

MJ – The Real Danger of Cannabis

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It is folly to legalise a drug that is known to leave users with permanent damage to their ability to reason, argues Susan Greenfield, the distinguished expert on brain processes

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Now that those anxious to look cool can puff cannabis freely in the street without fear of arrest, perhaps those of us who have argued that relaxing the laws on cannabis is irresponsible and dangerous should retreat gracefully behind our chintz curtains. Yet the downgrading of the classification of cannabis perpetuates the same tired old myths and the same serious problems.

Take the myth that cannabis is 'just the same as' alcohol. A glib yet logical riposte might be that if the drugs are truly identical why not just stick with the booze? What is the distinct appeal of cannabis that can be ignored in equating the two drugs? Such sophistry is inappropriate because alcohol and cannabis work on the brain and body in very different ways. Alcohol has a range of non-specific actions that affect the tiny electrical signals between one brain cell and another; cannabis has its own specialised chemical targets, so far less has a more potent effect. Moreover, although drinking in excess can lead to terrible consequences, there are guidelines for the amount of alcohol that constitutes a 'safe' intake. Such a calculation is possible because we know alcohol is eliminated relatively quickly from the body.

With cannabis, it is a different story. The drug will accumulate in your body for days, if not weeks, so, as you roll your next spliff, you never know how much is already working away inside you. I challenge any advocate of cannabis to state what a 'safe' dose is. Until they do, surely it is irresponsible to send out positive signals, however muted?

Another notion is that cannabis is less harmful than cigarettes. I'm not sure how this idea came about, certainly not as the results of any scientific papers. We do know cannabis smoke contains the same constituents as that of tobacco: however, it is now thought that three to four cannabis cigarettes a day are equivalent to 20 or more tobacco cigarettes, regarding damage to the lining of the bronchus, while the concentration of carcinogens in cannabis smoke is actually higher than in cigarettes.

And if cannabis were 'just the same' as alcohol and cigarettes, why are people not taking those already legal drugs for the much-lauded pain-relief effects? After all, another case for the relaxation of the laws on cannabis is the 'medical' one that it is an effective analgesic.

But there is a world of difference between medication prescribed in a hospital, where the cost-benefit balance tips in favour of pain relief, compared to a healthy person endangering their brain and body needlessly.

Even the most loony of liberals has not suggested tolerance for morphine or heroin abuse, because they are prescribed clinically as potent painkillers. And think about it: if cannabis brings effective relief from pain, then how does it do so? Clearly by a large-scale action on the central nervous system.

Further wishful thinking is that, because cannabis doesn't actually kill you, it is OK to send out less negative legal signals, even though the Home Secretary admits that the drug is dangerous. Leaving aside the issue that cannabis could indeed be lethal, in that the impaired driving it can trigger could well kill, there is more to life than death. It is widely accepted that there is a link between cannabis and schizophrenia: as many as 50 per cent of young people attending psychiatric clinics may be regular or occasional cannabis users. The drug can also precipitate psychotic attacks, even in those with no previous psychiatric history. Moreover, there appears to be a severe impairment in attention span and cognitive performance in regular cannabis users, even after the habit has been relinquished. All these observations testify to a strong, long-lasting action on the brain.

Some attempts have been made in laboratories to work out what cannabis could actually be doing to brain cells. So far, some data have suggested that there can be damage to neurons, and at doses comparable to those taken on the street. None the less, others argue that the experimental scenario of isolated neurons growing in a lab dish are hardly a natural situation, and that such data have to be interpreted with caution. But absence of evidence is not evidence of absence. The effects on the brain in real life are most probably subtle and therefore hard to monitor: it's not so much that cannabis will create great holes in your brain, or deplete you wholesale of all your best neurons. Instead, by acting on its own special little chemical targets (and because it will therefore work as an impostor to a naturally occurring transmitter), the drug is likely to modify the configuration of the networks of brain cell connections.

These configurations of connections make you the unique person you are, since they usually reflect your particular experiences. So a change will be hard to register from one person to another, and certainly from one slice of rat brain to another: but still, it will make you see the world in a different way, characteristically one depleted of motivation.

It is hard for me, as a neuroscientist, to accept that a drug that has the biochemical actions that it does, that hangs around in the brain and body, and that has dramatic effects on brain function and dysfunction, could not be leaving its mark, literally, on how our neurons are wired up and work together.

It is argued that we will never stamp out cannabis use, and therefore we should give up trying. But we will not stamp out murder or house break-ins or mugging, yet I've never heard an argument for freeing up police time by liberalising the law on these acts. Laws, it is said, are only enforceable when the majority wants them enforced, yet the arguments used for easing up on cannabis apply equally to promoting ecstasy or other mind-bending substances. Do we really want a drug-culture lifestyle in the UK?

Cynically, one could argue that it is politically expedient to court the youth vote, to open up the inevitable prospect of revenue from a new source of taxes and to help the ailing tobacco industry prosper from a great new product of readymade packets of spliffs. The condoning of chemical consolation also distracts from other problems. We have failed our young people in providing homes and jobs and, by giving them an easy route into a chilled-out oblivion, have turned our backs on the far more challenging prospect of initiating policies to help them realise their potential and live better and more fulfilling lives. They are paying a high price for cool.