This psychoactive drugs trip isn't working

September 3 2013, by Craig Motbey

A wave of new mind-altering drugs has appeared – a wave that won't recede. Credit: 1000watt

Recreational drug use has been with us forever, and so have the challenges that this use brings to medicine and society. But the nature of the modern drug scene has changed to such an extent that the health systems of the developed world face catastrophe if we fail to respond.

The best known from the current crop of so-called "novel" psychoactives are mephedrone in Europe and methylenedioxypyrovalerone (MDPV) in North America. But a very large number of alternate drugs have joined these. In 2010 alone, European authorities identified the use of 41 new psychoactive drugs. This trend shows no sign of stopping any time soon.

With most of these drugs, our scientific knowledge of their effects and dangers is essentially zero. Detailed scientific investigation is not a quick process, and the toxicology of illicit drugs is not an area that receives a huge amount of research funding. It doesn't attract a lot of charitable attention, and the big pharmaceutical companies don't see a lot of profit in it.

As was the case with the drugs of the 20th century, customs enforcement and interdiction of precursor chemicals may eventually prove effective in limiting the supply of some of these new drugs. But this approach gives a temporary respite at best.

A large number of easily manufactured molecular variants exist, many of which are likely to be psychoactive to some degree. The flexibility of modern chemistry allows for an almost inexhaustible supply of alternative drugs.

The oncoming tide of novel psychoactives would have daunted even King Canute's advisors. Just the contents of the phenethylamine family are enough to occupy the global psychopharmacology community for decades. Add to that the cathinones, the tryptamines, and the list keeps going.

Where things stand

To date, the main reaction by governments has been to reflexively ban each new drug as it appears on the market, often before any adequate evidence has been presented as to whether the harms of using the drug justify this response.

As well as potentially criminalising people for doing something that may be completely harmless, this approach creates the perverse risk of driving users towards an endless stream of new drugs, many of which

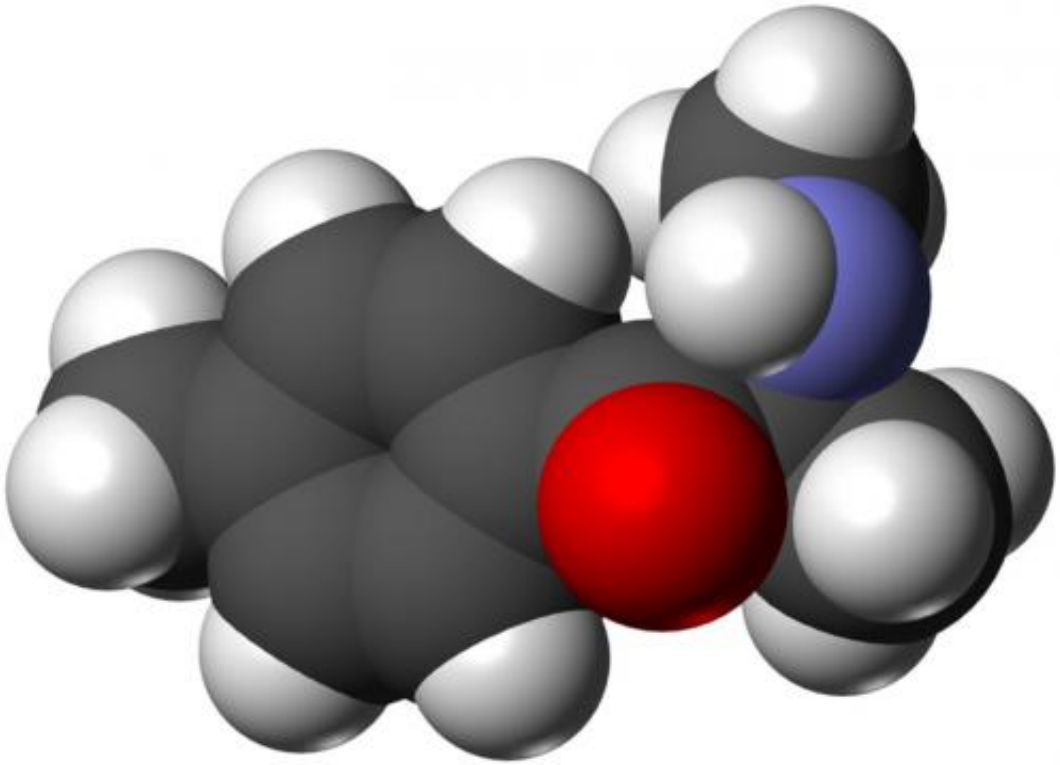
may be more harmful than their already-established alternatives.

It appears that this is exactly what has happened with the substitution of mephedrone and MDPV for MDMA (ecstasy) consumption.

Radical departure

An effective response to the fast-moving realities of the modern drug market is likely to require a radical departure from business as usual.

Most obviously, we need systems to facilitate the rapid assessment and provisional classification of new drugs. This assessment needs to be made on the basis of genuine scientific evidence about the dangers of the drug in question. Legislating from ignorance is not an effective way to make good laws.



Mephedrone. Credit: Wikimedia Commons

Any system of provisional classification, followed by later refinement, will necessarily mean the occasional lessening of restrictions on drugs found to be relatively less harmful – a move that would be deemed politically unpalatable to governments in many countries. So it's essential that such classification bodies be rigorously independent of political influence.

If we wish to minimise the damage caused by drug use, decisions about drug regulation must be made on the basis of the best available scientific evidence rather than the political tactics of the moment.

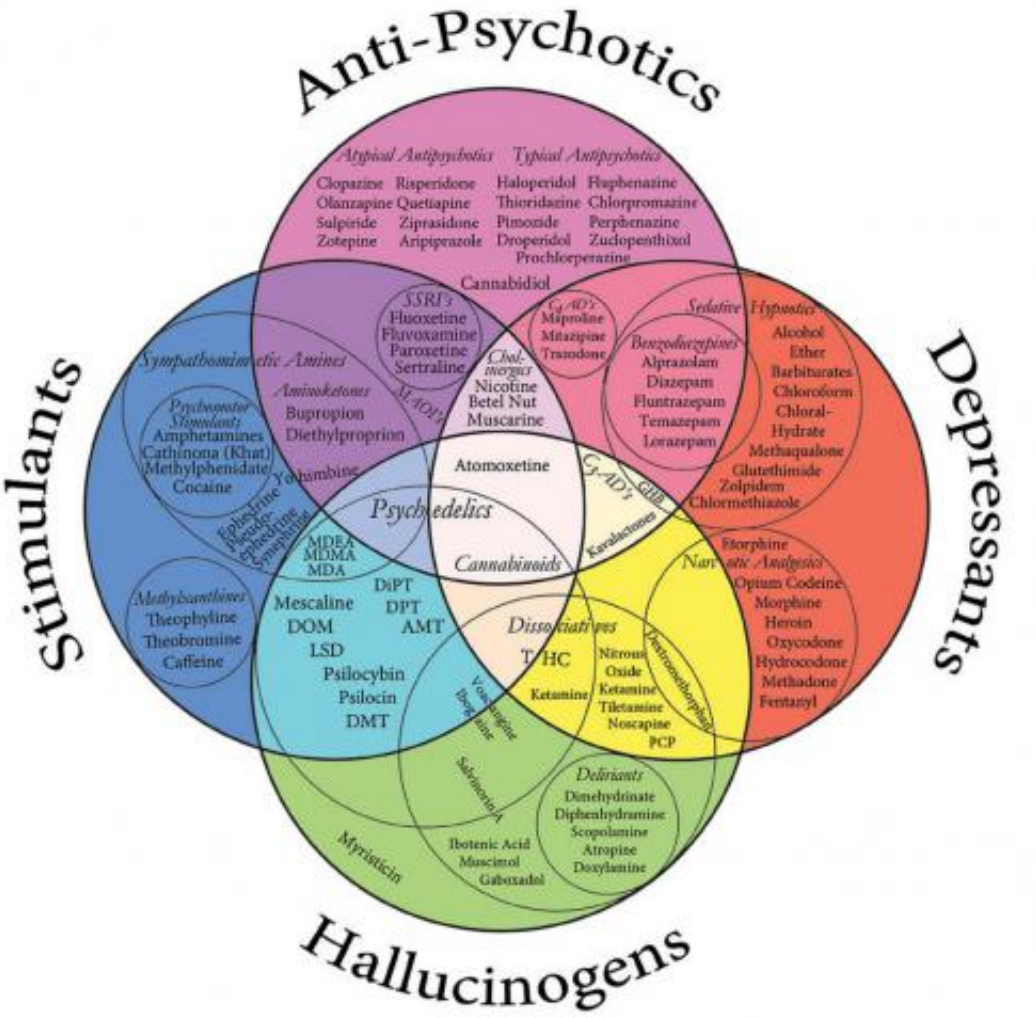
MPTP – a case in point

The history of MPTP (1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine) – a compound that can be produced inadvertently while manufacturing a synthetic heroin substitute known as MPPP – is a sobering reminder of what can go wrong.

In 1982, the accidental production of MPTP by illicit chemists in the US led to a micro-epidemic of drug-induced Parkinsonism.

That's because within a few days of MPTP poisoning the victim begins to stiffen up, and shortly afterwards progress to permanent and severe Parkinson's Disease. MPTP is so good at doing this that scientists now use it to create animal models of the disease in order to test new treatments.

The dangers of MPTP were almost entirely unknown to science in 1982, much as is the case with many emerging drugs of today.



Credit: speedypete312

Without prior scientific testing we have no way of knowing which of the new drugs are relatively safe and which are lethal.

Because the negative side-effects of drugs are often slow to appear and initially subtle, it's impossible for drug makers to predict this beforehand without proper testing. The fact your mate took some last week and seems okay right now does not make it safe in the long-term.

A changed environment

Two factors combine to create the current, dangerous situation:

1) The rapid and worldwide spread of novel psychoactive drugs in advance of any substantial research into toxicity.

2) The subtle and progressive nature of many neurological disorders, with substantial and lasting neural damage often preceding overt behavioural symptoms and "incubation" periods varying from instantaneous to life-long.

Taken together, these raise the alarming possibility of a global pandemic of drug-induced neurological injury.

Hypothetically, a novel psychoactive party drug that induces a slowly-appearing neurotoxic impairment, when combined with market penetration of speed and depth similar to mephedrone and MDPV, would have the potential to cause an immense amount of harm before the dangers are even detected by science.

As well as the personal suffering of the individuals affected, an event of this type has the potential to collapse the public health systems of the nations affected. Put in blunt economic terms: the long-term care of brain injury patients is incredibly expensive.

The increasing pace and diversity of recreational drug markets worldwide has altered the landscape to such an extent that the already-flawed conventional approach to drug control has become actively dangerous.

The core of the problem is in the lack of alignment between the relative risks of drug harms and varying degrees of legal restriction. Current drug

legislation is based upon a toxic mix of history and politics rather than any rational assessment of the best way to minimise the damage associated with drug use.

Solving this problem is going to take more than a greater focus on toxicity research, necessary as that is. If we want to keep our kids alive and healthy (and maybe save the health system in the process), we need a substantial reform to the way governments worldwide seek to control the use of these drugs.

Source: The Conversation