

Guest editorial

Karenza Moore and Angus Bancroft

Drugs, technologies and cyber markets: an introduction

For a long time, researchers, policymakers and law enforcement have referred to “the drug market” as a generic term for aggregated global drug production, trafficking and distribution systems. Mirroring developments in capitalist societies, we have recently observed the emergence of what might be called conscious markets, where drug dealers and buyers have a distinct understanding of themselves as operating within and according to market principles – seeing themselves as and expected to behave as service providers and consumers. That has implications for drug normalisation, access, pricing, quality, product diversity and availability. There is a growing acknowledgement of the disruptive potential of technologies – particularly “the digital” – to transform illicit drug markets and future use patterns (Griffiths and Mounteny, 2017). We may also benefit from widening our perspective beyond cyber or networked information communication technologies (ICTs), towards a broader definition of technologies alongside a concern with *continuity, change and innovation*. Technologies have of course always played a pivotal role in drug markets; from public phone boxes to arrange a street deal, to location-based app “drug drops” and darknet markets. What might we say about drugs and technologies in a more general sense? For instance, as technologies *and* drug-taking are typically “gendered” as masculine, it is perhaps unsurprising that gender has only recently been explicitly considered in relation to online illegal drug markets (Fleetwood *et al.*, 2020).

A critical factor driving the reshaping of drug markets has been technological innovation in all its forms. The intersection between the diffusion of technological innovation and illicit drug markets – notably the internet, but also smart phones, social media platforms and privacy-focused communication apps such as Telegram – has drawn attention from academic researchers and concerned publics in recent years. Connected digital technologies now mediate social life, leaving little untouched. Beneath the surface, the “open” World Wide Web is an array of platforms, communication systems and services that are often hidden, closed, dark or incommensurable. The “cyberspaces” people occupy on a daily basis subject them to new forms of surveillance and power. Data capitalism turns individual interactions into saleable data points. The legal and commercial principles driving these systems are often opaque to users and resistant to traditional social research methods. On the other hand, countercultural technology systems such the dark web or darknet, where political protest collectives and illegal drug markets reside, present alternative ways of organising drug users and dealers in their own terms. Moving beyond sensationalist press reports, typically featuring dodgy drug dealers on shadowy sites and the image of a young man wearing a hoodie hunched over a laptop in a darkened room, is critical to both understanding novel developments and giving voice to the interests and experiences of participants.

Much scholarship is focussed on the multiplicity of illicit drug marketplaces, alongside changes to vendor and purchaser practices wrought by networked technologies and global drug market innovation (EMCDDA, 2016; Berry, 2018). Leaders in this field have traced first and now second generation cyber drug markets with a keen eye on emerging developments (Aldridge and Décarry-Hétu, 2016). The structural factors which underly the resilience and

Karenza Moore is based at the School of Health and Society, University of Salford, Salford, UK. Angus Bancroft is based at the School of Social and Political Science, The University of Edinburgh, Edinburgh, UK.

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growth of such markets have also been subject to scrutiny, as in the work of [Tzanetakis \(2018\)](#) who deploys economic sociology to produce a conceptual framework for understanding how social order is upheld on illicit drug cryptomarkets (see also [Bancroft and Scott Reid, 2016](#)).

From concern around new psychoactive substance (NPS) markets online to the establishment of “mature” cyber markets for tobacco ([Barrera et al., 2019](#)), NPS, illegal drugs and illicit medications, the rapidity of change demands drug researchers embody conceptual, theoretical and empirical flexibility and adaption, while addressing more familiar concerns. These include connections between purchase and prevalence data; purity, availability and user preference; vendor reputation and buyer trust; the efficacy (or otherwise) of law enforcement interventions; drug market violence (or its absence); harm reduction; e-treatment interventions; and emerging cyber market trends, such as the increasing use of apps and GPS capabilities of smart phones to organise localised drug distribution. In this special issue, we present six papers each with a keen focus on intersections between drugs, drug users, drug markets and technologies. Questions around drugs, technologies and cyber markets prove to be wide-ranging, varied, yet all significant, and particularly concerned with drugs and the *sociotechnical*. How are technologies transforming illicit drug markets, alongside vendor/purchaser/user experiences? How does drug pricing “work” on drug cryptomarkets, for example? How does the sociocultural gendering of technologies and drug use shape assumptions about cyber market vendors? What role do innovations in drug checking technologies have in shaping responses to drug use? And what are the most recent sociotechnical innovations in dual diagnosis service delivery?

It is in the spirit of mixing the cutting edge with more established themes of drug scholarship that we start this special issue. Strizek, Karden and Matias offer a methodological and substantive exploration of the European Web Survey on Drugs, and specifically the recruitment of survey respondents via drug cryptomarkets. They highlight just how central such markets have become to researching drug purchasing practices and related drug user characteristics. Those purchasing on drug cryptomarkets have consistently been found to be concerned with trust, credibility and anonymity. These concerns are also shown by Strizek, Karden and Matias to be central to successful recruitment for targeted population survey research with regular drug cryptomarket purchasers. This approach aides our understanding of crypto-purchaser characteristics (as compared to the more “general population” of drug purchasers). It also contributes to improvements in the quality of data available to us about “the drug problem” across Europe ([Moore and Matias, 2018](#)).

The internet is a rich information hub where drug producers, distributors and users seek out and exchange knowledge and information, such as “recipes” for methamphetamine ([Vidal and Décary-Héту, 2018](#)), harm reduction advice (e.g. pillreports.net) and user experience reports, including those of psychonauts ([Davey et al., 2012](#)). Understanding how people who purchase illicit drugs online reach, evaluate, implement and/or disregard information, and how this may shape their subsequent practices, is crucial. One of the key capabilities of the internet is to facilitate discussion about all aspects of drugs and drug cultures ([Davey et al., 2012](#)). Drug users form communities online, just as other groups with “special interests” do. Pestana, Beccaria and Petrilli explore one such community, namely, the psychonaut community as manifest on the popular platform *Reddit*. The platform and the online interactions between psychonauts (and others) prove to be a rich seam to mine for the authors, who analyse the motives for, and modalities of, psychedelic substance use among a group rarely included in research on drug use in leisure settings or on “controlled” use in medical settings. The self-regard of this psychonautic community reiterates the importance to many drug users of “being responsible”. Those who perceive that they are in control of their drug-taking tend to distance themselves from those perceived to be uninformed, or worse, irresponsible

(Askew, 2016; Lau *et al.*, 2015; Pennay and Moore, 2010). MDMA/Ecstasy users who deploy independent drug-checking (IDC) technologies such as reagent tests typically view themselves as “being responsible” by maximising pleasure and minimising harm, in the broader context of neoliberal consumer capitalist leisure spaces and times (Taylor *et al.*, 2020). Further, cryptomarkets are now key spaces for peer knowledge production and exchange around safer drug use practices (Bancroft, 2017).

Cryptomarkets involve the purchasing of illicit goods of significant cultural and economic value. Cyber markets for drugs are at heart consumer capitalist markets. Our third special issue paper by Craciunescu explores the popular culture and drug subculture sign-values attached to drug products by darknet *DreamMarket* vendors. Crucially, Craciunescu shows how sign-systems used by darknet vendors are replete with references to established consumer brands and popular crime media representations. These markets are also the focus of Zauneder and Bancroft, who explore drug cryptomarket vendor profiles, purchaser feedback and product pricing in our fourth paper. The authors highlight how these aspects are used as key markers of “authentic” products and trustworthy vendor identities within both on/offline spaces.

Certain practices and procedures involving illegal drugs, technologies and configurations of sociotechnical systems emerge in the (aforementioned) context of consumer capitalist leisure spaces and times. Advances in drug checking is one such example. On-site drug checking at music festivals has increasingly been deployed to promote harm reduction and to mitigate risks associated with unknown products of variable dosage and purity available from illegal drug markets (Measham, 2019; Beckley, 2019). We have also seen the growth of public health surveillance technologies such as wastewater testing and analysis being used to compliment other forms of “social” data such as general and targeted population surveys (EMCDDA, 2018). From these two examples we can reflect on how configurations of sociotechnical systems work to produce (sometimes novel) knowledge about drugs, drug use and drug markets. This may in turn shape people’s drug-taking practices, directly or indirectly. Knowledge about “what is in my drugs” (when coupled with other harm reduction information/discussion) may, for example, change young people’s drug-taking practices (Giné *et al.*, 2017; Measham, 2019). Findings from wastewater analysis may drive drug prevention and/or harm reduction interventions (EMCDDA, 2018). Tejada *et al.*, for example, analyse the concentrations of THC, CBN and CBD in cannabis joints seized by law enforcement in one region of Spain over a two-year period. As they state, a key aim of their work is to improve knowledge about “what is in joints” to inform the definition of a standard cannabis joint and improve related harm reduction interventions. We can try prising open the “black box” (Winner, 1993) in the hope of better understanding drugs, drug use and drug policies and interventions.

“Try something different” is the rallying call of our final paper on improving services for people with a dual diagnosis of substance dependency and mental health problems in England. The authors Dugmore and Bauweraerts (this issue) draw on their local experiences and thirst for innovation to argue that “The introduction of substance misuse workers to acute and rehab mental health inpatient services can lead to service users engaging at the point of admission”. From the perspective of technological determinism, we tend to think of innovation as being located solely within technologies which then “impact” on (existing) social systems. Sociotechnical approaches help us capture more nuanced multidirectional relationships between technologies and social systems, as products of human endeavour. As Dugmore and Bauweraerts show, the seemingly simple act of *reconfiguring* the availability of professionals to service users had a positive impact on their engagement. This integrated (yet separated) service model was (in part) operationalised through inter-professional training and better information-sharing systems. Their local model – which the authors recommend for broader adoption – proved safer for service users, with, for example, fewer reported incidents relating to prescribing. This and the other papers we present in this special

issue highlight how innovation in the drugs field emerges in many forms and guises, with perhaps the only constant being a perpetual state of local and global sociotechnical change.

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