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Appraisals of the Adverse Health Effects of Cannabis Use: Ideology and Evidence

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The cannabis policy debate in the USA and many other Western countries has often been represented as a forced choice between two positions: Doves who argue that cannabis use is harmless, and hence it should be legalized; and Hawks who argue that cannabis use is harmful to health, and hence should continue to be prohibited. This false antithesis has prevented a realistic appraisal of the adverse health effects of cannabis (Hall, 1997). It has meant that the public have been exposed to two polarized views of the adverse health effects of cannabis dictated by their proponents' views on the legal status of cannabis. The Doves focus on the modest health risks of intermittent cannabis use; the Hawks emphasize the worst case interpretation of the evidence on the risks of chronic cannabis use. There seems to be an implicit agreement between Doves and Hawks that the acute health effects of intermittent cannabis use provide at best a weak justification for prohibition. The Doves stress that there is no risk of overdose from cannabis. The Hawks respond by pointing to the possibility of death or serious injury in a motor vehicle accident if cannabis users drive, and to the social consequences of engaging in risky sexual and other behavior while intoxicated by cannabis.

Points of Dispute

Hawks and Doves both accept that there is some respiratory risk from sustained heavy cannabis smoking but they disagree about its magnitude because they use different bases to assess it. Hawks stress the fact that on a puff-for-puff basis marijuana smoke contains more carcinogens and toxins than tobacco smoke (Tashkin, 1993). Doves (e.g. Zimmer and Morgan, 1997) point out that this comparison ignores two facts: that there are many fewer regular marijuana than tobacco smokers under current policies, and the average marijuana user smokes many fewer joints in a day than a daily tobacco user smokes cigarettes. Doves

also discount the respiratory effects (e.g. Zimmer and Morgan, 1997), arguing that on current patterns of use the attributable risk of cannabis smoking to respiratory disease is very small by comparison with that of tobacco smoking; they ignore the amplification of risk among the minority of regular heavy marijuana smokers, many of whom are also daily tobacco smokers (Hall, 1998).

Is Cannabis a Drug of Dependence

One of the most contested issues is whether cannabis is a drug of dependence. Doves argue that it is not because it does not have a clearly defined withdrawal syndrome. Hawks cite animal evidence of the development of tolerance to the effects of THC and the occurrence of withdrawal symptoms. Both arguments depend upon a narrow view of dependence that makes withdrawal and tolerance *sine qua non* for dependence. Modern concepts of dependence place greater emphasis on impaired control over use and continued use despite problems caused or exacerbated by drug use. In the latter sense, there is no doubt that some cannabis users want to stop or cut down, and find it very difficult to do so without assistance and support (Hall et al, 1994). Epidemiological studies (e.g. Anthony et al, 1994) indicate that impaired control over cannabis use is the most common form of drug dependence in the community after tobacco and alcohol. Doves contest these prevalence estimates and reports of people requesting assistance to stop using cannabis (e.g Zimmer and Morgan, 1997). They argue that the apparent increase in persons complaining of cannabis dependence is a by-product of drug testing and the promotional activities of a "cannabis treatment industry". Yet, population surveys suggest that one in ten of those who have used cannabis in their lifetimes have met criteria for dependence at some time, and 80% of these people have not sought treatment (Hall et al, 1994). In Australia, moreover, cannabis use is highly prevalent, drug testing is still rare and there has not been a cannabis treatment industry. Yet treatment services that traditionally treat people who are alcohol and opiate dependent have seen a steady increase in the numbers requesting help to stop using cannabis (Hall et al, 1994). The most contentious issue of all is the explanation of the association between heavy adolescent cannabis use and the risk of using harder drugs (MacCoun, 1997). Hawks see the association as evidence of the deleterious effects of cannabis on the development of young people, and hence, as a potent reason for continued prohibition. Doves, by contrast, see it as a consequence of two things: (1) the types of troubled adolescents who begin cannabis use early and become heavy cannabis users; and (2) the shared illicit drug markets for cannabis and harder drugs. There is evidence in favor of both (1) and (2): adolescents who initiate cannabis use early,

and who become heavy users, are independently at higher risk of using other drugs (e.g. Fergusson and Horwood, 1997); and cannabis users are also more likely to keep company with other heavy drug using peers. But the association is not wholly explained by pre-existing risk and peer group affiliations so Hawks can still legitimately argue that heavy cannabis use by adolescents predicts an increased risk of harder drug use (MacCoun,1997). Hawks also contend that heavy cannabis use produces an "amotivational" syndrome. There is reasonable self-report data that cannabis intoxication can affect motivation but it seems unnecessary to invoke an "amotivational syndrome" to explain the narrowed interests, loss of motivation and achievement seen in some chronic heavy cannabis users. It is simpler to regard these as symptoms of chronic cannabis intoxication (Hall et al, 1994). A more realistic understanding of the health effects of cannabis demands more appraisals that are not driven by the appraisers' views on the legal status of cannabis (e.g. Hall and Solowij, 1998). Debates about cannabis, and drug policy more generally, are too important to be left to the Hawks and Doves. The challenge is finding the institutional arrangements and professional incentives that will encourage non-partisans from a variety of relevant disciplines to provide fairer appraisals of the health and social consequences of cannabis use and predictions about the likely effects of changes in the legal status of cannabis use.

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