chief Harry J. Anslinger. In a paper communicated to the League of Nations Advisory Opium Committee (renamed the 'Narcotics Commission' in 1946), 14 May 1938, Anslinger opined: "...the drug (marihuana) is adhering to its old world tradition of murder, assault, rape, physical demoralization and mental breakdown...Bureau records prove that its use is associated with insanity and crime. Therefore, from the standpoint of police work, it is a more dangerous drug than heroin or cocaine."

As a brief digression, I will quote from McGill Law Professor Desmond Manderson's paper called the "Archeology of Drug Laws" (1994) where he examines the universal tone of ferocity and repulsion at ugliness that is betokened in drug laws in the twentieth century. He places the word 'narcotic', which appears in the 1914 Harrison Narcotic Act, in its historical context when answering the question: "What is the effect of the endemic use of this word?"

It implies that the substances previously identified only as 'dangerous' are united in their medical and pharmacological nature as well as by their legal status. There is a patina of scientific legitimacy attached to that crucial word 'narcotics'. By using it, the title tells us to expect a certain kind of scientific substance to be dealt with. The frame gives medical legitimacy to the like treatment of the substances dealt with in the Act.

Clearly the language of the title is a nonsense: neither cocaine nor cannabis is a narcotic (i.e. sedative). By categorising them using a technical medical term, however, their legal treatment was shored up with scientific authority, all the while underscoring the belief that 'drug use' itself was a medical problem. 'Narcotics' in the first place gives the illusion of a scientific basis to legal policy and, second, presents the drug question as a medical rather than a moral issue. The word acts as a legitimation and a defense of government intervention. Here, then, we see the power of the language of the title to construct a reality, to expropriate authority by the use of persuasive words, and to redefine a social event - the consumption of cannabis, for example - by placing it within a frame so that it becomes seen to be scientifically dangerous and medically

unjustifiable.

The language of narcosis, however, while it reflected and effected a focus on the medical dangers of drug use alien ... was, by the 1970s, no longer an adequate description and justification of people's fears... by [then]... the concern over drug use... [was]... to do partly... with the non-medical or recreational use of drugs... The drug user may not be suffering from any medical problem but he or she is nevertheless 'abusing' drugs. In fact, the power of the language comes exactly from the intentional conflation of use with misuse and abuse.

Given the foregoing discussion of the use of psychoactive substances or intoxicants to satisfy the acquired 'fourth drive' for psychoactivation (Siegel 2005), the distinction between medical and non-medical drug use becomes arbitrary and rather meaningless. Recreational or re-creation-al use of hempen botanical medicine can be understood in terms of making practical use of the medicine's relaxant properties for creative self-fashioning. Re-creative cannabinergic psychoactivation, given its transpersonal, integrative, somaesthetic, and human drive-satisfying dimensions, can legitimately be understood in a positive health and medical context. What we have with the medical marijuana movement is a 'triage' model, where those with the most urgent medical concerns are attended to first. End of digression.

Tying medical/non-medical use to the use/abuse dichotomy is based on a pharmacologicalistic, prohibitionist ideology that is adhered to with extremist zeal, as evidenced by mass arrest, mass incarceration, and the enactment of death penalty laws in the United States and around the world. A death penalty sentence for 'marihuana' has not yet been fully judicially apportioned in the United States, but its threat remains 'on the table' in sentencing/plea bargaining discussions with federal prosecutors. Cannabis-related death penalties are routinely used in Saudi Arabia, Indonesia, Malaysia, Singapore, Qatar, and China. Maintaining an explicit death penalty for some degree of association with the hempen cannabinergic botanical medicine at any stage of its maturation from viable germplasm legitimates, justifies, and provides cover for any aspect of enforced dignity-denial, pain, suffering, distress, hardship, and/or human right's violation apportioned to study participants solely on the basis of their health-dependent association with this renewable, easily matured germplasm from the global commons. To estimate the degree of 'death penalty apportionment' associated with participants' physician-authorized use of medical marijuana, I propose measuring psychological distress with a structured interview standardized instrument such as the 20-item "Current Psychological Distress Form" created by The

Measurement Group. (<http://www.themeasurementgroup.com/modules/mods/module26.htm>)

In addition to this method, I intend on conducting open-ended interviews about psychological distress. Inquiries will also be made into drug enforcement pain delivery, which often amount to civil or social death or their threat. A check-list of standard drug enforcement techniques such as searches, surveillance, raids, confidential informant placement, arrest, incarceration, child-removal, job loss, asset forfeiture, financial aid suspension, biometabolite screening of excrement or hair, etc., or their threatened or feared use, will be created and used to further characterize pain delivered through the enforcement of structurally violent drug laws for each participant. Finally, the quantity of cannabinergic botanical medicine used by study participants over a given time period (in kilograms), individually and collectively, and the number of clonally propagated plants from the original germplasm, will be divided by the 60,000 kilograms and 60,000 plants, respectively, to arrive at a 'fractional apportionment' of the federal death penalty for all individuals involved in this study.

By collecting this information about health-related quality of life cost-effectiveness and death penalty apportionment for a study-enrolled group of qualifying patients all using a clonally linked supply of cannabinergic hempen botanical medicine whose environmental origination is known in as much detail as possible, I hope to have made an concerted effort at daylighting the medical geography of cannabis germplasm utilization in a local region of Washington State. In doing so, I hope help move one step closer to ending the modern-day witch-hunt of institutionalized drug war.

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□
Addendum to Dissertation Research Proposal Sent to Committee Members: Prof. Jonathan Mayer-chair (Geography), Prof. Craig ZumBrunnen (Geography), Prof. Richard Morrill (Geography), Prof. Mark Sullivan-GSR (Medical History and Ethics), Prof. Gregory Carter (Rehabilitation Medicine), Prof. Ethan Russo (Neurology)

From: Sunil Aggarwal [mailto:sunila@u.washington.edu]

Sent: Monday, May 07, 2007 1:26 PM

To: 'Jonathan Mayer'; 'Greg Carter'; 'mark d sullivan'; 'erusso@gwpharm.com'; 'Craig ZumBrunnen'; 'RICHARD L MORRILL'

Subject: three-paper option--and proposal details

Dear Committee Members,

I have chosen to go with the three-paper option to structure my dissertation. The three papers are to have a common thread and they will be an introduction and conclusion section in the final dissertation. The papers need not be accepted for publication to qualify, though that is what I am aiming for.

Last week, the committee also asked for further information and details about my dissertation plans. After giving it some thought, here is what I propose:

Daylighting the medical geography of medical marijuana in WA state. This will be a medical geography of medical marijuana access and delivery. Paper 1: access; Paper 2: germplasm delivery; Paper 3: critical look at human-environment relationships involved in medical marijuana
As opposed to journalists reports and gov't propaganda, this will be an empirical study.

Paper 1: -- ACCESS (to information, to state medical asylum protections, to treatment monitoring)

Site 1: Dr. Gregory Carter's Physical and Rehabilitation Medicine Clinic

300+ medical cannabis patients

How well is the therapeutic goal of opiod sparing achieved with medical marijuana access?

Will conduct a medical records review observing the pain score, McGill scores, and opiod use levels over the course of authorized medical marijuana treatment

Will interview Carter on distress faced?

Will interview/survey subset of patients about death penalty apportionment-related distress...random sampling from empanelled group? Geocode patients to zip-code to quantify spatial reach/catchment of Carter's clinical cannabis therapeutics.

Paper 2: DELIVERY—human-environment relationship involved in germplasm delivery...with a discussion of the political ecology of health at dispensary/maturation locations...green medicine

Site 2: medical marijuana Germplasm delivery in ____ WA (purposeful site selection)

How far, in terms of therapy, does one germplasm line of cannabis go over a 5-mile radius? Or how far

out does it go? Geocode pt data and germplasm maturation and delivery. How much does it cost to get that out? And again, survey a sub-group of qualifying patients with subjective well-being assessments (two time points?) and with measures of distress? Interview producers: how do you cope with hypersurveillance? Maybe a time-geography/worldline of a patient who is procuring medical marijuana? And a time-geography/worldline of the germplasm that matured and was delivered to that patient. This would require a GPS device and uploading of data into a GIS; it would also require some collection of oral environmental history about the origins of the germplasm line.

Paper 3: The political ecology of medical marijuana – a hatchet and seed critical analysis paper

*Political ecology as a hatchet that hacks away at socially constructed mystifications

“As critique, political ecology seeks to expose flaws in dominant approaches to the environment favored by corporate, state, and international authorities, working to demonstrate the undesirable impacts of policies and market conditions, especially from the point of view of local people, marginal groups, and vulnerable populations. It works to “denaturalize” certain social and environmental conditions, showing them to be the contingent outcomes of power, and not inevitable.” (Robbins 12)

*Political ecology as a seed: political ecology as equity or sustainability research

“...seeks to document the way individuals cope with change, households organize for survival, and groups unite for collective action...involves a detailed analysis of agrarian practices, social systems for resource distribution, and techniques for cataloguing and harvesting non-human nature.” (Robbins 13)

*Topics

Clinically significant distress as manifested by substance-related legal problems: a medical geography of mental disorder or governmental disorder?

Distinguishing beneficial from problematic use in medical marijuana court trials. OR, rather, “I’ve been there.” ...Where the new subjective medicine meets medical geography...OR a section reviewing resinous herbal cannabis therapy for treatment of substance use disorders (both hatchet and seed here)

I will need human subjects approval for the research required for papers 1 and 2.

Best,
Sunil

DISSERTATION RESEARCH PROPOSAL ADDENDUM: EXTENDED BACKGROUND AND PURPOSE OF RESEARCH DISCUSSION

UW Medical Center and Harborview Medical Center adopted policy guidelines for physicians regarding medical marijuana in March 2002 (Policy Number 80.15, attached) following Washington State’s passage by voter initiative of a law authorizing the medical use of marijuana in 1998 which was subsequently affirmed and amended in the 2007 Legislative session (RCW 69.51a); in addition, a \$94000 allocation was made for a Washington State Department of Health rule-making study on medical marijuana dosing and supply during the coming year. Similar laws are currently in place in 12 other states and several other countries such as Canada, the Netherlands, Israel, Germany, and Spain; the rising prominence of cannabinoid-rich marijuana in health care is actually a rediscovery and not a novel medical practice since the medicinal use of dried, resin-producing pistillate inflorescences of *Cannabis sativa* --referred to by the Mexican Spanish-Portuguese slang word ‘mari(h/j)uana’ since the yellow journalism of ca. 1910--has an extensive ancient history cross-culturally, with the oldest documented references known today dated to 2737 BCE in the Chinese pharmacopoeia of Emperor Shen-Nung. The medical use of marijuana in the modern period was common in the USA from the mid-1850s to the early 1940s due to its introduction into Western medicine by Calcutta Medical College co-founder and professor, Dr. W.B. O’Shaughnessey, in a landmark 1838 journal article.

Today, nearly one and three-quarter centuries later, Cannabis botanical medical

science has greatly advanced due in large part to the elucidation of in vivo cannabinergic structure and function. However, a large translational gap now exists in this field between research-driven knowledge and patient-centered medicine and public health. Safe access to Cannabis botanical medicine is blocked due to an international statist monopoly over all germplasm of the genus Cannabis found on the global biosphere. This monopoly was extra-procedurally instituted by world governments' in the mid-twentieth century under the leadership of American diplomats. While the terms in international law of this sweeping, genogeographic ownership-ban of Cannabis germplasm allow for governments to develop state-sanctioned programs for the use of Cannabis in medicine, the American federal government has neglected to maintain such a program, opting instead for the hardline position that Cannabis has "no accepted medical use in treatment in the United States." The international Cannabis germplasm enclosure is defended and enforced principally through a regime of "marijuana punishment" for those caught or "busted" by authorities for officially undermining the statist monopoly. This prohibitionist scheme has led to roughly sixteen million marijuana arrests, hundreds of thousands of person-years of incarceration, and thousands of executions around the globe; it has generated a carceral ecology with respect to human-Cannabis relations in which human fear turns into money and Cannabis flowers turn into assets worth their weight in gold, according to a recent US government study.

Seen through a public mental health perspective, any and all consumption of Cannabis is prohibited in American law for its "high potential" for being a telltale sign of Cannabis Abuse mental disorder. Yet Cannabis use has a low potential for dependence, does not cause overdose death, and only in certain circumstances does its use result physical hazard, interpersonal conflict, or failure to fulfill major role obligations at work, school, or home. The only way that the high abuse potential classification of Cannabis in American law could be construed as medically meaningful is if clinically significant distress in a Cannabis consumer that is manifested by nothing more than recurrent or persistent Cannabis-related legal problems is understood as psychopathic. This, in fact, is the current psychiatric perspective codified in the Substance Use disorder diagnostics of the DSM-IV. One aim of this research project is to ask whether this "clinically significant distress" is a sign of Cannabis Abuse mental disorder or Cannabis policy governmental disorder.

Despite the lack of policy change at the federal level, triage care for medically-sanctioned marijuana use has emerged in Washington State. Valid documentation that medical marijuana may benefit a qualifying patient with a terminal or debilitating condition has been provided by an estimated one to two thousand Washington-licensed physicians to an estimated ten to twenty thousand qualifying patients across Washington State. Such medical documentation grants patients and their providers state-level medical asylum protection from prosecution under laws that criminally penalize Cannabis flower consumption, production, and provision; however, access to medical marijuana treatment is permitted under state but not federal law which allows only five patients treatment who were grandfathered into a now-closed program. Therein lies the sociopolitical tension. The aims of this research are to investigate and daylight the medical geography of medical marijuana access and germplasm delivery in Washington State by describing the sociomedical and biophysical contexts of the sites involved in this health system and to document health outcomes and distress levels of qualifying patients linked with these places. The first site is a UW faculty member's medical practice where medical marijuana access, information, and treatment monitoring is provided to qualifying patients; the second site is a complementary and alternative medicine community clinic where environmentally-accessed botanical medicine is delivered to qualifying patients.

CURRENT FOCUS: MEDICAL GEOGRAPHY OF CANNABIS BOTANICALS (aka 'MEDICAL MARIJUANA')

(Nota Bene: Cannabis flowers are known by several names--inter alia, marijuana, marihuana, medical marijuana, dope, pot, grass, weed, ganja, reefer, bud, herb--these terms all refer to ♀ resinous herbal cannabis flowers which ultimately originate from germplasm (seed).)

University of Washington Medical Center Policy on Medical Marijuana

[Click here](#) to read the University of Washington Medical Center's policy document "Guidance to Physicians Regarding Medical Marijuana", effective March 2002.

[Click here](#) to read an article entitled "University of Washington/Harborview Medical Center Adopt Medical Marijuana Policy" by Jennifer Brzana, Pharm.D., appearing in DRUG THERAPY TOPICS, A University of Washington / Harborview Medical Center Drug Information Center publication distributed monthly by authority of the Pharmacy and Therapeutics Committee. Vol. 29 No. 4-5 - April-May 2000.

Two major recent reviews of the evidence base of cannabis therapeutics

[Click here](#) to read Mohamed Ben Amar, Cannabinoids in medicine: A review of their therapeutic potential, *Journal of Ethnopharmacology*, Volume 105, Issues 1-2, 21 April 2006, Pages 1-25.

This paper performed a meta-analysis of articles on Medline and Pubmed up to July 1, 2005. Seventy-two properly controlled clinical trials evaluating the therapeutic efficacy of cannabinoids were identified.

[Click here](#) to read Pacher P, Batkai S, Kunos G, The Endocannabinoid System as an Emerging Target of Pharmacotherapy, *Pharmacological Reviews*, 2006 Sep;58(3):389-462.

An important, thorough review of cannabinoid biology, pharmacology, and therapeutics.

[Click here](#) to read a copy of the peer-reviewed Commentary: Aggarwal SK, Kyashna-Tocha M, Carter GT. Dosing Medical Marijuana: Rational Guidelines on Trial in Washington State. *Medscape General Medicine*. 2007;9(3):52. Epub 2007 Sept 11.

[Click here](#) to read a copy of the editorial published in the Sept/Oct issue of the *American Journal of Hospice and Palliative Medicine*. (Volume 22, Number 5)

TITLE: Clearing the air: What the latest

Supreme Court decision regarding
medical marijuana really means

Sunil Aggarwal, BS, BA

Gregory T. Carter, MD

Jeffrey J. Steinborn, LLb

[Click here](#) for journal's table of contents

A paper that I reviewed for the *Harm Reduction Journal* has been published:

Melamede, Robert J. Cannabis and tobacco smoke are not equally carcinogenic.

Harm Reduction Journal 2005, 2:21 (18 October 2005).

[Click here](#) to read a copy

UPDATE: (1/20/07)-----

Here is a copy of an abstract I submitted to the SSH MD/PhD Conference 2007: Rethinking Health, Culture, and Society: Physician-Scholars in the Social Sciences and Medical Humanities to be held Saturday, April 21, 2007-Sunday, April 22, 2007 Chicago, Illinois. I have changed the title.

The political ecology of medical marijuana germplasm access and delivery: therapeutic cost-effectiveness and death penalty apportionment*

***for a qualifying patient group in Washington State undergoing physician-authorized treatment with a clonal line of *cannabinergic hempen* botanical medicine from the global commons**

Human-environment relationships between people and as few as ten banned psychoactive botanical biota take place on contested and hysteria-laden grounds and have significant influence on human health, morbidity, and mortality globally. These botanical biota have unique secondary metabolite biochemical profiles in that they contain chemicals that can robustly interact with endogenous systems of mood regulation, pleasure, muscle relaxation, and reward (among others). The intentional consumption of these organisms, in whole or in part, by humans and animals, while ubiquitous, historic and prehistoric, is the locus of intense medical, public health, and international political focus in the modern day. For these reasons, human-environment relationships involving psychoactive biota should be studied with ethics, reason and patience. Here I propose a medical geographical framework to interrogate a sub-group of these relationships in the local environment surrounding a single, continuously cultivated germplasm line of *Cannabis sativa* L., the highly globally-distributed, yet nearly globally banned, botanical. Human orientation towards this *Cannabis* germplasm line will be looked at through two American policies that embody diametrically opposed viewpoints on the human-*Cannabis* relationship of germplasm cultivation: RCW69.51a and 18 U.S.C. 3591(b). The former, a Washington state policy, regards qualified *Cannabis* cultivation practices as botanical medicine production intended for therapeutic consumption, and the latter, a U.S. federal policy, regards without exception the cultivation of 60,000 *Cannabis* plants (or ~12 acres with 3-ft crop spacing) as grounds for the imposition of a sentence of death. This study, whose progress will be reported on, examines the medical geography of the implementation of these two policies for a qualifying patient group in Washington State who have obtained some medical amnesty protections for *Cannabis* consumption and who rely on botanical medicine produced from a shared germplasm line. Using a political ecology of health approach which quantifies and qualifies medical cannabis cost-effectiveness by measuring subjective health-related quality of life as a function of dosing, a group cost-effectiveness germplasm branching diagram will be mapped that takes into account *Cannabis* delivery costs and related health care cost savings. The geographic impact of the *Cannabis* production death penalty policy, ostensibly a cannabis abuse prevention and control public health regulation, will be examined through the lens of radical empiricism, human rights, and the political ecology of hemp. A re-visioning of mental health diagnostics and psychoactive substance use regulation will be proposed that seeks to incorporate, in a post-drug war era, principles of peace and nonviolence.

END UPDATE-----

Medical marijuana laws represent a kind of health care provision via a shift in the political ecology of cannabis germplasm. As a medical geographer, I will take a look at the spreading (in space) of the politically-sanctioned 'medical marijuana' phenomenon in the United States and in other parts of the world. What impacts do medical marijuana patients, caregivers, and providers have on the practice of medicine overall, including the use of pharmaceutical drugs? What clinical lessons have been learned with the practice of cannabis therapeutics? (similar questions are asked when new pharmaceuticals are subjected to ongoing Phase IV field clinical studies) This could be studied by surveying cannabis-consulting physicians, for example. New indications for cannabis therapeutics have emerged because people have felt freer to come forward. What kinds of stigma did these individuals face in the past, before medical marijuana laws, and what kinds of stigma do they experience now? What new things have we learned about cannabis abuse disorder? What lengths have people gone to in order to secure safe access to cannabis therapeutics? (e.g., movement, migration, democratic and cultural resistance)... and at what price? Importantly, does medical cannabis use shed new light on the persistent and pervasive phenomenon of cannabis use in individuals whom we would not consider "seriously ill"?

[Click here for part one](#) and [here for part two](#) of the youtube videos of my oral comments at the Seattle Medical Marijuana Workshop held by the Washington State Department of Health. Downtown Seattle Public Library, 9/10/07.

[Click here](#) to listen to my talk on the mainstage of the 2007 Seattle Hempfest, 8/18/07. This was broadcast on the [NORML Daily Audiostash](#) on 9/4/07.

[Click here](#) to see my powerpoint presentation slides for a talk I gave entitled "Learning About Medical Marijuana as a Medical Student in a Medical Marijuana State." [Symposium in Exile, June 23, 2007: Medical Marijuana: Myths, Facts & Current Science](#), Chicago, IL. Presented by The Medical Marijuana Policy Advocacy Project (MMPAP) in collaboration with Roosevelt University's Illinois Consortium on Drug Policy, Students for Sensible Drug Policy (RU Chapter), and the Drug Policy Alliance. 6/23/07.

[Click here](#) to see my powerpoint presentation slides for a talk I gave entitled "The political ecology of medical marijuana germplasm access and delivery: therapeutic cost-effectiveness and American federal death penalty apportionment*." A version of this presentation was given at both the 2007 AAG meeting in San Francisco and at the 2007 SSH MD/PhD conference in Chicago. 4/19-22/2007.

[Click here](#) to see my powerpoint presentation slides for a talk I gave entitled "The Medical Consequences of the Drug War: A Focus on Violence." Hosted by Bastyr University Student Physicians for Social Responsibility.. (This talk was a modified version of [the one I presented with the same title](#) at the 2007 SPSR National Conference on 2/24/07.) 5/21/07.

[Click here](#) to see my powerpoint presentation slides for a talk I gave at the 2006 National Organization for the Reform of Marijuana Laws Conference in San Francisco. The talk was entitled "Mental Health and Cannabis: Loose Ends". 4/21/06.

[Click here](#) to read a copy of the comments I delivered at a forum entitled "Essential Medicines: Global Access, Global Responsibility" put on by the UW student chapter of Americans for Informed Democracy, along with Universities Allied for Essential Medicines at UW and AMSA UW Premedical Chapter. In this talk, I advocate for the reform of drug laws that exert a type of pre-emptive patenting giving exclusive ownership rights of botanical medicines to governments while forcefully prohibiting all others from utilizing them. 11/21/06.

[Click here](#) to see my powerpoint presentation slides for a talk I gave entitled: 'Emergency Cross-Border Prison Extractions in the Americas: Global Health, Structural Violence, and the Enforcement of Evidence-Denying Prohibitions on Botanical Biota'. The talk was given by invitation as part of the '[Students Moving Mountains](#)' [Speakers Series](#) sponsored by the University of Washington Libraries and the Friends of the UW Libraries. 11/2/06

[Click here](#) to see a youtube video of my talk on a panel entitled "Cannabis: A Holistic Medicine" at the 2006 Seattle Hempfest. Other portions of the panel can be seen [here](#). 8/19/2006.

[Click here](#) to see and listen to my comments on the 'Grass Roots to Grass Tops: Activists Effectively Working Together At All Levels' Panel at the 2006 National Organization for the Reform of Marijuana Laws Conference, San Francisco, CA, 4/20/06—broadcast nationally on C-SPAN Radio, May 7, 2006 @ 10 AM (eastern).

[Click here](#) to see my powerpoint presentation slides for a talk I gave at the 2006 National Organization for the Reform of Marijuana Laws Conference in San Francisco. The talk was entitled "Mental Health and Cannabis: Loose Ends". 4/21/06

GRADUATE WORK UPDATE: (9.14.06) I have passed my departmental General Exam, which officially makes me a PhC (doctoral candidate). This was a three-part exam. First, in late May/early June, I wrote a General Statement. Then, based on this statement, my committee wrote a six-question General Exam to which I wrote responses over the course of two weeks. Finally, on 8.30.06, my committee gave me an oral examination. I was given an "enthusiastic pass" afterwards. I am now proceeding on to draft a dissertation project proposal as well as working on a few other writing projects. I have also posted a few recently completed writing projects. See below.

GENERAL EXAM: Statement, Questions, Responses:

Click here to read a copy of my General Statement. This was entitled: Living in hiding. A critical political ecology of Cannabis Abuse mental disorder: diagnostic, therapeutic, and public health implications.

Click here to read the six-question exam. The two papers referenced in question 4 can be seen here and here.

Click here to read my written responses as one document. Or see below for individual questions:

Question 1b: Because of my having taught Geog 512, and because of my interest in linguistic precision, I would appreciate a brief foray into 2 phrases used in your 1st paragraph. A "recognizing the human body as both a materially and discursively created natural object", uh, discursively, how, why? what's the matter with socially? B "holistic perspective.... sophisticated poststructuralist and feminist understanding of the human body that...integrates...subjectivity and embodiment" etc.... Why and how is a feminist understanding of the body different from a masculinist understanding? I'm serious about this. Doesn't it set up an essentialist dichotomy that at best is a cliché?

Question 2: In your statement you make an argument for using a political ecology of health/disease framework in your dissertation and discuss core requirements for such an approach (pages 6-7 of your statement). Can you identify, discuss, and analyze examples in the literature which best exemplify prior uses of such an approach or at least examples which come closest to the ideal integrated approach as you have identified it?

Question 3: What patterns of cannabis use would not be considered abusive? What basis would you use to distinguish abusive from therapeutic use? What properties of cannabinoids make them well suited for use as an analgesic? What are the most promising recently discovered properties of cannabinoids?

Question 4: One of your stated areas of expertise is clinical epidemiology. Thus, please consider one of the two articles attached to this exam (S Bent et al, Saw palmetto for benign prostatic hyperplasia. New England Journal of Medicine 2006;354:557-66 OR JA Blumenthal et al., Effects of exercise and stress management on markers of cardiovascular risk in patients with ischemic heart disease: a randomized controlled trial. JAMA 2005;293:1626-34. Do not read commentaries that accompanied or followed the publication of the study. Is the study convincing? Is the methodology appropriate? Are there problems in the study design? Are these problems significant enough to affect the conclusions? Are the statistical methods appropriate? What alternative statistical methods could have been used?

Question 5: In the section on substance-related disorders, DSM-IV distinguishes 11 categories of substances. For most of these substances, it also distinguishes between substance abuse and substance dependence. Among these many disorders, is Cannabis Abuse disorder uniquely suspect? Are the abuse disorders more suspect than the dependence disorders? Are the Cannabis disorders more suspect than those of other related substances: alcohol (high prevalence), hallucinogens (similar pharmacology), opioids (endogenous analogs), nicotine (similar health hazards). Does the political ecology of cannabis use cast suspicion on the disorder diagnosis or on its legal status or both? Why?

Question 6: Discuss the differential expression of pain in various cultures and cultural groups. Why do these variations exist? What are the therapeutic implications? Implications for the use of cannabinoids? Discuss both "purely" cultural factors as well as genetic factors, citing appropriate empirical and theoretical studies. Is there a geography of pain?

GRADUATE WORK UPDATE: I have completed and passed my Departmental Preliminary Exam! This exam consisted of three parts. In chronological order: first, a Preliminary Statement was drafted; second, the Preliminary Committee of three professors prepared a tailor-made written exam based on the Preliminary Statement that was taken over the course of a week; third, a two-hour Preliminary Oral Exam was conducted. Here I will post the preliminary statement and the preliminary exam with my written answers to three of the questions.

PRELIMINARY EXAM: Questions and Responses

[Click here to read the preliminary exam questions prepared by my Preliminary Committee.](#)

HERE ARE MY WRITTEN RESPONSES:

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?

Question 2a: Explain how your area of interest follows from, or is an example of the traditions of medical geography.

Question 3b: What is known about the geography and epidemiology of pain in the population as a whole in the United States? Propose a research agenda for what is unknown.

PRELIMINARY STATEMENT [Click here to read a copy of the SECOND AND FINAL version of my preliminary statement entitled:](#)

Mental Disorder or Governmental Disorder? Self-administration of illegal neurotransmitter-analogue substances: delineating Substance Abuse mental disorder from health and human rights considerations in the field

The three sections of this statement are titled:

- (1) A Primer on Substance Abuse Mental Disorder and Criterion A3 As Per The DSM-IV-TR
- (2) A Study Population: Those Diagnosable By Criterion A3 And Those At-Risk
- (3) Geographically Discernable Responses to Violence: Harm Reduction

Here is the FIRST DRAFT of the PRELIMINARY STATEMENT. This explores issues from the final draft at a more in-depth level and serves as 'background' for the final draft. [Click here to read The title is:](#)

From drug war to drug peace: Medical violence embedded in the diagnostic criteria for "Substance Abuse" mental disorder enables systematic human rights violations and must be updated by the medical geography of non-problematic and beneficial psychoactive substance use.

The three main points covered in this piece are:

- (1) Medical violence 'writ large' AND the circularity of medical and legal definitions of psychoactive "substance/drug abuse"
- (2) Grounding psychoactive substance use in place, culture, and health: Geographic context of non-problematic and beneficial substance use
- (3) Towards harm reduction and benefit maximization by fostering therapeutic landscapes for human

psychoactive substance use: geography as set and setting

Selected Graduate School Course Work:

[Click here to watch](#) a copy of a final project powerpoint presentaion and [accompanying paper](#) co-written with Michael Horner and Zhong Wang called:

The Impact of Global Warming Induced Mean Sea Level Rise on the Puget Sound Costal Zone

Written for Geography 460: Geographic Information Systems Analysis: A Coastal Perspective, Fall 2006

I participated in a glossary-writing project for the 2006 University of Washington Common book:

Mountains Beyond Mountains: The Quest of Dr. Paul Farmer, a Man Who Would Cure the World by

Tracy Kidder. [Click here](#) to learn more about the common book project. I authored or co-authored the

terms MEDICAL GEOGRAPHY (with Sarah Paige and Amber Pearson), POLITICAL ECOLOGY OF DISEASE (with Michelle Bilodeau), MALARIA, KWASHIORKOR, and TYPHOID.

[Click here to access](#) the full glossary, edited by Dr. Matthew Sparke.

[Click here to read](#) a copy of a paper I wrote called:

Embodying Forbidden Cannabinated States

Written for Geography 573: Urban Political Geography: Sexuality and Space, Spring 2006

[Click here to watch](#) a copy of a powerpoint presentation and [accompanying paper](#) entitled:

Persecution of the Ill and Disabled who use Cannabis as Medicine – Health and Human Rights Cases in the American-led ‘War on Marijuana’

Written for Health Services 590K/Law H540: Health and Human Rights, Winter 2006

[Click here to read](#) a copy of a paper co-written with Gregory Simon called:

The intersection between Political Ecology and Health Geography at the scale of the embodied subject.

Written for Geography 515: Evidence and Explanation in Geography, Spring 2005

[Click here to read](#) a copy of my final project paper called:

Problematic Alcohol Use and Marijuana Law Enforcement: Correlations at Multiple Scales in the US.

Written for Geography 360: Principles of Cartography, Spring 2005

[Click here to read](#) a copy of a paper I wrote called:

Health and Prohibition: An Exploration of Seattle's Medical Cannabis Community

Written for Geography 532: Qualitative Methods in Geography, Winter 2005

[Click here to read](#) a copy of a paper I wrote called:

Deconstructing the War on Drugs

Written for Anthropology 561b: War and Society, Winter 2005

[Click here to read](#) a copy of a paper I wrote called:

Geographies of Lethal and Nonlethal Violence

Written for Geography 581: Research Seminar in Medical Geography, Fall 2004

[Click here to read](#) a copy of a paper I wrote called:

Health Care Access--Private or Public (about Hill v. Colorado and abortion clinic buffer zones)

Written for Geography 574: Geography, Law, and Social Control, Fall 2003

[Click here to read](#) a copy of a paper I wrote called:

Peller Plays Roulette (about Roulette v. Seattle--the sidewalk ordinance--and Gary Peller's 'metaphysics of law.'

Written for Geography 574: Geography, Law, and Social Control, Fall 2003

[Click here to read](#) a copy of a paper I wrote called:
Can Disease Ecology Account for non-infectious diseases?
Written for Medical Geography Rotation, Summer 2002

Selected Clinical Elective Course Work:

[Click here to read](#) a copy of my reflection paper for the course:
Mind-Body Medicine, Fall 2004. The was the first time it was offered at the University of Washington School of Medicine as a for-credit clinical elective.

[Click here to read](#) a copy of my personal oath statement for the course:
The Healer's Art: Awakening the Heart of Medicine, Winter 2003. The was the first time it was offered at the University of Washington School of Medicine as a for-credit clinical elective.

Selected Application Essays:

[Click here to read](#) a copy of my application essay for the Betty Ford Summer Institute for Medical Students that I attended in June 2005.

[Click here to read](#) a copy of my (rejected) application essay for the 2005 Center for Studies in Demography and Ecology Fellowship. The topic is 'medical cannabis'.

[Click here to read](#) a copy of my personal statement for my University of Washington Department of Geography graduate school application (Jan. 2004).

[Click here to read](#) a copy of my cover letter for my application to be a member of Seattle's I-75 mandated [Marijuana Policy Review Panel](#) for which I was interviewed at City Hall (Nov. 2003). [N.B.: Cancer claims made in this piece are outdated and likely erroneous. See papers linked at top of this page for the latest.]

[Click here to read](#) a copy of my Autobiographical Statement for my University of Washington Medical Scientist Training Program Application (Oct. 2001).

[Click here to read](#) a copy of my MD-PhD Statement of Intent for my University of Washington Medical Scientist Training Program Application (Summer 2001).

[Click here to read](#) a copy of my Personal Statement for my medical school application (Summer 2001).

[Click here to read](#) a copy of my Practice Vision Essay for my medical school application (Summer 2001).

Selected Physicians for Social Responsibility Speeches and Presentations:

[Click here to view](#) slides from my invited presentation "The Medical Consequences of the Drug War: A Focus on Violence" given at the 2007 National Student Physicians for Social Responsibility Conference, Stanford University, 2/24/07.

[Click here to read a copy of my second piece at the WPSR 2005 Annual Holiday party first-ever "open mic". I shared this after I read my Healer's Art Oath. December 8, 2005.](#)

[Click here to read a copy of my invitation to join WPSR that I wrote for my 4th year medical student classmates. July 1, 2005.](#)

[Click here to read a copy of my statement at the King County Bar Association's Press Conference on 'An Exit Strategy from the War on Drugs.' March 3, 2005.](#)

[Click here to read a copy of my statement at the February 14, 2005, Press Conference on the costs of the Iraq War organized by Steve Ludwig of S.N.O.W.: Sound Nonviolent Opponents of War. Theme of US siege on Fallujah.](#)

[Click here to read my inaugural address at the 2004 WPSR annual dinner: "Bringing In the Next Generation". October 16, 2004.](#)

Links:

Please contact [Andrea Brandon](#), a fellow MD/PhD student at University of Illinois Urbana-Champaign, if you are a physician who is also an advocate for 'drug policy' reform. She is looking for such individuals as part of her PhD research.

[Check out my web student directory page \(with picture\) at the UW MSTP \(Medical Scientist Training Program\) website.](#)

[A very interesting geography undergraduate's project: Joen Madonna \(Geography major at UC Berkeley\)
"Hidden in Plain View: Cannabis Clubs, Visibility, and Power in the Urban Landscapes of the Bay Area and Amsterdam"](#)

[check out my rap. \(Temporarily Down\)](#)

[Check out my friend Alex's wonderful book on wholeness.](#)