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The diverging trajectories of cannabis and tobacco policies in the United States: reasons and possible implications

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ABSTRACT

Aim To examine briefly the (i) rationales for two policy proposals in the United States to make it mandatory for cigarettes to contain very low levels of nicotine and to legalize cannabis for recreational use by adults; and (ii) possible lessons that participants in each policy debate may learn from each other. **Method** We briefly describe the diverging policies towards cannabis and tobacco in the United States, explain and critically analyse their rationales and discuss possible policy lessons. **Results** Advocates of cannabis legalization have argued that prohibition has been an ineffective and expensive policy that penalizes ethnic minority users unjustly of a drug that is far less harmful than alcohol. The prohibition of traditional tobacco cigarettes has been advocated as a way to eliminate cigarette smoking. These proposals embody very different attitudes towards the harms of recreational adult drug use. Advocates of nicotine prohibition demand that alternative methods of nicotine delivery must be shown to be completely safe before adults are allowed to use them. Advocates of tobacco prohibition ignore evidence that smokers may not use these products and the likelihood of expanding the illicit tobacco market. Advocates of legalizing and regulating recreational cannabis ignore the need to tax and regulate sales in order to minimize the harms of heavy use. **Conclusions** It is not clear that the prohibition of adult use has a useful role to play in the regulation of either cannabis or tobacco. If both products remain legal, the goals of regulating tobacco and cannabis products should be to restrict youth access, promote the use of the least harmful products, provide users with evidence-based information on both absolute and differential product risks of use and use differential taxes and marketing controls to promote ways of using these products that cause the least harm to their users.

Keywords Cannabis, legalization, policy, prohibition, tobacco harm reduction, tobacco smoking.

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INTRODUCTION

In the United States, the regulatory approaches to the two most commonly smoked drugs—cannabis and tobacco—are moving in opposite directions along the policy continuum defined by prohibition at one end and libertarian *laissez faire* at the other. Leading US tobacco control advocates are trying to convince the Food and Drug Administration to prohibit the sale of smoked tobacco products that contain more than trace levels of nicotine. At the same time, cannabis reform advocates have succeeded in persuading the citizens of eight US states to allow adults to use cannabis legally for recreational purposes. Given the powerful influence of the United States in global drug policies, we need to understand how these very different policy trajectories have come about. It is also worth asking: what may the two very different communities involved in making policy about these drugs learn from each other?

THE CURRENT STATE OF PLAY IN US TOBACCO CONTROL

The policy goal of some US tobacco control advocates is the elimination of the recreational use of nicotine. They advocate for 'end-game' scenarios in which the marketing

and use of all tobacco and recreational nicotine products has been eliminated [1].

Advocates of nicotine prohibition would ban the sale of all tobacco cigarettes, except for cigarettes with very low levels of nicotine that are insufficient to sustain smoking. This policy, which was first advocated in 1994 [2] has been endorsed by the American Medical Association and in the US Food and Drug Administration (FDA) law covering tobacco product regulation [3,4]. It is included in the list of 'global nicotine reduction strategy' options recommended by the World Health Organization Study Group on Tobacco Product Regulation (WHOTobReg) [5]. A mandatory very-low-nicotine cigarette amounts to the prohibition of conventional cigarettes [6–9].

Some advocates of a low nicotine policy only want to eliminate cigarette smoking; they would combine this policy with tobacco harm reduction (e.g. [4,5]); that is, policies that attempt to move smokers away from combustible cigarettes towards obtaining their nicotine in much less harmful ways; for instance, using low nitrosamine smokeless tobacco products such as snus or by switching to e-cigarettes and nicotine vaporizers (e.g. [5]).

Advocates of nicotine prohibition do not support the use of less harmful nicotine products unless they are approved formally as smoking-cessation aids (e.g. [10,11]). Their opposition has ensured that the American public is unaware of, or mistaken about, the lower risks of using smokeless tobacco or e-cigarettes than combustible cigarettes [12]. Government agencies have contributed to widespread public misapprehension about the differential risks of these products [13,14]. The FDA tobacco law requires that any manufacturer who claims that a tobacco product is reduced risk must provide evidence that the marketing of such a product would not have a negative effect on population health [3]. It has proved extremely difficult to satisfy this provision. Recent changes to the FDA tobacco law [15] have made it more difficult and more expensive to market nicotine-containing vaping products.

CANNABIS POLICY IN THE UNITED STATES

Cannabis policy in the United States, by contrast, has moved towards the legalization of recreational cannabis by adults over the age of 21 years. Cannabis legalization has been accomplished largely via citizen-initiated referenda. The first was passed in 1996, when the citizens of California voted to allow cannabis to be used to treat illnesses on the recommendation of a medical practitioner [16]. The initiative defined medical cannabis use as any use of cannabis condoned by a medical practitioner. Cannabis was provided initially to patients by 'medical dispensaries' on a compassionate basis, but the emergence of commercial cannabis dispensaries created *de-facto* legal cannabis markets in California (and later in Colorado and Washington) for anyone with a doctor's recommendation [16].

More recently, a series of citizen-initiated ballot proposals legalized adult cannabis use in eight US states: Colorado and Washington in 2012, Alaska and Oregon in 2014 and in California, Massachusetts, Maine and Nevada in 2016. More states may follow, according to opinion polls which show that a majority of the US public has supported the legalization of adult cannabis use in the United States since 2013 [17].

Advocates of cannabis legalization (e.g. the American Civil Liberties Union, the Marijuana Policy Project and the Drug Policy Foundation) have persuaded citizens in these states that: the modest adverse health effects of cannabis use are insufficient to justify the prohibition of adult use; that criminal penalties for cannabis use are disproportionate and have been imposed in a discriminatory way, contributing to racial disparities in imprisonment; legalization would release law enforcement resources for use against more serious crimes; and taxes on cannabis sales would raise revenue that could be used for the prevention and treatment of cannabis abuse [18]. The push for cannabis legalization throughout the United States is now being funded by an emerging legal marijuana industry and its lobbyists [18].

WHY ARE THESE APPROACHES TO RECREATIONAL USE OF CANNABIS AND NICOTINE SO DIFFERENT?

These polices are the outcome of the activities of very different policy communities, with little or no overlap between the two. The tobacco control community comprises tobacco researchers, public health advocates, non-governmental organizations and government officials. The cannabis policy community has been more diverse: civil liberties lawyers, civil rights advocates and drug law reform advocates.

The two policy communities have shown very little interest in each other's policy debates. Some tobacco control advocates have expressed concerns about the emergence of Big Marijuana and the future role of Big Tobacco in promoting marijuana and tobacco use [19] but ignored potential lessons about creating illicit markets from cannabis policy. Advocates of cannabis legalization have preferred to look to alcohol rather than to tobacco for regulatory models [20].

The two policy communities have also adopted very different approaches towards the regulation of recreational use of drugs. Advocates of cannabis legalization may accept that cannabis use can harm some users, but argue that these risks do not warrant a ban on recreational use by adults. Advocates of a ban on nicotine vaporizers reject

harm reduction as a policy for recreational products such as tobacco or nicotine, contrary to long-standing public policies towards many other commodities that can harm consumers, such as prescription medicines, alcohol, fast food and automobiles [13,21]. They demand implicitly that alternative nicotine products must be harmless before adults are allowed to use them (a policy that they do not advocate for tobacco cigarettes).

One reason for the policy difference may be that the legalization of recreational cannabis use was preceded by the legalization of medical use. This exposed the US public to claims about the allegedly manifold therapeutic uses of cannabis in which it was presented as a panacea for treating cancer, AIDS, epilepsy and degenerative neurological disorders [16]. These claims echo the extravagant therapeutic claims made when tobacco was introduced to Europe [22]. The claims about the therapeutic value of cannabis have been based largely on patient testimonials, rather than evidence from controlled trials [23–28].

By contrast, possible therapeutic effects of nicotine have been overshadowed by the widespread acceptance within the public health community of the fact that, nicotine addiction ensnares smokers in their youth and kills prematurely the majority of those who continue to smoke throughout adulthood. The 2014 Surgeon-General's Report [29], for example, dismissed evidence on the possible beneficial effects of nicotine on cognition, anxiety, attention deficit hyperactivity disorder and Parkinson's disease. The report argued that any such benefits were outweighed by the deadly consequences of tobacco smoking; it did not acknowledge that this argument did not apply to nicotine delivered via gum or patches. The report also did not consider possible benefits of nicotine as an appetite suppressant in obesity control [30]. The tobacco control community is also reluctant to acknowledge that the pleasurable effects of nicotine might justify recreational nicotine use in safer forms (see [31–33]).

These responses are perhaps understandable, because the consumption of nicotine via the smoked cigarette is much more likely than cannabis to lead to life-long use [34]. Michael Russell argued in 1971 ([35], p.3) that 'it requires no more than three or four casual cigarettes during adolescence virtually to ensure that a person will eventually become a regular dependent smoker'. This does not appear to be the case for newer smokers. Since the 1970s the likelihood of using cigarettes intermittently has increased in comparison to daily smoking and heavy daily smoking [36], and there is a lower chance of moving from a trial of cigarette smoking to dependent use (e.g. [37,38]).

Tobacco control policy advocates should attend more to the absolute levels of risk [39] and acknowledge the pleasurable effects of nicotine for some users. For cigarettes and other combusted tobacco products the absolute levels of risk are very large, causing premature deaths in three in five cigarette smokers [40]. By contrast, the risks for many smokeless tobacco products and vaping devices are estimated to be at least 90% less than those of tobacco smoking [41,42]. If we can develop recreational nicotine products with even lower risks of adverse health effects, it will be easier to assess the possible positive effects of nicotine use alongside its addictiveness. This possibility is denied by advocates of nicotine prohibition.

THE NEED FOR MORE EVEN-HANDED POLICY PROJECTIONS IN TOBACCO POLICY

Tobacco control advocates use speculative scenarios about the possible future harms of e-cigarettes to justify tighter restrictions on their sale than apply to combustible cigarettes. Ironically, these scenarios invoke a causal 'gateway' between e-cigarettes or smokeless tobacco and combustible cigarettes among young people at the very time when the gateway argument seems to have lost its power in cannabis policy debates. Those who invoke a gateway role for e-cigarettes ignore evidence that the increased use of nicotine vaporizers has been accompanied by historic declines in tobacco smoking (e.g. [43,44]). They also overlook a more plausible explanation for why young people who use e-cigarettes also smoke tobacco cigarettes; namely, they have an increased liability to use a variety of drugs, including tobacco cigarettes [45–47]. They fail to acknowledge that the majority of young people who try e-cigarette 'starter' products do not smoke tobacco cigarettes [39]. Critically, they under-estimate our capacity to regulate how tobacco and nicotine products are marketed to young people [7]. Recent modelling of smoking and trends in e-cigarette use in the United States provides little support for gateway effects; indeed, it indicates that very significant public health gains can be expected from the increased use of e-cigarettes by smokers [48].

THE PROBABLE EFFECTS OF CIGARETTE PROHIBITION

Advocates of nicotine prohibition provide very weak evidence for this policy. It comes from a small number of short-term studies of smoking in small samples of volunteers, many of whom continue to smoke conventional cigarettes in addition to the low-nicotine cigarettes with which the researchers supplied them [8,49]. This research has not investigated the appeal of very-low-nicotine cigarettes in heavy smokers, e.g. individuals with mental illnesses and those who drink alcohol heavily or use other drugs [8,9,50]. They ignore the failure of past attempts by the tobacco industry to market low-nicotine cigarettes [7–9,51].

Advocates of cigarette prohibition also ignore plausible projections of the effects of this policy, based on historical experience with the prohibition of alcohol (1920–32) and cannabis (1937–2014) in the United States. Both policies generated large-scale and very profitable black markets [52]. There is already a substantial tobacco black market in the United States generated by differentials in state tobacco taxes [53]. The prohibition of conventional tobacco cigarettes would almost certainly generate smuggling of manufactured tobacco cigarettes from neighbouring countries that have not banned their sale. It may also generate the local production of smoked tobacco products, as happened with cannabis cultivation under prohibition, even if it is more challenging to grow and process tobacco than cannabis.

Advocates of tobacco prohibition pay little attention to the practicalities of enforcing this policy [8]. Will individual smokers be charged with criminal offences? How will the ban on smoking conventional tobacco cigarettes be enforced when it remains legal to smoke low nicotine cigarettes and cannabis? Indeed, how will enforcers tell when someone is smoking a low-nicotine cigarette, a conventional cigarette, a cannabis-only cigarette or a cigarette that contains a mixture of cannabis and tobacco [54]? The latter will present a major challenge, because approximately 60% of monthly adult cannabis users have smoked cigarettes in the past 30 days [55]. Adults who smoked cannabis when it was illegal would probably be more willing to use illegal tobacco products.

WHAT MIGHT CANNABIS POLICY LEARN FROM TOBACCO POLICY?

Advocates of cannabis legalization have much to learn from the cigarette century [56] and the history of alcohol regulation [57]. A for-profit cannabis industry, like the tobacco industry, will have a commercial interest in increasing daily use and expanding the number of daily users [58]. As it grows in profitability, a legal cannabis industry will also have the resources to resist public health regulation, as already seems to be happening in some US states that have legalized recreational cannabis use [19,58].

A major challenge in advocating for more public health-orientated cannabis regulation is that the harm experienced by cannabis smokers is proportionally far smaller than that caused by tobacco smokers. Cannabis is a drug of dependence, but the risk of dependence is substantially less than those of other illicit drugs [59–61]. Moreover, the adverse health effects of smoking cannabis are certainly much less serious than those for tobacco, and probably less serious than those for alcohol [59]. Cannabis-impaired driving puts the health of non-users at risk, but the degree of impairment is less severe than that caused by alcohol-impaired driving [60,62].

The first four US states that legalized cannabis adopted a system of regulation based on that of alcohol. This is a familiar model for governments, and its adoption seems to be justified by the fact that cannabis is used more like alcohol than tobacco [58]. However, an alcohol-based regulatory model is not necessarily a good one for cannabis. The alcohol industry has resisted effective regulation successfully, undermined the effectiveness of public health policies, such as taxation, progressively wound back many restrictions on alcohol availability and persuaded governments to allow the industry to 'self-regulate' its marketing activities [57].

The challenge for public policy makers in regulating cannabis is in applying lessons from successful alcohol and tobacco control [63]. These include: the use of taxes based on potency to minimize heavy use and dependence; limiting availability via trading hours and numbers of outlets; and restricting the promotional activities of the legal cannabis industry [63]. It is already proving difficult to implement these policies in the early days of cannabis legalization, because US state governments have focused upon reducing the size of the cannabis black market—one of the major arguments for legalization—rather than minimizing heavy use. This has made governments reluctant to impose high taxes on cannabis products, or impose what the emerging legal cannabis industry claims are onerous 'regulatory burdens' (such as testing potency and pesticide contamination). A reasonable fear from a public health perspective is that in using light regulation and low taxes to create a viable legal cannabis industry, state governments will create an industry wealthy and powerful enough to resist efforts to increase cannabis taxes or impose public health-orientated regulations on the sale, promotion and potency of cannabis products [64].

THE FUTURE

These contrasting policy trajectories for cannabis and tobacco are incomplete, and it is uncertain how far each will progress. We hazard a guess that cannabis legalization is more likely to become national policy in the United States than is the prohibition of addictive tobacco cigarettes. A majority of the US public now supports cannabis legalization in the United States [17]. The growing legal cannabis industry in eight US states, including California, and the probable increase over time in cannabis use, will probably lead to the broader acceptance of recreational cannabis use by adults and make a return to cannabis prohibition unlikely. The major uncertainty is about the possible renewal of the Federal enforcement of the Federal Controlled Substances Act by the Trump Administration.

The tobacco industry's adept exploitation of loopholes in the FDA law and the major political and economic power of cigarette makers are likely to prevent the implementation of a mandatory nicotine reduction plan for cigarettes [7]. One can also expect that tobacco companies will fight in the courts to delay, if not block, such a policy [7].

CONCLUSIONS

The diverging policy trends in the United States for cannabis and tobacco deserve more critical attention in the addiction and public health fields. While tobacco control advocates are hoping and preparing for a tobacco 'end-game', more and more governments are preparing to establish legal cannabis markets. Policy actors and scholars working on policies towards each drug have something to learn from each other.

Proposals for tobacco or nicotine 'end-games' may not be particularly constructive. The long history of recreational drug use shows a remarkable persistence of some level of use, despite the best efforts of government to eliminate it (e.g. [65]). Minimizing the net adverse effects of tobacco/nicotine products may be a more realistic goal. Would-be tobacco prohibitionists also need to consider the probable adverse effects of imposing this policy on cigarette smokers, e.g. probable resistance from smokers; an increased scale of a tobacco black market; and the exclusion of other more plausible strategies such as tobacco harm reduction. Evidence for the usefulness of a low nicotine cigarette as an optional cigarette in the market-place should be required before we make the sale of only these products mandatory [9]. We believe that tobacco control policy should accept that nicotine and less harmful tobacco products are recreational drug products that have some value for some members of society and regulate them appropriately. There is better evidence that this approach will reduce the prevalence of cigarette smoking radically than there is for the prohibition of the conventional cigarette.

Advocates of cannabis legalization accept the social value of recreational cannabis use by adults. They need to be more cognisant of the public health risks of creating a for-profit cannabis industry that can be expected to behave like the alcohol and tobacco industries in giving priority to profits over public health. Regulations and taxes are needed to reduce incentives for retailers to increase heavy use among current users, increase the numbers of new users and prolong cannabis use careers by promoting the use of more potent cannabis products.

It is not clear that the prohibition of adult use has a useful role to play in the regulation of either cannabis or tobacco. If both products remain legal, the goals of regulating tobacco and cannabis products should be to restrict youth access, promote the use of the least harmful products, provide users with evidence-based information on both absolute and differential product risks of use and use differential taxes and marketing controls to promote ways of using these products that cause the least harm to their users.

Declaration of interests

None.

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