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Canada

Ways to Consider Non-Medical Cannabis

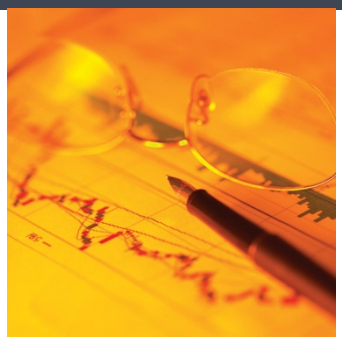
Reasoning from Conceptual Analogues

by Austin Lawrence

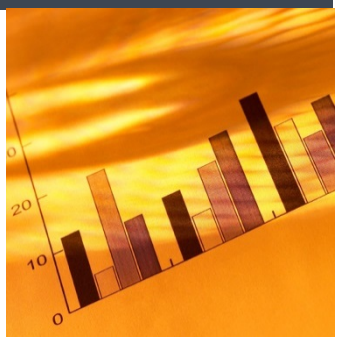
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Abstract

Cannabis legislation and regulation is a complex undertaking. This paper provides a framework for organizing approaches to thinking about cannabis regimes by considering the psychoactive commodity analogues of alcohol, tobacco and natural health products. An understanding of the characteristics and semantic spaces that have been applied in the development of regimes to control currently legal psychoactive commodities can be instructive in rationalizing and organizing the dialogue related to the legalization of psychoactive cannabis.

Author's Note

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Table of Contents

Introduction 3
- Background 3
- Objective 3

Discussion 4
- Commodities 4
  - Legal 5
  - Illegal 9
  - Form 11
- Intersections 13
  - Exchange mechanism 14
  - Market level 14
  - Privacy 15
  - Motivation 15
  - Demographic 15
- Space 16
  - Governance 17
  - Practice 18

Illustrations 20
- Alcohol – Motivation – Governance 21
- Tobacco – Demographic – Governance 21
- Alcohol – Market level – Governance 21
- Alcohol – Market level – Practice 22
- Tobacco – Exchange mechanism – Governance 22
- Natural Health Products – Market level – Practice 23
- Alcohol – Privacy – Governance 23
- Tobacco – Market level – Practice 23

Conclusion 24

Bibliography 25

Introduction

Background

Cannabis and its byproducts are the most widely used illegal psychoactive substances in the world, with roughly 125 million users and suppliers of cannabis products in 2011 (Caulkins et al, 2012). Canada has one of the highest prevalence rates of cannabis use in the world, with 34% of Canadians having used cannabis as a drug during their lifetimes, including 11% of those 15 years and older having used it in 2013 (Health Canada, 2015).

The Liberal Party platform included a commitment to "legalize, regulate, and restrict access to marijuana" and further, "remove marijuana consumption and incidental possession from the *Criminal Code*, and create new, stronger laws to punish more severely those who provide it to minors, those who operate a motor vehicle while under its influence, and those who sell it outside of the new regulatory framework" (Liberal Party of Canada, 2016).[1]

A reading of the Liberal Party of Canada (2016) policy position indicates the goals are to:

- reduce the rate at which "young people" are consuming cannabis;
- reduce to zero the rate of consumption of cannabis for "children;"
- reduce the total number of people with criminal records for cannabis possession offences;
- reduce the total cost of enforcing cannabis laws to all parts of the criminal justice system;
- reduce the net profits from the cannabis market to people offending as organized criminals;
    - specifically, reducing the net profits from the cannabis market to people offending as organized criminals, who also offend as human traffickers or are involved in "hard drug" markets; and
- divert a portion of cannabis market profits to legitimate taxation.

The government has committed to wide-ranging consultations with stakeholders, experts and the public on how to best legalize non-medical cannabis. Thus, the goals and objectives of legalization may be refined and/or be modified in the future.

Objective

With the goal of identify approaches and considerations for consultation and policy discussion, the objective of this report was to: a) identify the similarities and differences between psychoactive cannabis and analogous legal substances consumed for their psychoactive

[1] The Liberal Party of Canada platform was published on-line in 2015. However, the web site indicates a copyright update to 2016. Thus, although the content referenced was disseminated in this form in 2015, it must be referenced as 2016.

properties; and, b) describe the characteristics applied when discussing or fashioning regimes related to the control of these substances.

The methodology applied was that of an informal literature review. Materials associated with the regulation of analogous legal psychoactive natural substances were scanned, as well as issues raised in recent reportage and court cases regarding non-medical cannabis. This was mainly accomplished as a by-product of researching the paper "Cannabis Performance Metrics for Policy Consideration: What Do We Need to Measure?" (Maslov, et al, 2016). The identified materials were examined for thematic similarities and differences, with examples provided to illustrate some of the identified considerations.

Discussion

Humans often reason by analogy. It is one of the most commonly used forms of inductive reasoning. In analogical reasoning the perceived similarities between certain sets of fact patterns are used to infer that an impact yet to be observed will also be the same for the two examples; the inference being that the treatment of, or reaction to, both examples should be similar. This line of reasoning is particularly relied upon when faced with novel situations. Using analogy and metaphor in political and policy discourse is particularly frequent.

From the mid-1800s until today, there are three primary commodity analogues that people have used to discuss how cannabis should be treated under legislation or regulation: alcohol; tobacco; and natural health products.[2]

The ways people have described what is important about how to think about these substances and the social behaviours that surround them can be classified along a number of axes: 1) form that the commodity takes; 2) exchange mechanism used; 3) market level; 4) privacy of behaviour; 5) motivation for use; 6) demographic group; 7) governance (level of government); and 8) economic sphere of practice (industry or sector).

Commodities

Cannabis was made illegal in 1923 under the *Narcotics Drug Act Amendment* Bill, as a "new drug" (Daniel, 2014). Before 1923 the use of cannabis was legal in Canada. This cannabis use was mainly in the form of medical preparations or patent medicines. The federal responsibility for the oversight of food and drugs in Canada predates Confederation, but was initially confined to ensuring that food and drugs were not adulterated. *The Proprietary or Patent Medicine Act* (1909) was the first legislation to register medicines, which it limited to secret-formula, non-pharmacopoeial packaged medicines. This Act was the beginning of the protection of the public against medically-active drugs administered without medical supervision. Following the

[2] Both alcohol and tobacco are psychoactive substances, while only a sub-set of natural health products are psychoactive.

establishment of a federal Department of Health in 1919, the *Food and Drugs Act* was introduced in 1920. By the late 1920s, Regulations developed under the Act established specific requirements for licensing pharmaceutical products (Health Canada, 2007). It is not clear whether the federal government or the newly formed Department of Health specifically regulated any cannabis preparations prior to 1923.

The initial impetus for making drugs illegal in Canada came from activists in the Social Gospel and Temperance Movements who had been primarily campaigning against the consumption of alcohol. Their targets also included public health campaigns and moral "crusades" against tobacco and other drugs, particularly opium. Milder stimulant drugs, such coffee and tea, were eschewed by some in these movements and endorsed as harmless alternatives by others. Some commenters believe that cannabis was classified as a prohibited drug by legislators almost as an afterthought, possibly due to influences from American law enforcement (House, 2003).

Thus, when Canadians first started consuming cannabis products they did so as easily accessible commercial medicines or, what we would call today, natural health products. However, by the 1920s, largely through advocacy by Prohibitionists, cannabis became more analogized to alcohol than a natural health product. While the production and consumption of alcohol was eventually re-legalized, the establishment of a category of illegal psychoactive plant-based drugs remained, with subsequent plants, fungi and chemical preparations joining cannabis in illegality.

There are a number of similarities and differences between alcohol, tobacco and natural health products that are cited when analogizing them to cannabis.

Legal

Legal psychoactive commodities can range from those that society considers relatively innocuous, such as foods and beverages that may contain caffeine, casein, or various sugars, to more risky medically-active natural health products, to the main legal psychoactive commodities of alcohol and tobacco, which are generally recognized as often involving significant social and individual harms (Nutt et al, 2010).

Alcohol

Drawing analogies between alcohol and cannabis is common, particularly when less restrictive cannabis policy positions are advanced during public legalization or decriminalization discussions.

- Alcohol is very commonly used. Use is common both in terms of the proportion of the overall Canadian population that has consumed alcohol, as well as the number of people whose cultural heritage has traditionally included the consumption of alcohol as a social or religious practice. The pre-Colonial historic use of alcohol tended to be concentrated in Europe, Africa, parts of Asia, and South America. Close to 90% of Canadians have used alcohol during their lifetimes, with about 76% of Canadians 15 years and older having used it in 2013 (Health Canada, 2015). Alcohol is consumed and advertised openly for consumption in many in-door establishments, and is consumed in private, with outdoor consumption often being socially and legally restricted.

- Alcohol is easy to produce. Alcoholic drinks with a concentration of under 15% alcohol are simple to produce at home, merely requiring the fermentation of sugars by a yeast. The process is similar to some types of simple food production or preserving, making leavened bread being the best example. The production of alcohol with a concentration over 15% or so is more difficult and usually requires specialized equipment and knowledge.
- Alcohol is sold both in natural forms (such as beer and wine), as concentrates (such as liquor or spirits), or as diluted concentrate preparations (such as sherry, coolers and cocktails).
- Alcohol is commonly included as part of food preparations, such as in chocolates or sauces. Consuming alcohol with a meal is a common social practice. It is also served at events or establishments where consumption of food is the focal activity. Alcohol is often regulated in a manner that is similar to food.
- The consumption of alcohol can cause significant behavioural changes and driving impairment.
- The incidental "second hand" consumption of alcohol by adults who do not want to ingest it is not common, due to oral ingestion being the most common method of consumption. The consumption of alcohol by a pregnant mother can have significant negative, long-term health impacts on her child.
- Alcohol is used as part of religious practices. This is particularly true of the Judeo-Christian religions and denominations, but does include pre-Christian European religious traditions, some African and South America spiritual traditions, and others.
- Alcohol is smuggled between jurisdictions and there is the illicit production of alcohol.
- Alcohol can be used as a base for medicines and herbal preparations. Some moderate use has been used as a dietary supplement for health purposes. Generally, alcohol on its own is no longer used as a pharmacological medicine.

Tobacco

Drawing analogies between tobacco and cannabis is common, particularly when cannabis policy is becoming more restrictive due to criminalization efforts.

- Tobacco is commonly used. The pre-Colonial historic use of tobacco was restricted to North and South America. Tobacco was actually introduced to much of Canada's north through colonialism. About 40% of Canadians have consumed tobacco during their lifetime, and about 15% consumed tobacco in the last year (Health Canada, 2015). Tobacco is consumed openly out-of-doors and in private, with social and legal restrictions on much indoor consumption and some outdoor consumption
- Tobacco can be produced at home. Tobacco horticulture and preparation of a consumable product can be difficult in many parts of Canada, but extremely simple in others. Raising the common form of tobacco *N. tabacum* is on par with raising tropical houseplants, while raising the rarely used *N. rutica* is simpler. Harvesting either species can be slightly

troublesome due to the chemicals and morphology of the plant, but no more difficult than weeding thorny plants or applying household cleaners.

- Tobacco products are not often consumed concentrated. However, recently a market for nicotine products, namely 'vaping,' has resulted in a retail market in tobacco extracts at the retail level.
- Tobacco is not generally used in food preparations. Tobacco is not usually regulated like food. It is a common social practice to consume tobacco after meals.
- Tobacco use does not cause significant behavioural changes or driving impairment.
- The incidental 'second hand' consumption of tobacco through inhalation of smoke or vapours is a common concern and has significant health impacts that are similar to those experienced by tobacco smokers themselves. The consumption of tobacco by a pregnant mother can have negative health impacts on her child.
- Tobacco is used as part of religious practices. This is mainly confined to Indigenous and syncretic spiritual traditions that arose in North and South America.
- Tobacco is heavily smuggled between jurisdictions. While there is illicit cultivation of tobacco, the focus is upon the illicit preparation of retail products and diversion of raw materials from the licit to the illicit market.
- Tobacco products are no longer commonly used as physical medicines. However, they are used as spiritual medicines in religious use, and their extracted derivatives (i.e., nicotine preparations) are used as treatments in the cessation of tobacco use.

Natural Health Products

As described in the background section, before it was criminalized in Canada cannabis was treated as what is known today as a 'natural health product' (Spicer, 2002). Today "natural health products" cover things such as vitamins and minerals, herbal medicines, homeopathic preparations, energy drinks, probiotics, other food products like amino acids and essential fatty acids, and many alternative and traditional medicines, such as Chinese medicines (Health Canada, 2012a; Health Canada, 2012b). Natural health product regulations specifically exclude plants and chemicals listed as 'controlled substances' under the *Controlled Drugs and Substances Act (CDSA)*. Natural health products are not recognized by the medical establishment as being pharmaceutical medicines, although they do meet the legal definition of a drug under the *Food and Drugs Act*. However, natural health products are acknowledged to be used by the public as treatments and/or have a notable impact on human physiology or cognition.

It is often in the category of natural health products that plants, fungi, animals and chemicals first appear that are later scheduled as controlled substances. This can occur in a number of different ways. The *CDSA* has scheduling criteria that reflect pharmacology, abuse liability, as well as evidence of harms. Scheduling can be related to an increase in the frequency of recreational use and/or a rise in adverse reactions being treated in hospitals, particularly in a demographic that has not traditionally used the product. Scheduling can also be driven by Canada's participation in international drug conventions, often supported by evidence presented for use of a substance in another country.

Importers and retailers will sometimes publicly market these types of products as home care products (such as the cathinones marketed as 'bath salts'), lifestyle products (such as diviner's sage marketed as 'incense'), or a food (such as kratom or betel nut being sold in ethnic grocery stores as 'spices'); often to get around enforcement actions or delay scheduling under the *CDSA*. However, in the popular imagination these types of products more clearly fall into the category of natural health products, since they are not consumed primarily for calories or as beautifying aids, but are instead used for their physiological and cognitive effects, and are not yet categorized by the authorities as illegal drugs.

As the substances in the category of natural health products are extremely diverse, it is difficult to characterize them as a group. In fact, most natural health products are not psycho-active; only a small sub-set of them are. However, amongst this sub-set, there are many psychoactive plants that are used traditionally in cultures around the world or historically as social and ritual inebriants or entheogens.[3,4] These are the products considered to be analogous to cannabis from this category. They mainly include the ones that are still in the natural health products category, such as kava kava, calamus root, and skullcap, but we can conceptually consider those that are in the process of being, or have been, criminalized, such as diviner's sage and khat.

- Individual natural health products are infrequently, and sometimes, very infrequently, used, although as a category they are very commonly used. As noted, sometimes it is only the infrequency of use that is the reason more restrictive regulation or legislation has not been applied to the product. It is not frequent to see them consumed in an obviously public or social manner; use is often personal or at least private.
- Some natural health products are simple to garden or harvest wild in Canada, although many are imported and a significant number would require a greenhouse and advanced skills to cultivate in this country.
- Natural health products are sold in both concentrated and non-concentrated forms. (Regulations regarding labelling requirements for standardized constituents may actually contribute to a market for concentrates, for some products.)
- The medicinal natural health products analogous to cannabis are not generally treated by users as food preparations, although they can often be taken with food (or after eating). Although they are not regulated like food now, historically and in their countries of import they often were because of their common agricultural origin and social use.

[3] An "inebriant" is a substance or agent that causes intoxication. "Intoxication" is a state where one loses control of one's regular mental faculties and behavior as the result of the ingestion of a chemical substance.

[4] An "entheogen" is a chemical substance that is used in a spiritual, religious or shamanic context to encounter the divine, enter into an alternative reality, or achieve a transcendent or numinous state.

- For most natural health products there are no significant behavioural changes or driving impairments; however, for those that are cannabis analogues there often can be (for instance, kratom or kava kava).
- Smoked materials are rarer in this category as a whole and dosage is often infrequent, so there is not usually an issue with second hand consumption impacts. The consumption of some natural health products may be contraindicated for pregnant and lactating women or people taking certain medications.
- The most analogous natural health products to cannabis tend to have a religious use (such as kava kava), but usually amongst a very small group of people. However, in their cultures of origin their spiritual and religious application tends to be a primary use.
- There is no significant smuggling between jurisdictions or illicit production in Canada, but products can be adulterated or mislabeled.
- Almost all natural health products are used as medicines or to improve health by some population.

Illegal

Cannabis

This analysis does not go into detail regarding the validity or the degree of difference or similarity between any of the cannabis analogues. Much more data and study would be required to firmly justify any given analogy. Further, due to the complexity of data, number of variables, and priority given to different factors, the selection of the analogue can become a cultural or ideological decision, since any number of rational arguments could be advanced. Finally, the selection of any one analogue presupposes a value judgment that cannabis should also be legislated or regulated according to the current regime for the analogous commodity, which can bias the selection of the comparator.

- Cannabis is commonly used in Canada today. The pre-Colonial historic use of cannabis covered many places in Europe, Africa and Asia. 34% of Canadians have used cannabis as a drug during their lifetimes, and 11% of Canadians 15 years and older having used it in 2013 (Health Canada, 2015). Cannabis is often consumed surreptitiously and in private locations.
- Cannabis can be produced at home. Cannabis horticulture and preparation is relatively simple, on par with the gardening and cooking of tomatoes.
- Cannabis products are consumed in both concentrated and non-concentrated forms, with non-concentrated forms predominating. Some analysts have suggested that illegality has created markets for more concentrated and potent forms of cannabis.

- Psychoactive cannabis is commonly used in food preparations, but it is not usually treated as nutritive itself.[5] In Western countries, psychoactive cannabis is not usually controlled like food. It is a social practice to consume cannabis before a meal to improve the appetite or increase the satisfaction derived from eating.
- The consumption of cannabis can cause significant behavioural changes and driving impairment.
- Incidental 'second hand' consumption of cannabis through the inhalation of smoke or vapours is a common concern and has significant health impacts. There may be health impacts on the children of pregnant mothers that consume cannabis.
- Cannabis is used as part of spiritual and religious practices. This use is mainly related to traditional religious practice in parts of Asia and Africa (such as Shavite Hinduism, some traditions of pre-Christian Europe, and new religious movements in the Americas such as the Rastafari and New Age movements).
- Cannabis is heavily smuggled between jurisdictions. There is also significant illegal domestic production and preparation of products.
- Cannabis is commonly used as a medicinal treatment.[6]

Table 1 provides a summary of the characteristics outlined for psychoactive cannabis and the most commonly cited analogues. This visual summary also provides a subjective indication of the degree to which a certain characteristic is apparent.

[5] Non-psychoactive cannabis, or "hemp," is raised for both fibre and the nutritive seeds. Hemp seeds are high in protein and produce edible oil, and are used as a food.

[6] While cannabis may be viewed medicinally in various forms of traditional medicine, particular sub-cultures, or be recognized in a populist manner as having medicinal benefits, Health Canada's reviews of medical science indicate that cannabis is not a legitimate pharmaceutical product (personal communication).

Table 1: Characteristics of Cannabis versus Analogues

Legend* + = stronger characteristic - = negligible characteristic	Social Prevalence[7]	Ease of home production	Consumption of Concentrated Forms	Treated as Food	Behaviour Changes	Second Hand Concern	Religious Use	Criminal Opportunity	Used for Health Purposes
Alcohol	+++	+++	+++	++	+++	++	+	+	+
Tobacco	++	+	+	-	-	+++	+	++	-
Natural Health Products	-	-	+	+	++	+	+	-	+++
Cannabis	+	++	++	+	+++	++	+	+++	++

*subjective assessment of the author

Plant-based drugs

There are a large number of plant- and fungi-based drugs that have been made illegal. These have been linked by analogy to cannabis, or themselves have been linked to the legal psychoactive analogues of cannabis listed above. Notable examples of such substances are coca leaf, khat, diviner's sage, ayahuasca preparations, peyote cactus, and psilocybin containing mushrooms. This paper does not focus on these analogies, or drugs that are currently planned to remain illegal. However, it should be noted that once cannabis is legalized, arguments by analogy from substances of this type to cannabis may be made. This discursive shift has already started to occur with support for the legalization of the medicinal and non-medicinal use of psilocybin mushrooms and other hallucinogens (Kreb 2015), as well as for the social use of khat (Lallanilla, 2013).

Form

The form the commodity takes along the path from production to consumption is often relevant to legislative and regulatory regimes. Since they are both plants, cannabis and tobacco appear to have the most similarity in this regard, although roughly congruent divisions could be made for alcohol and many natural health products.

In the case of marijuana, the various following forms can result in differences in treatment under varying regulatory scenarios:

[7] "Social prevalence" is a subjective category summarizing usage rates and the degree to which consumption, and talking about or images of consumption, are encountered in the course of daily life.

- **Germplasm**: The materials used to start a new plant can fall into two major categories.
    - **Seeds**: For cannabis these can be produced to be exchanged in different forms when viable (to produce only female plants, to auto-flower, etc.) or to be exchanged in a form that is not viable (usually for food or fodder).
    - **Cuttings**: Similar to seeds, these are components of plants, usually cuttings, which are used to grow further cannabis products.
- **Growing plants**: Growing plants can be distinguished into two basic types.
    - **Vegetative**: This type consists of seedlings and plants in a vegetative stage of growth. Depending on the horticultural technique being used, they may or may not be raised to the flowering stage when they will produce cannabinoids in quantity. They might instead be kept until their sex is known, then the male plants destroyed (e.g., crop "thinning") or a female plant might be kept in the vegetative state to produce genetic stock or for other horticultural purposes (e.g., as a "mother" plant).
    - **Flowering**: This type consists of those plants that are either intended to become flowering plants or are flowering.
- **Harvested material**: There are two basic types of harvested material.
    - **Wet**: This is a material that is in the process of being transformed into a dryer form (such as when marijuana is "cured") or is a final product that will be consumed in a form that includes significant natural plant moisture (such as use in salads or smoothies).
    - **Dry**: This is a material that has been processed into a dry form that is the final form to be consumed, sold or processed (such as dried cannabis flower 'buds').
- **Concentrates**: There are two basic groups of methods for concentrating the active constituents of cannabis (i.e., the cannabinoids and terpenes):
    - **Kinetic**: Kinetic methods involve the simple mechanical extraction of cannabis concentrates at ambient atmospheric pressure, with or without water. This includes techniques that range from direct contact with undried or living plants (e.g. "charas" or "finger hash"), to dry sifting (e.g., "hashish"), to wet sifting (e.g., "bubble hash"), to mechanical pressure under ambient or hot conditions (e.g., "rosin" made with hair straighteners).
    - **Scientific**: These methods involve some combination of extraction using a chemical solvent and/or the manipulation of atmospheric pressure. These methods can use homemade or adapted apparatus, using solvents such as butane, propane, isopropyl alcohol, carbon dioxide, liquid nitrogen, as well as homemade or commercial vacuum and heating chambers.[8] The products of this

[8] Failure of these types of concentration methods can cause catastrophic injury and fire.

concentration method can be termed “dabs,” “hash oil,” “wax,” and “shatter,” depending on the procedure used and marketing.

- **Mixtures**: Mixtures are of two general types: extracts and dilutions. The difference between dilutions and extracts from concentrates is not one of potency, but that in dilutions and extracts adjuncts are intentionally included in the product besides components of the cannabis plant.
    - **Extracts**: The active chemical constituents of a concentrated cannabis product can also be extracted into a carrying media that becomes part of the end product that is consumed, such as fat (“canna-butter”) or alcohol (cannabis tincture). This may be consumed as is or transformed into another product.
    - **Dilutions**: Concentrates can be diluted in preparations, such as in edible foodstuffs, as lotions for external or internal application. Dried harvested material can also be diluted with other plant matter, such as tobacco or lobelia, or with non-psychoactive cannabis plant matter, for respiratory ingestion.

For alcohol similar types of categories would include dried and wet yeast cultures, prepared fermentation kits, partly fermented products, fully fermented products, ice ‘distilled’ products, heat distilled products, chemically-produced dry powdered products; and mixtures of concentrated products with adjuncts. The categories for tobacco are fairly similar to cannabis, but differ slightly due to the biology of the plant and common consumption techniques.

Intersections

Regulatory responses to cannabis around the world are diverse (CCSA, 2015) and are further diversifying rapidly. These cannabis regimes are on a continuum from full criminalization with maximum legal sanctions applied for most types of offences to nearly full legalization where full commercialization exists alongside minor penalties for the remaining decriminalized offences. It is not the intent of this paper to provide a description of these regimes or the advantages, disadvantages or possible concerns with them. Rather, this paper outlines conceptual approaches to discussing the establishment of such regimes.

By generally comparing how and where regulatory regimes differ between, and over time for, alcohol, tobacco, natural health products, and cannabis, a number of axes for the intersection of the qualities that are often considered in these legislative and regulatory regimes can be observed. In the following section this paper outlines the major conceptual categories where legislative, regulatory or enforcement responses differ. This discussion will use the term “regime” for the legislative and regulatory framework for the governance of behaviours associated with the psychoactive commodity.[9]

[9] Please note that this discussion does not describe what type of analysis would be required after an intersection of characteristics is identified; essentially describing a policy issue for consideration. Such analysis could include a review of what is known regarding the prevalence of patterns of behavior, impacts or the risks associated with the area of concern. Examples include medical dangers to users (such as heightened risks of mental illness), accident dangers to others (such as with drunk driving), etc.

Exchange mechanism

The exchange method through which the commodity is transferred between people is often considered to be important under different regimes. These methods of exchange include:

- **Personal production**: In personal production there is no exchange at all because the consumer creates the product.
- **Sale**: In this case the commodity is transferred in exchange for money.
- **Barter**: This possibility has two forms. Either: 1) one form of the commodity is exchanged for another form of the commodity; or 2) the commodity is exchanged for some other product or service.
- **Gift**: In this case the commodity is transferred from one person to another without formal obligation or negotiation of rights. This could be in the form of: 1) sharing the consumption of the commodity with another person; or 2) giving the commodity to another person for them to consume later. In either case, no payment is received, beyond strengthening the bonds of social obligation.
- **Theft**: Theft is an illegitimate exchange mechanism. This can occur when: 1) the property of an individual or group known to the offender is taken without the freely given consent of the party controlling or owning the property (e.g., robbery, 'inventory shrinkage' at a legal cannabis producer); or 2) property that is without known ownership or provenance to the offender is taken (e.g., harvesting plants found on public land).

These methods of exchange can become more complex, through processes such as contract or communal exchange. For instance, in **proxy production** the labour and capital used to create the commodity are transferred to the consumer, but the actual commodity is not because they are considered to own it throughout the production process. This can happen with various cooperative arrangements. The commodity is viewed as being owned by the consumer from start to finish as an arrangement of contract. If no payments are made, this can be similar to a gift. If payments only covering the cost or labour and capital are provided, the situation is similar to barter. If payments for profit are provided, the situation is similar to sale. (For instance, some jurisdictions allow for-profit business to provide the service of assisting in the production of alcohol outside of the home at "U-brew" establishments under particular circumstances. Some medical marijuana regimes allow for cooperative, not-for-profit growing with, or on behalf of, others.)

Market level

In many regimes, the legality or regulations can often differ by market segment. General, common classifications for these market segments are at the levels of:

- **Production**: The stage at which the commodity is produced. In flat markets, the producer transfers directly to the consumer or is the consumer. In complex markets, the producer transfers the commodity to other market segments prior to the consumer obtaining the product.
- **Wholesale**: Where owners of finished commodities transfer to other distributors or to those who transform the commodity into other products.

- **Retail:** Where the holder of finished commodities transfers them to consumers.
- **Consumption:** Where the consumer has possession of the commodity.

Privacy

The degree of privacy related to consumption often distinguishes between elements of a regime. These usually include the categories of:

- **Public**: The behaviour or activity involving the commodity can take place in any public space.
- **Commercial commons**: The behaviour or activity involving the commodity can take place, in private spaces open to the general public, if the property owner is in accord.
- **Semi-private**: The behaviour or activity involving the commodity can take place in certain private spaces that only particular members of the public can access.
- **Private**: The behaviour or activity involving the commodity can only take place in private residences or other types of personal property (such as a vehicle or water craft).

Motivation

The motivation of the user of the commodity is taken into account in many regimes. The four major categories of use are:

- **Medical**: These are people who consume the commodity because of a medical benefit or because they believe it to be beneficial to physical or mental health.
- **Dependence**: These are people who do not want to consume the commodity but experience a compulsion to continue consuming the commodity due to psychological or physical reasons.[10]
- **Recreational**: These are people who consume the commodity because they enjoy the personal or social effects that the physical and/or cognitive changes of consuming the commodity provide.
- **Spiritual**: These are people whose religious ideology include the consumption of the commodity and/or feel that consuming the commodity is of spiritual benefit.

Demographic

The social characteristics of the consumer population are often a distinguishing feature of the regime. These include:

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[10] There is an emerging literature regarding the abuse of, and dependence upon, marijuana. This is being complemented by ever more publications on the medical uses for cannabis. These health-related motivations for use have hitherto been the main areas of governmental focus under shifting policy regimes surrounding the medical use of marijuana. For more information see Maslov et al, 2016.

- **Age**: This is usually distinguishing between the two categories of adults and youth. However, sometimes more categories, such as seniors, adults, young adults, youth, and children, may be considered.
- **Health status**: This can start with the categories of healthy and un-healthy, with various sub-categories for un-healthy populations that are distinguished between, such as the addicted, self-diagnosed, medically-diagnosed, alternative health care practitioner diagnosed, etc.;
- **Religion**: Exemptions can be provided to adherents of particular religions or to accommodate the practices of a particular religion.
- **Ethical community**: Sometimes particular ethical communities are accommodated in regulatory regimes. Examples include, vegetarians, people who consume only organic or ethically-produced products, or do not consume genetically-modified products.[11]
- **Criminality**: Having any criminal record or a criminal record for a particular type of offence (e.g., drug trafficking, criminal organization, etc.) can be considered a relevant distinguishing feature in some regimes.

Some of these differences in regime that are related to demographic characteristics may be indirectly applied through proxies. The main example of such a situation is when a demographic identity is associated with a population that is reflected in a social **geography** or **location**. In this case demographic characteristics are indirectly, geographically distinguished. For instance, if only certain neighborhoods have a policy applied to them or a policy may apply only around certain institutions (such as schools or sites were addicts consume the commodity). Although rarely explicit, the social geography of place associated with criminal and morally-disputed social behaviours, such as the use of legal and illegal psychoactive drugs, can indirectly reflect differences in how a regime is applied to people that are from a different economic **class** or from a varying **ethnicity**.

Historically, other types of social categories, such as **occupation** (i.e., Christian priest or rabbi, a soldier), **gender** (i.e., being a man), might also characterize more or less restriction on behaviour related to a commodity under different regimes. Due to social changes, some of these common markers of difference have less relevance today than earlier in the last century.

Space

Some social theorists term the conceptual frameworks people use to develop meaning in their thinking “semantic spaces” (Masucci, 2016). How concepts are divided, and in what frameworks they are discussed, matters greatly as a social process because the dialogue shapes resultant social behaviour.

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[11] For instance, allowances or requirements for informative labelling and related standards regulating product claims are part of the wine industry in some jurisdictions. One example is that certain wines are clarified using products that are refined forms of fish or crustacean parts, which is not acceptable to some vegetarians or vegans.

Legislation, regulation and enforcement of regimes related to psychoactive commodities can be discussed in many different ways, as people negotiate the social meaning of the use and control of a substance. Conceptually, in terms of both legal and illegal, psychoactive commodities, our society has determined that the highest level concepts for intervention regarding control of social behaviour surrounding these substances are in the 'spaces' of governance and of practice.

Governance

The social decision to control or not control a behaviour at a particular level of governance is a function of historical and cultural negotiation, which is often guided by politics and solidified in law. In Canada today, particular legal, regulatory and enforcement responses fall more or less within the responsibility of different levels of government. So too will social control mechanisms be constrained to different levels of government. However, there are many shared areas of governance. Therefore, there is significant room for negotiation as to jurisdictional responsibility under which any element of a regime could fall.

The history of the control of alcohol and tobacco in Canada generally follows the pattern that municipalities will be first with by-laws, which are later expanded or rationalized provincially, territorially or federally. Sometimes a provincial, territorial or federal government provides a framework for different local actions on an area of policy. Concerns regarding other psychoactive substances (such as natural health products or substances that become scheduled as controlled substances) may follow a similar pattern of local to regional to national concern. However, other psychoactive substance that are not alcohol or tobacco are less likely to be accompanied by formal responses at lower levels of governance, instead being responded to at higher levels of governance.

Regimes for commodities of this type often distinguish responses according to the following jurisdictions:

- **Federal**: Criminal law is constitutionally reserved for the federal government, but how it gets applied varies greatly by other level of governance. Cannabis is currently illegal under the federal *Controlled Drugs and Substances Act*. The federal *Excise Act* regulates many aspects of the alcohol and tobacco regimes in place in Canada.
- **Provincial** / **Territorial**: Provincial and territorial governments interact with police services to influence enforcement priorities and policies related to the application of criminal law, as well as control significant areas of regulatory enforcement.
- **Municipal:** Large municipalities interact with their police services to influence enforcement priorities and policies related to the application of criminal law. Large and small municipalities create by-laws to encourage or constrain behaviours related to alcohol and tobacco in their communities.
- **Indigenous**: Some majority Inuit jurisdictions and First Nations governments have either formally through by-law, or informally through enforcement, significantly differed in their approach to psychoactive commodity regimes than the surrounding jurisdictions.
- **Private**: Differences in response to the commodity may be allowed in privately controlled spaces, such as restaurants, churches, social clubs, or music festivals. If the private response is more restrictive than the regime applied by a higher level of

governance, a rights violation may occur as a result.[12] If the private response is less restrictive than the regime applied by a higher level of governance, enforcement sanctions may be levied.

Practice

Within, or alongside, level of governance, the industries or social sectors involved in the activity of production, distribution or consumption of the commodity can be relevant to how a policy regime is implemented. Industries and social sectors are often legislated and regulated differently from one another, even if governed at the same level of governance. How new activities for an industry or sector are treated can be influenced by past trends in that industry or sector.

Currently, there is only one separate, formal listing for the cannabis industry by Statistics Canada under the North American Industry Classification System (NAICS), where it is classified as: "Agriculture, forestry, fishing and hunting : Crop production : Other crop farming : All other miscellaneous crop farming" (Statistics Canada, 2012). This classification was originally drafted to cover the cultivation of low THC cannabis, or "hemp," for edible seeds or fibre. This classification groups cannabis more with tobacco, than alcohol or natural health products.

There are many other industries or social sectors which could include cannabis. In fact, the majority of the top level NAICS categories could conceivably apply to some element of a cannabis regime. Provided below are some illustrative examples of relevant industries or social sectors. This list is in no way exhaustive.

- **Horticulture**: There are a number of horticulture sectors, from commercial farming in greenhouses, to hydroponic equipment dealers, to home gardening related business. Examples:
    - greenhouse, nursery and floriculture production, in the category of "other food crops grown under cover";
    - provision of gardening services, such as equipment rental, maintenance services, planning services, nurseries, planting services, etc.;
    - seed merchants (wholesale and retail); and
    - manufacturing and sales of agricultural and garden equipment, such as hoses, machinery and equipment (wholesale and retail).
- **Manufacturing**: There is specialized equipment and industrial processes that could be used in some parts of the cannabis industry. Examples:

[12] For instance, if a business allows the smoking of one legal commodity but not another – say tobacco but not legal cannabis, or only allows particular people that are legally entitled to consume the commodity to do so – say by allowing the consumption of alcohol and tobacco together, but not alcohol and cannabis.

- machinery, equipment and supplies merchant wholesalers, for farm, lawn and garden machinery and equipment;
- essential oils wholesale manufacturing equipment, in the category of "all other miscellaneous chemical product manufacturing;"
- pharmaceutical and medicine manufacturing; and
- agricultural implement manufacturing.

- **Marketing**: Advertising and marketing tend to be carefully regulated for alcohol, tobacco and natural health products. Examples:
  - advertising, public relations, and related services;
  - radio and television stations;
  - Internet publishing and broadcasting and web search portals; and
  - pay and specialty television.
- **Retail**: Analog commodities and related products are retailed in many different ways in Canada. Examples:
  - food and beverage stores;
  - convenience stores;
  - beer, wine and liquor stores;
  - pharmaceuticals, toiletries, cosmetics and sundries merchant wholesalers;
  - health and personal care stores; and
  - electronic shopping and mail-order houses.
- **Labour**: The way labour is regulated and treated across industries can vary. Examples:
  - human resources consulting services;
  - support activities for agriculture and forestry; and
  - business, professional, labour and other membership organizations.
- **Real Estate**: Issues related to cannabis growing, selling and consumption regimes usually consider place, which implicates various real estate and construction sectors. Examples:
  - real estate property managers (commercial and residential);
  - commercial and institutional building construction; and
  - wholesale trade agents and brokers.
- **Religion**: Religious organizations comprise an establishment "primarily engaged in operating religious organizations for religious worship, training or study; administering an organized religion; or promoting religious activities" (Statistics Canada, 2012: 468), which may be a factor in some scenarios. Examples:

- churches and places of worship;
- health and social service institutions operated by religious organizations; and
- publishing houses operated by religious organizations.

There are instances where the treatment of a commodity analogue can change temporarily in an industry or social sector to improve efficiency in that industry or sector, or for a similar purpose. This happened when alcohol was prohibited nationally as a temporary wartime measure in Canada between 1918 and 1920. However, such cases are rare, and usually also involve other reasoning and motivations for the temporary shift in regime.

Illustrations

In the preceding discussion three commodities analogous to cannabis were identified. There are roughly 10 types of forms that cannabis can take. There are five main variables that intersect when people discuss and implement regimes to legislate and regulate the analogous commodities. And, there are five levels of governance and more than seven industrial or social sectors that could be involved.

Each combination of factors should be considered and addressed in the development of cannabis policy. The number of unique possible situations for policy consideration is upwards of 16,000; calculated, in turn by multiplying the number of cannabis forms by the number of intersections. These possible situations can be examined against at least five levels of governance and seven sectors to determine where regulatory or legislative action might be required, resulting in at least 560,000 unique possible combinations for policy analysis. Cannabis legislation and regulation is obviously a complex undertaking.

While there may logically be 560,000 possible combinations for policy analysis, in practicality there are far fewer. This is because in regulatory or legislative frameworks the most rare or hypothetical combinations are not addressed, and follow-up reviews and case law is relied upon to fill any gaps that become apparent later. There is also the common approach of grouping similar situations together regardless of the other overlapping considerations. For instance, there might be a decision to take the same approach to any of the 10 forms of cannabis when it comes to people of a similar age category. A reduction in complexity may also occur if a decision is made to treat some categories identically, such as providing no exceptions or differences to a regime based on user motivation. Further, certain factors may not be addressed as unique elements of a regime, but instead implicitly reserved for other regulatory or legislative regimes. For instance, cases of cannabis theft dealt with as a regular property crime under the *Criminal Code* or the commerce of machinery and equipment dealt with under relevant federal, provincial, and territorial legislation.

What follows here are examples of how intersecting factors influenced a current or historical approach to analogous commodities. The examples illustrate the types of issues for policy consideration when approaching reforms to the cannabis regime. For the ease of reference, categories for consideration have been underlined, while individual considerations are highlighted in bold text, as per the discussion above.

Alcohol – Motivation – Governance

After the passage of the federal *Canada Temperance Act* in 1894, municipal governments were given the power to forbid the sale of alcohol by a majority vote of their citizens. Thus, both **federal** and **municipal** levels of governance were involved. This targeted alcohol consumption by motivation, focusing on use that was **recreational** or related to alcoholism (i.e., **dependence**). However, legal exemptions were allowed for **spiritual** (termed "sacramental") and **medicinal** use. This distribution was generally controlled by the medical establishment or was concentrated in the Catholic or Jewish communities, although corruption in these systems and diversion was common.

Currently, under legalized alcohol regimes in Canada, separate regulatory categories can exist for "sacramental" alcohols, like Kosher wine. However, the category of "medicinal" alcohol does not exist, but has been replaced by the industrial regulation of alcohol as an ingredient in medicines, not as a medicine itself. Other regulatory categories related to health have been added to alcohol sales, which fall more under demographic and **ethical communities** than motivation (e.g., labelling and regulations related to the production of organic and vegan alcohols).

Tobacco – Demographic – Governance

The **age** demographic at which tobacco can be purchased and consumed is generally regulated at the **provincial / territorial** level. When this governance occurs, the age categories tend to be divided into two categories: youth / children versus adults. The age at which restrictions on selling tobacco to young people and their possession of tobacco is generally 18 years old in Alberta, Saskatchewan, Manitoba, Québec, Nunavut and the Northwest Territories, while it is 19 years old in the rest of the country (FindLaw, 2016).

However, when it comes to the unintentional consumption of secondhand tobacco smoke, age-related laws become more complex, with location often becoming a proxy for a control measure. For instance, secondhand smoking may be disallowed due to differences in the privacy of consumption locations, which may have their own demographic restrictions. An example is the cut-off age restricting being in a **private** vehicle with a tobacco smoker being limited to either those of 16, 18 or 19 years of age in several different provincial or territorial jurisdictions, with other provinces not regulating this issue at the provincial level but instead allowing municipal by-laws to exist on the issue (FindLaw, 2016).

Alcohol – Market level – Governance

A "dry" community is one that severely restricts both the consumption and trade in alcohol. A "damp" community is one in which the private consumption of alcohol is allowed, but not the trade in alcohol. In a "wet" community, both the consumption and trade in alcohol is permitted.

In Canada, the prohibition of alcohol has gone through a number of stages and been governed at different levels, starting with some local **municipal** bans in the late 19th century, continuing with **provincial** bans in the early 20th century, to **national** prohibition (a temporary wartime measure) from 1918 to 1920. Most of these bans were repealed by the 1920s, although alcohol was illegal in Prince Edward Island until 1948. Remaining bans on alcohol in Canada are mainly confined to rural and **Indigenous** communities.

An example is Natuashish, an Innu community in Labrador which voted in January 2008 to make the community dry, and giving the RCMP the authority to charge people caught bringing alcohol into the community. Since that time, the RCMP continues to seize alcohol from people disembarking from airplanes and boats destined to the community (Koren, 2012).

There are also other Inuit and First Nations communities that are currently dry. In other damp communities, alcohol controls differ by market level, where personal **production** and **consumption** may be allowed, but where the **wholesale** or **retail** market is disallowed. In these communities, much alcohol must be flown in subject to air freight and additional charges. Thus, personal production and consumption may also be regulated through the purchase of permits to allow alcohol or its precursors to be transported into the community.

Alcohol – Market level – Practice

Provinces and territories have different building codes, used to regulate architecture and the safety and security of structures. There can also be municipal by-laws that are similar, usually strengthening and further restricting practice. Thus, governance will be at the **provincial** and **municipal** level, for a specific practice in industries such as **real estate**.

In Ontario, the provincial *Building Code* includes specific regulations for building and maintaining premises that produce or store specific forms of **concentrated** alcohol. Not only is the **production** market level covered by the Code, but also the **retail** level. The Ontario *Building Code* also regulates "dining, alcoholic beverage and cafeteria space" businesses. There are no similar regulations in this code for tobacco. However, there are municipal by-laws regulating places where tobacco or other social herbal smoking takes place (Collier, 2015), as well as ventilation systems and related construction (at least historically).

However, both of these illustrations do not cover related instances of other exchange mechanisms at the same level. For instance the **personal production** of concentrated forms of alcohol is prohibited if heat is used in production, but there are no clear regulations if the use of freezing is used to concentrate the alcohol (mainly because distillation is defined by the process used, not the ultimate concentration of alcohol in the final product). There are also no specific building code requirements for the legal home production of beer and wine, beyond regular requirements for food preparation at private residences.

Tobacco – Exchange mechanism – Governance

The **federal** *Excise Act* and the *Tobacco Act* regulates many elements of the tobacco regime in Canada. At the market level of **production**, home production is allowed so long as "the quantity of product manufactured in any year does not exceed 15 kg for the individual and each member of the individual's family who resides with the individual and who is 18 years of age or older" (*Excise Act, 1985*). The exchange mechanism for this tobacco can only be **personal production** or **gift**. It does not appear that a person can make a gift to a business or that advertising can be involved in the gifting process in any way. The Act does not distinguish by motivation of use, such as providing an exemption for **spiritual** uses.

Natural Health Products – Market level – Practice

Hemp essential oil with minimal, legal levels of THC or other cannabinoids are manufactured through steam distillation. They are used in the aromatherapy and related personal care product industry, in the food industry, as well as a natural health product (Samara Botane, 2015).

However, distillation apparatus used in the essential oil industry can also be used to produce '**scientific**' **concentrates**, in forms such as hash oil and 'dabs.' This type of equipment is being marketed and used by medical marijuana manufactures, as well as by legal recreational producers in the United States. To date, this use appears to mainly be at the **wholesale** and **production** market levels, since the apparatus is quite expensive. The author could find no evidence that the practice of using specialized equipment for the extraction and concentration of the chemical constituents of plant products was differently regulated in any industrial or social sector.

Alcohol – Privacy – Governance

While the legal drinking **age** in British Columbia is 19 years old, the **provincial** law does allow parents or legal guardians to allow minor children in their own **private** residence to consume alcohol under appropriate supervision (Buckley, 2014). Thus, an exemption is made for a certain demographic under certain conditions of privacy where there is a particular exchange mechanism used (i.e., **gift**).

Tobacco – Market level – Practice

Neither the *Tobacco Act* nor the *Excise Act* mentions the term "seed" in the context of the tobacco regime. Thus, the practice or types of market exchange mechanisms allowed regarding the transfer of the **seed** form of tobacco germplasm is relatively unrestricted in Canada, regardless of industry or social sector, market level, or degree of privacy.

Conclusion

The development of a legalized regime for cannabis is a very complex undertaking. The numbers of factors for policy consideration are immense.

Reasoning by comparison and using analogies can simplify consultation, discussion and debate surrounding cannabis policy. However, reasoning using analogues may also create inherent biases towards particular constellations of policy options. This natural tendency can be mitigated. Presented in this paper are the general categories of importance that lay behind the thinking that has been used in the development of analogous policy regimes. Understanding these categories allows us to be more rational in how cannabis policy reform is discussed and to interrogate the assumptions embedded in arguments made by analogy. Also, how cannabis legalization is discussed and what is decided can very well become important as a precedent and analogue for future discussions regarding decriminalizing or legalizing other illicit plant-based drugs. Thus, before a statement is made comparing cannabis to an analogue, it is prudent to closely consider the similarities and differences between the two, as well as the implied policy associations. When studying any policy issue regarding a cannabis regime or analogous regime, the categories laid out in this paper can be used to precisely describe situations that should be grouped similarly or situations for differential treatment.

Analogues have been regulated and legislated at all levels of government, in many cases on the same issue. Notwithstanding that there are traditional areas of constitutional responsibility for certain functions of governance in Canada, historically there has been much flexibility in selecting a level of government at which to constrain behaviours surrounding psychoactive substances. Generally speaking, if a higher level of government decides to legislate or regulate, the regulations of the higher level of government are less restrictive than the formal legislation or regulations that some lower levels of government may decide to implement. However, in these situations where lower orders of government are more liberal regarding a substance their policy orientation will be expressed through differential enforcement of regulations and/or legislation. Another tendency is that in areas where a higher level of government is silent or unclear (perhaps as a result of court decisions), a lower order of government may regulate and legislate to constrain behaviour. Discussions regarding cannabis legalization will likely proceed partly through the analysis and comparison of the complex patchwork of legislation and regulation currently applied to alcohol, tobacco, and natural health products. As this occurs, a basic understanding of the characteristics and semantic spaces that have been applied will prove extremely instructive in rationalizing and organizing the dialogue related to the legalization of psychoactive cannabis.

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