

Cambridge University Press

978-0-521-81447-8 - Cannabis Dependence: Its Nature, Consequences, and Treatment

Edited by Roger A. Roffman and Robert S. Stephens

Excerpt

[More information](#)

---

## **Part I**

### **The Nature of Cannabis Dependence**

1

Themes in the History of Cannabis Dependence

ROGER A. ROFFMAN, SAM SCHWARTZ AND ROBERT S. STEPHENS

In the foreword to the 1972 trade book edition of *Marihuana: A Signal of Misunderstanding*, the official report to the US President and Congress of the National Commission on Marihuana and Drug Abuse, the Commission’s chairman wrote:

If public need is an appropriate purpose for publishing a book, and surely it must be, I cannot readily imagine a more legitimate book than the one at hand. For seldom in the nation’s history has there been a phenomenon more divisive, more misunderstood, more fraught with impact on family, personal, and community relationships than the marihuana phenomenon.

As the Commission noted more than 30 years ago, the concept of cannabis dependence also had been highly subject to misunderstanding. That challenge is ongoing. Over time, its very existence has been both vigorously asserted and robustly denied in legislative hearings, books and articles in the popular literature, scientific writings, and in the pronouncements of medical and legal experts. In this chapter, we examine the history of this concept, particularly emphasizing key themes that have contributed to how cannabis dependence has been perceived by the general public, by the scientific community, and by policy-makers.

At the outset we ought to acknowledge that many kinds of influence have shaped these perceptions at different points in time. Legend, cannabis users’ autobiographical accounts, findings of commissions of inquiry, expert opinion, colorful newspaper stories and Hollywood films, the shifting meanings of such terms as “narcotic” and “addict,” nomenclatures for classifying drug and alcohol problems, various iterations of diagnostic guidelines, epidemiological studies of cannabis users, research on brain physiology, and treatment outcome studies have all contributed to how cannabis dependence has been and currently is perceived. This list is not exhaustive, however, since one factor it does not yet include is the impact of advocacy by diverse stakeholders

Cambridge University Press

978-0-521-81447-8 - Cannabis Dependence: Its Nature, Consequences, and Treatment

Edited by Roger A. Roffman and Robert S. Stephens

Excerpt

[More information](#)

(e.g., governmental entities such as the Drug Enforcement Administration and the National Institute on Drug Abuse, and drug reform groups such as the Marijuana Policy Project and the National Organization for the Reform of Marijuana Laws) in their efforts to achieve hegemony in influencing public attitudes about cannabis use and whether and how it ought to be dealt with in the law, in education, and in treatment.

The contributors to this volume offer current findings of various scientific disciplines in seeking meaning of the cannabis dependence concept. One might anticipate, however, that political and cultural factors that have played a role in defining this concept in the past will likely evolve and continue to have influence on how this phenomenon is understood in the future.

Studying the salience of factors that shape the meaning of cannabis dependence is not simply an intellectual exercise. Rather, examining these sources of influence helps to illuminate how consensus for varying conceptualizations of cannabis dependence grows or recedes in the attitudes of the general public, among legislators, in fields of science, and in the human services (Edwards, 1968). Ultimately, these perceptions shape the nature of research inquiry, social policy reflected in the law, decisions concerning the expenditure of public funds, and the design of educational and therapeutic approaches. To illustrate the point, we might consider the implications of three quite different profiles of cannabis dependence:

1. an addiction to a narcotic by societal outcasts who will likely become violent and insane,
2. a disease of the brain brought about by altered neurotransmission, or
3. a social construction based on cultural conflict.

A good place to start in this effort to understand the evolution of the meaning of cannabis dependence is to acknowledge the diversity of the product itself.

### Diversity of Cannabis Preparations

Variations in cannabis plant species, preparations, and methods of administration result in a wide range of behavioral effects associated with the regular use of this drug. As a consequence, understanding the nature of cannabis dependence requires specification of a context. Which cannabis product is being considered, how has it been prepared, and how is it being consumed?

Linnaeus named the hemp plant *Cannabis sativa* and classified it as a member of a plant family known as *Cannabaceae* (Earleywine, 2002). Later, Lamarck distinguished between hemp grown in Europe from the plant variety grown in India, with the name *Cannabis indica* given to the latter. Yet another variety of

Cambridge University Press

978-0-521-81447-8 - Cannabis Dependence: Its Nature, Consequences, and Treatment

Edited by Roger A. Roffman and Robert S. Stephens

Excerpt

[More information](#)*Themes in the History of Cannabis Dependence*

5

hemp was given the name *Cannabis ruderalis*. While each plant variety is distinguished from the others in terms of the quantity of resin produced, it remains uncertain whether these types are separate species or variations of one plant (Schultes *et al.*, 1975).

Varying preparations of cannabis and alternative methods with which they are consumed further add to the diverse profiles associated with regular cannabis use. As an example, three cannabis products used in India include ganja (the flowering tops of the cannabis plant), charas (the plant's resin), and bhang (either a combination of the flowering tops and small stems or a beverage made from the leaves). Ganja and charas are smoked, thus resulting in a faster delivery of tetrahydrocannabinol (THC) to the brain. Bhang is eaten or consumed as a beverage, both of which result in a slower delivery of THC.

Illustrating how the process of plant cultivation can add to variation in the product's effects, Abel (1980) notes that in India plants used to produce bhang are given relatively little attention during the growing season whereas plants grown to produce ganja or charas are carefully cultivated to maximize their THC content. Thus, the plant cultivation procedures, the products that result, and alternative modes of administration all contribute to the wide variations in effects. Just one example of the many different cannabis concoctions is dawamesc, a confection in Arab countries made from hashish, butter, cannabis, pistachio, musk, sugar, cinnamon, ginger, and cloves (Abel, 1980).

Given the influence of these factors, it is not surprising that the addiction potential of cannabis was characterized quite differently in America, Asia, and Europe (Bromberg, 1939). In the early 1900s as cannabis use in the US increased, American writers tended to see the drug as habit-forming while writers in parts of the world where more potent forms were consumed perceived it as producing a physical addiction.

**The Influence of Tales, Legend, Myth, and Lore**

Vivid and evocative imagery, often conveyed in popular literature and the media, has been among the key contributors to the public's perceptions of cannabis, its dependence liability, and the consequences of becoming dependent. Prominent themes have included portraying the cannabis-dependent individual as menacing the public through theft, murder, rape, or the seduction of children; the user's will being entirely taken over; and his/her moral standards being subjugated. Not uncommonly, racist associations were embedded in accounts of the drug's effects. In these portrayals, neither moderate patterns of use nor use with only positive consequences were generally acknowledged.

Cambridge University Press

978-0-521-81447-8 - Cannabis Dependence: Its Nature, Consequences, and Treatment

Edited by Roger A. Roffman and Robert S. Stephens

Excerpt

[More information](#)

Just a few examples will illustrate this contributing factor to the cannabis dependence phenomenon.

First, from the Arab world come stories of cannabis both as an instrument of political murder and as an aid to attaining spiritual vision. Marco Polo wrote in the late 13th century of a ruthless Persian ruler (the Old Man of the Mountains) whose disciples committed religiously motivated murders. Subsequent chroniclers reported that these followers, encouraged to develop insatiable appetites for hashish in order to fortify their courage, consequently came to be known as Hashshashin, allegedly the derivation of the term assassin. Contemporary historians describe a reign of terror in which leaders of a sect of the Shiite branch of Islam did indeed recruit and train a unit of men to commit secret assassinations of their political opponents. What is questioned, however, is there being any basis for their fanaticism and brutality having been induced by hashish (Mandel, 1966). In his recent book *Cannabis: A History*, Booth (2003) comments on the likely historical misattribution:

So it was that, gradually, by association with the Assassins ... hashish came to be considered a drug capable of generating bedlam, undermining society, creating chaos and turning otherwise merciful men into merciless murderers. And this grossly erroneous myth has been perpetuated ever since, right up to the modern day... (p. 55).

While cannabis was first used for religious purposes in India, in the 12th century AD the Sufis, a mystical movement of ascetics in the Arab world whose religious principles were contrary to Islamic orthodoxy similarly encouraged the seeking of spiritual insights through the use of hashish. Their critics, decrying the heretical ideas espoused by this offshoot religious group, claimed that use of hashish was driven by a physical addiction to the drug, leading the addict to be preoccupied with searching for new sources (Rosenthal, 1971). Additionally, the Sufi use of hashish was seen as not only a challenge to traditional forms of Islam at the time, but also as a challenge to society as a whole, because users were more interested in searching for mystical experiences than working within the traditional roles of society.

Finally, stories from Africa tell of induced dependence on cannabis as a means of holding people captive or for the purpose of greatly enhancing their capabilities. In the late 18th century, African white landowners were described as having intentionally addicted Bushmen at an early age to dagga, another name for cannabis. The goal was to create an irresistible inducement for Bushmen to remain in the landowner's service (Thompson, 1967). In the mid-1800s, young Zulu warriors were described as being capable of accomplishing hazardous feats due to stimulation from dagga. A. T. Bryant, a white explorer who wrote *The Zulu People*, portrayed the Zulus as addicted to dagga (Bryant, 1970).

Cambridge University Press

978-0-521-81447-8 - Cannabis Dependence: Its Nature, Consequences, and Treatment

Edited by Roger A. Roffman and Robert S. Stephens

Excerpt

[More information](#)*Themes in the History of Cannabis Dependence*

7

As will be noted later in this chapter, the telling of colorful and often frightening tales about the addiction liability of cannabis and its consequences continued into the 20th century. These examples from as early as a thousand years ago make it evident that cannabis hyperbole is not an invention of our time.

**Memoirs and Writings of Key Literary Figures and Artists**

Another major influence on the public's perceptions of cannabis dependence has come from descriptions by writers and artists of their personal experiences. There is an extensive literature of this genre, and two specific examples will be illustrative.

In the mid-1800s, a group of French writers and artists, referring to themselves as Le Club des Hachichins (The Hashish Eaters' Club), met monthly in Paris, experimented with an eaten cannabis concoction, and mused about its effects on their creative imaginations. Among the club's members were Fernand Boissard de Boisdénier, Théophile Gautier, Gérard de Nerval, Charles Baudelaire, Victor Hugo, Honoré de Balzac, and Honoré-Victorin Daumier, and their writings about hashish led to greater public awareness of cannabis in Europe. The corpus of their published work conveyed vivid portrayals of altered states of consciousness as well as warnings that the user needed to be in a positive psychological disposition before consuming the drug. Based on his personal experience, Baudelaire eventually came to be highly critical of hashish when its use was motivated to attain heightened states of consciousness, stating that it ultimately risked the destruction of man's will.

Also in the mid-1800s, an American writer by the name of Fitz Hugh Ludlow published an autobiography titled, *The Hasheesh Eater: Being Passages from the Life of a Pythagorean*. Ludlow described his youth as having been spent in a constant state of cannabis intoxication, and noted that he eventually became psychologically dependent on the drug. He wrote of the lessons learned from hashish use, including terrifying hallucinogenic experiences that led to short-lived vows to abstain. He concluded, however, that society ought not to judge those who seek self-awareness through its use. When he eventually tried to quit, efforts to combat his dependence by taking laudanum and later alcohol proved unsuccessful. He found himself unable to stop either abruptly or through tapering, and ultimately needed the help of a physician to successfully overcome cannabis dependence (Ludlow, 1857).

**Commissions of Inquiry Concerning Cannabis Dependence**

Formal boards of inquiry have been established periodically in order to summarize existing knowledge concerning cannabis, recommend policy, and – in

Cambridge University Press

978-0-521-81447-8 - Cannabis Dependence: Its Nature, Consequences, and Treatment

Edited by Roger A. Roffman and Robert S. Stephens

Excerpt

[More information](#)

some cases – to conduct new research. As will be noted in this section, the findings of these various boards and commissions *vis-à-vis* the addiction potential of cannabis have varied considerably.

### ***The 1893–1894 Indian Hemp Drugs Commission***

Established in 1893 by the British Secretary of State for India, this commission was charged with identifying the consequences of cannabis use, particularly focusing on its possible impact on the moral and social life of the people of India, and the pros and cons of cannabis prohibition. While commerce in cannabis was legal at the time, concern arose among both British and native Indian administrators that cannabis use was eroding the efficiency of native troops employed by the British and members of the lower working class who performed most of the manual labor in the country. A Member of Parliament who had called for an official inquiry had asserted that ganja was far more harmful than opium.

More than a thousand individuals offered testimony to the commission which issued its findings in a seven-volume report. Among the conclusions were an acknowledgement that understanding cannabis' effects necessitated taking into account both the frequency of usage and the potency of the specific preparation being considered. Moreover, because cannabis concoctions frequently contained other substances (e.g., opium, datura, and hyoscyamis), determining whether any adverse effects were due to cannabis was extremely difficult.

The commission found that cannabis use for recreational, medical, and religious purposes was more widespread than had been estimated; that it was not a cause of criminal behavior; that moderate use was not a cause of mental illness or immoral behavior; and that banning its use would adversely affect religious observance and cause civil unrest. The commission's witnesses tended to believe that moderate cannabis usage eventually developed into excessive usage with a consequent heightened likelihood of moral degradation and mental instability, but they perceived this vulnerability toward progression to be held in common by all intoxicants. The commissioners recommended against prohibiting cannabis, suggesting that if discouragement of use were desirable, taxation would be a preferable approach. At the time of its issuance, the report of the Indian Hemp Drugs Commission (1894) was the most comprehensive inquiry to ever have been conducted about cannabis.

In the years that followed, the beginning of the twentieth century witnessed a greater emphasis on drug prevention, with calls for international restrictions on cultivation and commerce in cannabis due to its presumed addictive nature. Representatives from Egypt and Turkey, at a 1924 meeting of the International

Cambridge University Press

978-0-521-81447-8 - Cannabis Dependence: Its Nature, Consequences, and Treatment

Edited by Roger A. Roffman and Robert S. Stephens

Excerpt

[More information](#)*Themes in the History of Cannabis Dependence*

9

Opium Conference, claimed that chronic hashishism was occurring in their countries (Booth, 2003). In his autobiography, the British journalist Malcolm Muggeridge noted that many of the students he taught at the University of Cairo were addicted to hashish (Muggeridge, 1972).

*The 1925 Panama Canal Zone Report*

Concerns about the potential deleterious effects of cannabis use on American soldiers stationed in the Canal Zone led to the convening of a formal committee of inquiry in April of 1925. Data considered by the committee included a review of the literature, consultation with experts, testimony from army officers, an examination of personnel records to look for a link between cannabis use and unruly behavior, and observations of several soldiers, four physicians, and two policemen while they smoked marijuana under controlled circumstances. The committee concluded that marijuana was neither habit forming nor risky in terms of the user's health and behavior. Two subsequent formal inquiries in the Panama Canal Zone produced essentially the same findings.

*The 1929 Preliminary Report on Indian Hemp and Peyote issued by US Surgeon General Hugh S. Cummings*

In the late 1920s, several members of Congress had expressed concern about marijuana, primarily in response to reports from constituents that marijuana was being sold to school children. Congressional attention to cannabis also was heightened following the inclusion of Indian hemp in a 1929 bill authorizing the establishment of two narcotic farms for the treatment of persons addicted to habit-forming drugs. This was the first time that marijuana had been identified as a narcotic in federal legislation.

Surgeon General Cummings' report was ostensibly the first official scientific inquiry of the US government on the effects of marihuana. By current standards, however, its investigative methodology was merely cursory. Neither the empirical literature nor the findings of the earlier government-sponsored boards of inquiry appear to have been considered when the report was drafted. The report's inadequacy may have been related to the fact that cannabis use at the time was largely limited to ethnic minority groups in the southwestern states, the lack of a constituency for a rigorous scientific inquiry, and the subordinate role that government health officials played *vis-à-vis* law enforcement officials in shaping government policy (Bonnie & Whitebread, 1974).

In contrast with the Indian Hemp Drugs Commission's findings, the Surgeon General's report failed to distinguish between moderate and excessive use of



Cambridge University Press

978-0-521-81447-8 - Cannabis Dependence: Its Nature, Consequences, and Treatment

Edited by Roger A. Roffman and Robert S. Stephens

Excerpt

[More information](#)

cannabis. As to the drug's dependence liability, the report found that cannabis was a narcotic and was habit forming but not addicting (i.e., caused psychological but not physical dependence).

Surgeon General Cummings' report contributed to what has become a potent linguistic ambiguity concerning the meaning of the term "narcotic." From a biological perspective, a narcotic induces narcosis (numbness, sleep) and analgesia (the alleviation of pain). The most notable narcotics are the opiates which have a high addiction potential when used regularly. Over time, however, the term narcotic came to be commonly used in the literature as well as in legislation to refer to: (1) any addicting drug, or (2) any illegal drug. Despite noting that cannabis was habit forming and not addictive, by referring to cannabis as a narcotic the Cummings Report lent official credence to the drug's addiction liability while also misrepresenting its pharmacological effects. The ultimate impact of this definitional confusion was marijuana coming to be indistinguishable from the opiates and cocaine in relation to its legal status. Additionally, the view of the marijuana "addict" changed from the "accidental addict" to the newly defined "dope fiend" and "immoral street user." Thus, this report greatly contributed to negative perceptions of the marijuana user's lifestyle (Bonnie & Whitebread, 1974).

***The 1944 LaGuardia Committee Report ("The Marihuana Problem in the City of New York")***

Sensationalistic accounts of young people engaging in criminal activities while under the influence of marijuana led Mayor Fiorello LaGuardia in 1938 to request that the New York Academy of Medicine conduct an investigation of the drug. The in-depth inquiry was conducted by a distinguished panel of medical practitioners and social scientists. The Committee concluded that most of the claims of marijuana's dangers were untrue or exaggerated. It found that marijuana smoking did not lead to addiction in the medical sense of the word (i.e., physical dependence), its use was not a precursor to opiate or cocaine addiction, and most of those who used it for a period of years did not demonstrate mental or physical deterioration (Mayor's Committee on Marihuana, 1944).

These conclusions stood in rather stark contrast with what the public and legislative bodies had been hearing about cannabis in the early to middle decades of the 20th century. In that period, the popularity of cannabis increased, gradually evolving from a southwest regional phenomenon to a national one. Increasingly, stories in the popular literature and legislative testimony conveyed racist conclusions that cannabis use caused crime and insanity in black and Mexican

Cambridge University Press

978-0-521-81447-8 - Cannabis Dependence: Its Nature, Consequences, and Treatment

Edited by Roger A. Roffman and Robert S. Stephens

Excerpt

[More information](#)*Themes in the History of Cannabis Dependence*

11

populations. Also, the emergence of jazz and its association with the Prohibition-era speakeasy further fueled public fears, with marijuana (“muggles”) smoking quickly becoming iconic of a cultural identity among jazz musicians, most of whom were black.

Harry Anslinger, Director of the Federal Bureau of Narcotics from 1930 to 1962, worked diligently to warn the public that marijuana use presented a serious threat, although most of the harms he claimed existed had no empirical support. Salacious stories and Hollywood portrayals of young people’s lives being destroyed by marijuana (Reefer Madness) added to a building sense of urgency. Legislatures in the southwest and south lobbied Washington for federal prohibition, and by 1936 thirty-eight states had added marijuana to their lists of dangerous drugs in the Uniform State Narcotics Acts. Then, enactment of the 1937 Marijuana Tax Act brought federal sanctions to bear on the problem. The subsequent 1951 Boggs Act and the 1956 Narcotic Control Act greatly increased criminal penalties for cannabis possession and sale. One argument put forth to support greater penalties was the claim that marijuana use was a precursor to heroin addiction, perhaps the first time that the “stepping stone” theory was put forth. Along the way, defense lawyers began to claim that their clients suffered diminished responsibility due to cannabis dependence and men subject to the draft petitioned for exemption from military conscription on the same basis. The Boggs act, in particular, standardized penalties with other narcotics, which reinforced and stimulated “society’s fear of drug dependence on the level of moral antipathy,” thereby reflecting and enhancing a negative view of cannabis use (Bonnie & Whitebread, 1974).

It is not difficult to imagine how effective these alarming messages about cannabis dependence must have been in shaping public attitudes, particularly when delivered by putative experts:

- In the midst of the US Depression, a physician wrote in a medical journal of the dangers to the public order resulting from cannabis dependence: “Under the influence of cannabis indica, these human derelicts are quickly subjugated by the will of the master mind. The moral principles or training initiated in the mind from infancy deter from committing willful theft, murder or rape, but this inhibition from crime may be destroyed by the addiction to marihuana (Fossier, 1931).”
- A 1932 article in *The Journal of Criminal Law and Criminology* conveyed the opinions of law enforcement specialists. The authors wrote, “It is impossible to fix a definite time in which one becomes an addict.... After the chronic use of marihuana “cannabinomania” develops, which in