

E:\Digital Crime,  
Technology and  
Social Harms\>\_

# Digital Transformations of Illicit Drug Markets

## Reconfiguration and Continuity

[edited by]...

Meropi Tzanetakis

Nigel South

# **Digital Transformations of Illicit Drug Markets**

# EMERALD STUDIES IN DIGITAL CRIME, TECHNOLOGY AND SOCIAL HARMS

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Over the past two decades, digital technologies have come to permeate ever more aspects of contemporary life. This trend looks to continue and has profound implications for the social sciences, particularly criminology, with technology-facilitated offences now arguably constituting the most dynamic and rapidly growing area of contemporary crime. Despite this development, the discipline of criminology has been slow to embrace the critical study of technology-facilitated offences and social harms, with most research conducted in this area still informed by a relatively narrow range of cybersecurity and applied criminological perspectives.

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Emerald Studies in Digital Crime, Technology  
and Social Harms

# Digital Transformations of Illicit Drug Markets: Reconfiguration and Continuity

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Nigel South and Meropi Tzanetakis  
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## Chapter 1

# Introduction: The Digital Transformations of Illicit Drug Markets as a Process of Reconfiguration and Continuity

*Meropi Tzanetakis and Nigel South*

### Abstract

This chapter explores the disruptive potential of the Internet to transform illicit drug markets while also challenging stereotypical depictions and superficial understandings of supply and demand. It argues that the digital transformation of illicit drug markets combines, on one hand, a reconfiguration of the scope and impact of how sellers, buyers, and other actors interact within and upon digitally mediated retail drug markets and, on the other hand, continuing trends in the embeddedness of market structures in cultural, economic, political, and legal realms. We develop conceptual ideas for studying the architecture of digital drug markets by drawing on interdisciplinary approaches to digitalisation, markets, and drugs. To understand the functioning of online drug markets, we first need to understand digitalisation. Thus, we draw on scholarship on the digital transformation of society and, second, put forward an understanding of markets that considers how personal relations and social structures enhance and restrict market exchange. Thus, we draw on economic sociology. Third, we build on and extend social science research on illicit drug markets which points out that drug markets exhibit significant variations over time and across jurisdictions. The introduction aims to provide a research agenda that can help us to explore ongoing digital transformations of illicit drug markets. It expands and deepens scholarship on the technological, structural, economic, and cultural factors underlying the resilience and growth of digital drug markets. It also goes beyond a

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concern with just one type of digital drug market into wider forms of digital environments.

*Keywords:* Illicit drug markets; digital transformation; embeddedness; cryptomarkets; social media; surface web

This book is about the recent and ongoing development of information and communication technologies (ICT) and how this has fuelled transactions involving illicit and licit drugs in a variety of ways. It explores the disruptive potential of the Internet to transform illicit drug markets while also challenging stereotypical depictions and superficial understandings of supply and demand. The proliferation of illicit markets on the Internet has attracted increased interest from researchers and media, political decision-makers, and practitioners – and the conditions of trading necessitated by a global pandemic have led to even more activity in the markets and hence the law enforcement scrutiny (FBI, 2021; Bergeron et al., 2022).

Drawing on criminology, economic sociology, Internet studies, and cultural studies, this book starts from the assumption that illicit drug markets evolve in response to political, economic, cultural, and social contexts. We develop conceptual ideas for studying illicit online drug markets by drawing on three (inter)disciplinary traditions dealing with digitalisation, markets, and drugs. To understand the functioning of online drug markets, we first need to understand digitalisation. Thus, we draw on scholarship on the digital transformation of society. Second, we then want to put forward an understanding of markets that takes into account how personal relations and social structures enhance and restrict market exchange. Thus, we draw on economic sociology. Third, we build on and extend social science research on illicit drug markets which points out that drug markets exhibit significant variations over time and across jurisdictions. This book builds on the longstanding tradition of researching change and continuity in drug production, distribution, and consumption practices through the development of theoretical concepts and empirical enquiries. Thus, we argue that the digital transformation of illicit drug markets combines, on the one hand, a reconfiguration of the scope and impact of how sellers and buyers interact within and upon digitally mediated retail drug markets and, on the other hand, continuing trends in the embeddedness of market structures in cultural, economic, political, and legal realms.

## **Digitalisation: Embeddedness of Drug Markets in Digital Transformation**

Rather than conceptualising digital drug markets in isolation, we understand them as embedded in the wider digital transformation. Initially, digitalisation means the process of converting analogue into digital information, which implies that information can be processed electronically (Jacob and Thiel, 2017). Digitisation,

therefore, encompasses more than the Internet; it is much more generally about storing and processing data. In the course of this development, digitisation is permanently changing the social order as well as everyday life. This includes how we acquire information or communicate with one another and how we connect our everyday activities. Digital data form the basis of new business models (e.g. digital platforms) and new hierarchies (Mau, 2019). Digitalisation is about the social and political shaping of a fundamental societal transformation that is open to regulation and governance.

Moreover, we agree with a large body of scholarship arguing against technological determinism (e.g. Woolgar, 2002). Digitalisation of society means that the relationships between the digital and the social are so entangled that ‘technology is society, and society cannot be understood or represented without its technological tools’ (Castells, 2010, p. 5). Thus, digital technologies are not a determining factor for political, economic, cultural, and social change; instead, they depend on social discourses, collective assessments, and political modes of regulation. Although the Internet has the potential for global reach, with geographical disparities in terms of access, it ‘is used in local spaces and shaped by local contexts and constraints’ (Franko, 2019, p. 176). We acknowledge that the Internet can be modified by its social practice, and digital devices are changing our every day and communication behaviour without determining specific ways of use.

Furthermore, as technologies and people are increasingly connected simultaneously, the distinctions between online and offline become blurred (Lavorgna, 2020; Powell et al., 2018). This connectivity includes, for example, the ways in which a smartphone is used as an information assistant to navigate unfamiliar territory when travelling to or around a city. Here, a digital device becomes an important object and interpreter of everyday life while both the virtual and the offline realms are inseparably connected to each other. This holds true for deviant activities as well. The organisation of darknet drug markets requires, for example, a reliable postal service through which drug shipments ordered online are delivered to the buyer’s physical address. Digitally mediated sourcing of drugs has implications in the physical world, not least as the drugs themselves need to be delivered to the buyer; this part of the transaction inevitably takes place somewhere offline (analogue). The examples underline that it is becoming increasingly difficult to separate the digital from the physical world, and the online/offline dichotomy may therefore be outdated. Instead, the notion of digital environments is a conceptual term ‘that describes the mutual permeation of the virtual with the physical world’ (Frömming et al., 2017, p. 1).

With our approach, we situate digital drug markets within a broader process of digitalisation of society. Thereby, we take into account the increasing embeddedness of ICT in everyday life which also shapes the production, distribution, and consumption of drugs in various ways. The widespread diffusion and diverse uses of pagers and mobile phones since the 1990s, for example, entailed increased connectivity (Curtis and Wendel, 2000; May and Hough, 2004). Such technological advances enabled retail drug sellers to make use of telecommunications technology to minimise the risks associated with police monitoring activities. Similarly, the ubiquity of digital devices such as smartphones and tablet computers enabled

users to connect to the Internet from almost any location (Lupton, 2015). In addition, the expansion of social media platforms since 2000 advanced the creation and sharing of user-generated content (Stratton et al., 2017). However, all these developments are preconditions for the formation of darknet drug markets and the use of social media networks for drug distribution. The examples illustrate that as digital technologies have permeated everyday life in the Global North (Lupton, 2015), computer software and hardware devices enable new (and old) forms and arenas of crime and drug cultures in cyberspace (N. Craciunescu and N. South, 2023, this volume, Chapter 7). These ‘downsides’ have been exported to the Global South as well as connectivity expands. As Franko (2019, p. 178) observes, ‘cyberspace challenges traditional notions of penal power and sovereignty which have been tied to territoriality and the nation state’. This means that analysis of the proliferation of digital drug markets should take into account the role of digital technologies in society at large.

## **Markets: The Social Organisation of Drug Markets**

Turning to scholarship on illicit drug markets, most theoretical underpinnings are explicitly or implicitly based on transaction cost economics (TCE). TCE operates under assumptions of economic efficiency, limited rationality, and imperfections in decision-making due to a lack of or false information (Bushway and Reuter, 2008; Reuter and Kleiman, 1986; Moeller, 2018). While economic approaches formally model the market as an abstract whole and ascribe little importance to social relations, research drawing upon criminological, sociological, and anthropological perspectives mostly focuses on dynamic relationships between drug users, their environment, market operations, and police interventions on retail drug markets.

Here, we extend previous scholarship on illicit drug markets by referring to the notion of the ‘architecture of illegal markets’ (Beckert and Dewey, 2017) as a theoretical vantage point to contribute to an understanding of the technological, political, social, and cultural embeddedness of illicit drug markets. This perspective from economic sociology aims to analyse the social practices that enable or impede market exchange, while the production, distribution, and consumption of drugs are prohibited by law. In contrast to the situation in legal markets, state institutions neither regulate quality standards in illicit markets nor property rights protected by formal institutions and fair competition is not ensured. On the other hand, of course, the state has an active interest in the prosecution of market participants involved in the production, distribution, and consumption of drugs. We are therefore interested in the question of how social order is upheld in digital drug markets. In addition, the spread of markets has historically been linked to technological innovations that have enabled the spatial and temporal separation of the production and consumption of goods, making many products tradable over great distances (Aspers and Beckert, 2008). In this sense, the ongoing digital transformation represents a historical continuity while enabling new forms of social interaction and exchange (Van Dijck et al., 2018).

Illicit markets represent such continuity and change as arenas of social interaction where drugs are exchanged regularly for money under conditions of competition (Beckert and Wehinger, 2013). As markets are socially shaped and the illegal status of drugs is defined by law, what constitutes an illicit drug market varies across jurisdictions and over time. The state and international drug conventions are central actors in the formation of illicit drug markets, while the shape of particular illicit drug markets varies with the socio-economic and socio-technical contexts of the exchange relations. Next to the illegal status of the goods for exchange, important social structural aspects of illicit drug markets are cultural norms, secrecy to avoid law enforcement and moral judgements, a lack of transparency regarding prices and product qualities, and the relevance of interpersonal trust among exchange partners (Beckert and Dewey, 2017; K. Moeller, 2023, this volume, Chapter 3).

## **Drugs: Understanding Retail Drug Markets**

This book also builds upon a longstanding tradition of interdisciplinary research on the demand and supply sides of illicit drug markets, contributing to the development of theoretical perspectives and the accumulation of empirical evidence. How drug markets operate at local, national, regional, and global levels has been the subject of much debate. Although there is a widespread agreement that there is no such thing as ‘the drug market’ (Coomber, 2004, p. 503) in a singular sense, there is some controversy regarding the organisational structure of drug markets.

Traditionally and still in popular media presentations, drug traffickers are depicted as hierarchically organised, family and kinship-based, and controlled by a ‘kingpin’. In contrast, a variety of empirical studies suggest a more complex understanding of drug markets (Adler, 1993; Coomber, 2015; Curtis and Wendel, 2000; Dorn et al., 1992; Pearson and Hobbs, 2001; Paoli, 2002; South, 2004; Sandberg, 2012). Different levels of drug markets have been suggested along the global supply chain according to function or task (May and Hough, 2004): from cultivation to production, through various upper-level drug networks involved in smuggling and trafficking across national borders, to ‘middle market’ domestic drug distribution for retail supply to drug users. In general, drug markets differ between and within countries and change over time. Depending on the political, economic, and cultural conditions prevailing in the countries involved, different types of drugs are sourced in different ways. Moreover, drug markets are shaped by subcultural norms and the availability and desirability of drugs. In addition, these contexts, as well as respective criminal justice responses, yield different levels of prevalence of violence and threats. Organisational structures include different roles, which may change over time, as well as loosely linked and flexible networks of independent dealers. Findings suggest that drug markets are rather disorganised (Reuter, 1983) as the illegal status of drugs exchanged and subsequent law enforcement activity reduce the organisational capacities of those involved in supplying drugs. In sum, drug markets are fragmented and fluid; they change as society changes over time and space in response to a myriad of factors.

In this book, we are concerned with retail drug distribution, which is located at the end of the supply chain where illicit drugs are supplied to drug users, sometimes by intermediaries via social supply transactions. Social supply is a concept developed to explain how, with the relative normalisation of recreational drug use in the UK and beyond, young people and adults drift into the role of recreational supplier or dealer to supply friends and acquaintances seeking to make minimal or no profit (Coomber et al., 2016). One implication of this concept is that boundaries between roles such as suppliers and users may overlap within a particular drug market (Chatwin and Potter, 2015).

Retail drug markets are traditionally conceptualised along the continuum of open and closed markets depending on geography, policy, and time (Coomber, 2015; Dorn et al., 1992; Hough and Natarajan, 2000; May and Hough, 2004; Ruggiero and South, 1997; Sandberg, 2012). Typically, sellers and buyers make decisions to balance the benefits of negotiating access to drug markets against the risk of encountering law enforcement attention. As Moeller and Sandberg (2019, p. 290) note,

illicit drugs are not sold in competitive markets that are organised by the laws of supply and demand with agents who have perfect information. No state institutions regulate quality standards, ensure fair competition, and enforce contracts; therefore, participants must develop informal ways of building trust and reducing uncertainty.

In open markets, drugs are advertised in and on public spaces such as streets or areas, and, thus, accessible to any plausible customer without prior introduction and with fewer barriers to entry than closed markets. Transactions usually take place in crowded public spaces (e.g. close to public transport hubs) to mask the exchange of drugs which, on one hand, means that buyers and sellers can find each other fairly easily, while, on the other hand, market participants are vulnerable to both police activity and potential fraud. With intensive law enforcement on the streets and the diffusion of mobile phone technologies, closed markets developed where transaction partners are less visible. Thus, closed markets are accessible only to those trusted customers who have previously established social relationships or been introduced by a trusted acquaintance. The trade in drugs is facilitated in relatively secure private locations, often by social suppliers, and thus the risk of law enforcement is lower. As closed markets rely heavily on friendly and subsequently trusting relationships between buyers and sellers, they also have lower levels of drug market-related violence. While sellers can operate with a reduced risk of attracting police in closed markets, their regular client base is limited to recommendations from existing contacts to drug users.

## **The Architecture of Digital Drug Markets**

With the development and use of sophisticated ICT, digital drug markets are proliferating. This includes both the implementation of encryption software to buy

and sell drugs on darknet drug markets and the use of social media platforms on smartphones for drug acquisition and distribution (Bakken and Demant, 2019; Barratt and Aldridge, 2016; Demant et al., 2020; Martin et al., 2019; Moyle et al., 2019; Tzanetakis and Stöver, 2019). However, drugs have been exchanged online since the early days of the Internet (Markoff, 2005; Martin, 2014a).

The exchange of drugs via digital environments includes elements of both open and closed drug markets while the distinction between public and private spaces is blurred by the Internet. In this way, the nature of the access-risk trade-off is changed by reducing both the risk posed by exposure to police and access barriers for buyers and sellers (C. Colman, 2023, this volume, Chapter 6). Some of the new digital platforms, social media, and messaging applications may be operated relatively anonymously when used with caution, disguising physical location and identity, and subsequently making customers and sellers less visible and accessible to law enforcement bodies. Simultaneously, a variety of illicit drugs becomes accessible to any customer with digital literacy and Internet access – even without prior social connections – and without restrictions on time and geographic location.

Digital drug markets encompass a variety of digital environments that mediate the buying and selling of illicit drugs. The Internet consists of different layers, including the surface web, the deep web, and the darknet (Tzanetakis, 2018c). The surface web, also called clearnet, comprises mostly publicly accessible content which can be captured by conventional search engines. By contrast, the deep web also contains private information and is a much larger layer compared to the surface web. It includes databases or content that are only accessible after a login or payment and that require a password or a membership registration. The darknet, on other hand, is the smallest layer of the Internet and contains hidden services that are only accessible with encryption software to protect privacy. Although the term ‘darknet’ initially suggests something mystical, criminal, and threatening, in fact, it says nothing about the legal status of the content, only how the content can be accessed.

The surface web is often used for the illicit supply of (prescription) medicines (J. Fleetwood and C. Chatwin, 2023, this volume, Chapter 8) and new psychoactive substances (NPS). The distribution of both drug types has in common that their legal status differs between countries and jurisdictions. In a snapshot study, Martinez et al. (2016) found that online shops selling NPS on the surface web show national variation with respect to IP address location and types of sites. In the early days, NPS sellers were operating with maximum visibility. However, the market has become more fragmented with different levels of visibility, including sellers who aim to be listed at the top of search engine results and those who employ camouflage strategies such as the use of codenames to mask the sale of prohibited substances. In addition, the online supply of NPS and illicit medicines is extremely dynamic and characterised by a high degree of fluctuation, which is reflected by the fluid and dynamic nature of digital technologies in general and the Internet in particular (Martinez et al., 2016; Hall and Antonopoulos, 2016). Moreover, recent developments in online drug distribution suggest an increased hybridisation between the surface web, the deep web, and the darknet, as well as between online and offline environments.

Darknet drug markets, on the other hand, are essentially digital platforms that combine encryption technology (e.g. Tor browser) with virtual currencies (e.g. Bitcoin) to facilitate the exchange of illicit drugs, among other goods and services. Since the first cryptomarket, Silk Road 1, went online in 2011, and following its closure in 2013, many other digital platforms of various sizes, language offerings, payment schemes, and lifespans have begun to operate and compete on the darknet, aiming to draw the attention of customers but not the attention of law enforcement agencies. Infrastructural characteristics of cryptomarkets rely on institutional reputation systems to build trust, digital communities active in various digital spaces, the introduction of service-oriented relationships between buyers and vendors, and a mail carrier – who unknowingly becomes a drug dealer – to deliver the drugs ordered online (A. Bancroft, 2023, this volume, Chapter 5; Barratt et al., 2014; Ladegaard, 2017; J. Martin, 2023, this volume, Chapter 9; Tzanetakis et al., 2016). Thus, cryptomarkets represent a ‘transformative criminal innovation’ (Aldridge and Décarry-Héту, 2014) and potentially reduce the number of intermediaries at the lower end of the supply chain.

In recent years, there has been an explosion of social media platforms on the Internet. Their content can be associated with both the surface web and the deep web, depending on whether communication can be indexed by search engines or is only accessible to group members or from peer to peer. Among this variety of social media platforms and messaging applications, a number have been used to supply drugs (Bakken and Demant, 2019; Demant et al., 2020; Moyle et al., 2019). With the ubiquity of mobile devices, the use of social media applications has become part of everyday routines and practices for producing, sharing, and consuming digital content, thereby transforming social behaviours and activities (Humphreys, 2018).

The increasing popularity of social media platforms and messaging applications, including Facebook, Snapchat, Instagram, Wickr, and Telegram, has transformed the background to social life around the world, although some user styles and preferences remain highly dependent on cultural preferences that vary across time and space (R. Coomber et al., 2023, this volume, Chapter 2). Social media platforms that enable access to drug transactions are characterised by a combination of social networking and high levels of availability of illicit drugs, which usually require purposeful access. While visual material like images and videos are used by sellers to signal the product’s quality, social media channels and messaging applications offer features such as end-to-end encryption (falsely) perceived as secure by customers. In contrast to most darknet drug markets, social media drug acquisition commonly involves physical meetings, although ‘dead drops’ or home drop-offs are occasionally used, which means that no personal meeting is necessary to exchange drugs. Social media drug supply is popular among young people previously unexposed to drugs, and this has policy implications that have been underappreciated by the criminal justice system and other official agencies.

Indeed, the role of the state in the changing digital world needs further attention. Obviously, in relation to drugs law and controls, the state and subsequent policing strategies represent an important point of continuity regarding the social structuring of illicit drug markets in general and will no doubt pay increasing

attention to digital drug markets in particular (I. J. Warren and E. Ryan, 2023, this volume, Chapter 4). While the growth of digital drug markets will pose significant challenges to drug policy, at present the international drug control system continues to prevail in determining the national and local policy agendas (Bewley-Taylor, 2012; Colson and Bergeron, 2017; Seddon, 2010). Even so, within this framework, there has been some scope for alternative regulatory responses to drugs issues that have been implemented in a limited number of countries and federal states, mainly in the Global North. Innovative regulations include decriminalisation laws, legalisation (of cannabis use), and harm reduction approaches.

At the same time, there is a large scholarly consensus that punitive and prohibitionist drug control measures have failed; instead of reduced drug supply and demand, several unintended consequences are observed, including the formation of international drug markets, geographic displacement of drug production and drug distribution to new locations, substance displacement to less controllable drugs, adverse health effects, stigmatisation of drug users, and reduced educational and labour market opportunities (Buxton, 2006; MacCoun and Reuter, 2011; Ruggiero and South, 1995; South, 1999a; Stevens, 2011; Seddon, 2020). The emergence and expansion of digital drug markets suggests that the international drug policy paradigm of prohibition is fundamentally challenged and outdated (M. Tzanetakis and S. A. Marx, 2023, this volume, Chapter 10). This is illustrated by the fact that the rigid international conventions struggle to keep up with dynamic and rapidly changing drug markets – which have always been in flux – as they change even more significantly with the emergence of new technologies and the creation of new opportunities for the exchange of drugs.

## The Structure of the Book

In this book, we explore the reconfiguration and continuity of digital drug markets through various lenses. Part I is concerned with the embeddedness of digital drug markets in socio-technical practices, online spaces, and policing. It commences with a chapter by Ross Coomber, Andrew Childs, Leah Moyle, and Monica Barratt, who use a multistage approach to explore how social media applications, encrypted messaging, and surface web platforms change the drug supply landscape online. Coomber et al. illustrate how buyers and sellers transition across different digital environments to exchange illicit drugs. These mid-range market spaces are situated between technically demanding darknet platforms and low-threshold traditional street dealing markets and combine elements of online and offline drug distribution. Therefore, matters of gaining access, security, drug quality, and safety are negotiated differently, primarily depending not on the respective digital environments but rather on different populations, cultural preferences, and the embeddedness of digital environments in everyday life. The chapter illuminates the diversification of digital environments involved in the mediation of drug transactions.

In Chapter 3, Kim Moeller turns to darknet drug markets. Drawing on a literature review on ‘trust’ in cryptomarkets, Moeller examines how trust is established by market participants who are confronted with high levels of uncertainty

in digital environments. The author provides readers with various definitions and dimensions of trust, which are rooted in different disciplinary perspectives, including psychology, sociology, and economics. He then goes on to present three analytical dimensions to the generation of trust in darknet drug markets, which overlap in practice. First, institutional-based trust is built by platform administrators who both implement an escrow payment system with a built-in dispute resolution mode and actively communicate with buyers and vendors. Second, process-based trust is established over time and derives from previous exchanges, resulting in the concentration of sales with a few trusted transaction partners. Third, character-based trust is produced by customers submitting reviews to signal product quality and service. The subsequent reputation system, however, enables reputation scores to be transferred between platforms and thus reduces the effectiveness of law enforcement operations. As darknet marketplaces are shaped by various degrees of anonymity, trust is presented as a multidimensional social practice which is difficult to establish between exchange partners and fragile once achieved.

The shaping of state prosecution of darknet cryptomarkets is analysed in Chapter 4 by Ian J. Warren and Emma Ryan. The authors use Australian legal cases against online drug vendors and a US case against a leading cryptomarket for the distribution of illicit drugs to argue that darknet policing in Australia is embedded in the broader development of the Americanisation of laws and online policing against drugs. As a result, US-driven values like ‘zero tolerance against illicit drugs’ are used to reshape the rule of law in other jurisdictions. While Australian prosecution against low- and mid-level vendors is based on conventional and historically well-established drug policing methods, transnational police investigations target high-level vendors and platform administrators. As transnational investigations are highly complex, they require multilateral coordination brought forward by bilateral agreements between law enforcement agencies and governments that are currently driven mainly by US standards. The authors further suggest that enhanced online investigation capabilities in Australia are often symptoms of the Americanisation of online policing. According to this, US policy-makers and law enforcement agencies frame the transnational supply of illicit drugs as evil in public discourse due to its hidden nature. However, alternative ways of dealing with cryptomarkets are not publicly discussed.

In Part II, the emphasis is on the demand side of darknet drug markets, in particular the experiences of opiate drug users and national differences in cryptomarket use. In Chapter 5, Angus Bancroft employs the concept of social time in relation to discussion threads on a leading cryptomarket forum to examine how the technological infrastructure of darknet markets shapes the experiences of heroin users. Time not only structures life in a disciplining society but also matters for drug consumption rituals. Bancroft presents two interlocking temporal dimensions which shape how time is structured for drug users. Firstly, heroin’s drug time combines the pharmacology of the drug with the embodied experience of dependence and withdrawal. Secondly, the material rhythms of the market include infrastructural elements such as the time to process Bitcoin payments, postal delivery systems, vendor response times, and shipping speeds; all of which affect the autonomy of users. Both dimensions illustrate how shared cultural

understandings of time in relation to heroin use are reconfigured by the technological solutions of cryptomarkets.

In Chapter 6, Charlotte Colman's exploration of the motives of Belgian buyers sourcing illicit drugs from cryptomarkets and the effects on their drug use trajectories is based on an online survey ( $N = 99$ ) and qualitative interviews ( $N = 10$ ) with customers. The study participants were mostly experienced drug users who had also previously bought drugs offline. Findings indicate that most respondents did not increase their overall drug use frequency, although a majority had sourced a wider range of drugs, including LSD and 2C types, since using cryptomarkets as these had been difficult to access by traditional means. In addition, most respondents bought drugs for their personal use, while some also supplied friends or family who would usually not know that the drugs were acquired from cryptomarkets. Motives to source drugs from cryptomarkets include a wider range of drugs available, curiosity, perceived high drug quality, and competitive prices (particularly for MDMA). Moreover, respondents indicated a preference for ordering from vendors who indicated that they would ship from Belgium or neighbouring countries to minimise the risk of not receiving the delivery. The Belgian case study also reveals that buyers were aware of the different security aspects and risks involved; however, they considered these to be minimal and an accepted part of the cryptomarket environment.

Part III is formed of four chapters that explore unequal power relations in terms of the 'Uberisation' and 'McDonaldisation' of darknet marketplaces, gender representations in digital environments, the gentrification of digital drug markets, and cryptomarkets' profit opportunities within platform capitalism. In Chapter 7, Nicolae Craciunescu and Nigel South note some of the actors and ideologies, organisational innovations, and technologies, linking 'drugs and the digital' as 'tools of liberation', from 1960s Californian counterculture to contemporary cyberspace. They offer an analysis of web-based drug selling and purchasing in terms of trends towards 'Uberisation' and 'McDonaldisation' and apply Bourdieu's (1986) concept of cultural capital to a discussion of the dynamics of consumption and different subcultures of the drug world.

In Chapter 8, Jennifer Fleetwood and Caroline Chatwin explore representations of gender in surface web drug markets, which have been largely overlooked. The analysis draws on both feminist media research and scholarship on gender in pharmaceutical advertising to examine visual images, blogs, and marketing emails relating to three different online shops selling modafinil, a prescription substance. The chapter illustrates that gender does not disappear in digital environments; instead, online representations of gender tend to reproduce traditional notions that drug cultures and drug markets are populated, and dominated, by men. Fleetwood and Chatwin reveal that gender was ubiquitous in how buyers and sellers of modafinil were imagined. However, the authors did find a lack of sexist stereotyping of women. Instead, advertising is narrowly focused on modafinil used for work to enhance individual productivity. However, which gender is imagined to be the 'normal user' and which gender is actually populating a particular market is, for this case study, quite different as women comprise around 40% of the market share for modafinil.

In Chapter 9, James Martin analyses the concept of drug market gentrification by focusing on darknet drug markets. Here, gentrification is understood as the process by which drug market participants adapt to changes in digital environments. Martin finds strong empirical support that potentially violent cultural norms of traditional retail drug markets are replaced by non-violent, more cordial and professional relationships between cryptomarket participants. Cryptomarkets' infrastructural characteristics and institutional features promote non-violent cultural norms that are associated with a high level of professionalism on the vendor's side, institutional controls, trustworthiness, and cordial engagement between buyers and vendors. Such infrastructural solutions include the reputation system, payment systems coming with dispute resolution, discussion forums, and self-regulation by both administrators, moderators, and cryptomarket communities. While vendors require specialised knowledge and expert skillsets to sell drugs via the darknet, Martin suggests that their customer-oriented approach including customer service, marketing, and branding resembles retail operations in the legal digital economy.

Finally, in Chapter 10, Meropi Tzanetakis and Stefan A. Marx apply the concept of platform capitalism to the operation of cryptomarkets. The authors use a dialectical method to argue that the basic foundation of cryptomarkets relies on the infrastructure of platform capitalism. While digital platforms are marketplaces where goods can be exchanged, platform capitalism refers to the process by which the vast collection of user data feeds into the accumulation of value. Moreover, several levels of control and fundamental contradictions in the accumulation of surplus value led to the concentration of power of the Internet. Tzanetakis and Marx examine the constellation of digital drug platforms by disclosing a threefold contradiction to explore cryptomarkets in an ideology-critical way: state control and self-regulation; visibility and concealment; and legality and illegality. The authors show that darknet drug platforms make a profit not only from the trade of drugs and the collection of user data but also from the illegal status of drugs, the associated ideology, and the closed ecology of darknet platforms. Thereby, power relations in cryptomarkets turn out to be 'more of the same' as those observed in platform capitalism in general.

And the question that follows is whether the same applies to the digital transformation of illicit drug markets in general? As this is a process of continuity as well as reconfiguration, do power relations really change all that much? Has the market simply evolved rather than undergone a revolution? Do the responses from policy and policing represent new ways of thinking about drugs consumption and distribution or are they remarkably familiar with a technological twist? This collection aims to provide a research agenda that can help us to explore such questions.

Part I

# **Embeddedness of Digital Drug Markets**

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## Chapter 2

# Social Media Applications and ‘Surface Web’ Mediated Supply of Illicit Drugs: Emergent and Established Market Risks and Contradictions


*Ross Coomber, Andrew Childs, Leah Moyle and Monica Barratt*

### Abstract

The online sourcing, supply, and purchase of illicit drugs is fast transforming drug markets worldwide. Although the long-term development of simple communications technology over time (from pagers to mobile phones) continues to impact and extend local drug supply dynamics, it is the recent developments of dark web cryptomarkets, social media applications (like Instagram), encrypted messaging applications (like WhatsApp), and surface web platforms, such as LeafedOut, that are changing the drug supply landscape online. The use of technology in drug supply has tended to go hand in hand with improving the efficiency of supply and opportunities to reduce exchange-related risks for both buyers and sellers. In relation to app-mediated supply, for example, the use of encrypted messaging provides enhanced security for arranging purchases beyond the lurking surveillance of law enforcement. Despite the perception of improved safety, however, the use of social media apps and other online platforms can expose both buyers and sellers to risk scenarios they may not fully appreciate. Drawing on two recent studies on the use of social media apps and the online platform LeafedOut as mediators of drugs supply, this chapter will consider how these mid-range (between cryptomarkets and traditional telecommunications such as basic texting/calling and material ‘street’ markets) virtual spaces are being utilised for drug supply and the extent to which this is ‘just more of the same’ or provides new structures and experiences for those engaging with it and in what

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ways. Consideration will also be given to contradictions in the mid-range market space where the broad perception of reduced risk from the use of encrypted messaging can in fact produce greater levels of risk for some buyers and sellers depending on how they engage with the process/es.

*Keywords:* Drug supply; social media; digital apps; drug markets; drug dealing

## Introduction

Prior to the introduction of electronic pagers in the late 1980s, the methodology of drug supply and exchange between sellers and users had been pretty much the same for decades. Previously, drug purchases were either ‘place’ focused (i.e. dealing from known ‘corners’, ‘hot-spots’, or areas where sellers and buyers would congregate with the knowledge that both would be present) and/or acquaintance based (where supply could be organised through regular, known, or ‘vouched for’ sellers and buyers). The exchange process was relatively risky in terms of exposure to law enforcement due to the need for direct personal exchange. Although it is the place-based ‘open street markets’ that did (and continue to) represent the clearest example of visible, risky exchange, even the comparatively ‘closed’ exchanges in private settings with new customers or new suppliers left buyers and sellers potentially vulnerable to undercover stings – a risk that continues in the current context (cf. Coomber, 2015, 2022, 2023). Since the late 1980s, however, the overall form of illicit drug markets has been in an ongoing, transitional phase with new exchange methods emerging and evolving. Some traditional issues remain but the overall landscape is now very different from that which preceded it. These changes have been particularly affected by the development and increasing ubiquity of communication technologies such as mobile phones and the Internet, but also other technological enablers (e.g. encryption and onion routing) that provide hidden online spaces for exchange on the dark web. Although there have been important changes in the practice of offline ‘street-supply’ involving traditional methods of face-to-face exchanges as well as in darknet drug cryptomarkets (cf. Coomber, 2022, 2023), this chapter will focus on drug exchange via the comparatively less well researched mid-range<sup>1</sup> space between these two – that of everyday social media app technology as well as that comprising the open and visible mainstream *surface web*.

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<sup>1</sup>For the purposes of definition, ‘mid-range’ in this context relates to supply that is partially digitally mediated. As such, darknet cryptomarkets would be seen as wholly digitally mediated, while an open-air street deal would be wholly in person (although a phone call or text could be involved). App-mediated markets and surface level web-mediated markets (such as LeafedOut) where face-to-face contact occurs after digital-mediated agreement and arrangements are thus partially digitally mediated.

Digitally mediated illicit drug supply and purchase are largely, but not completely, distinct from what we might term ‘offline’ illicit drug supply. In this ‘always on’ world, very little is now completely offline, but it is nonetheless reasonable to discern a meaningful distance between what is involved in darknet-located drug cryptomarkets (Baym, 2009; Martin, 2023, Chapter 9) and surface web grey market (see below) drug exchanges and those corporeal relations that take place between heroin and crack cocaine sellers and buyers in material spaces. As we shall see, the use of social media apps (e.g. Wickr, Instagram, WhatsApp, Facebook, and so on) for arranging illicit drug exchanges sits somewhere between these extremes.

Initial research and criminal justice interest in the 2010s on how the Internet and related technology was coalescing with the illicit drug trade focused on grey market sales (i.e. products diverted from legal markets and then sold in markets such as online pharmacies, often with uncertain legal status) through surface platform websites offering two primary types of psychoactive and other substances. Originally, these were medicines and pharmaceuticals such as anabolic-androgenic steroids which required prescriptions in many jurisdictions (but were sold, often from sites based in countries that did not require them, without requiring the proof of prescription) and, at that time, were euphemistically called ‘legal highs’ and became known as new psychoactive substances (NPS). The burgeoning market of (mostly) undetectable illicit drug exchanges taking place in cryptomarkets on the dark web was the other primary focus. Somewhat analogous to the way that legal highs (NPS) such as mephedrone became extremely common and established among young users before researchers, drug services, public health organisations, or enforcement was aware of them (ACMD, 2011), researchers and others were also late to the party on recognising the use of social media apps – almost ubiquitous in the day-to-day life of most young people – as a new common method of accessing and supplying illicit drugs. Until 2017, despite some early media coverage (albeit largely sensationalist with little depth – see Moyle et al., 2019) and an academic ‘nod’ towards the activity by Aldridge as far back as 2012, there was no published academic research on the use of social media apps and their use in drug supply. Moyle et al. (2019) published the first research paper looking at the ways that social media apps were being used in everyday drug supply. It is that research, and other key research published since that we will consider in more detail here before discussing developments in the other ‘in-between’ area of illicit drug supply mediation via the surface web.

## **How Social Media Apps are Utilised in Drug Exchanges**

Various internationally popular social media apps (e.g. Snapchat, Instagram, and Facebook), as well as some specific to a region or locality, are used to enable illicit drug exchanges between previously unconnected individuals. Actual app preferences vary by time and space and are related more to different geographical cultural preferences for specific apps than to app efficiency for drug exchanges, and this is likely to continue.

An ideal-type scenario for local illicit drug exchange is as follows: potential purchasers identify suppliers and their drug/s of choice on specific social media platforms (e.g. by searching for specific hashtags or identifying the use of emojis to indicate the availability of drugs via a particular vendor). A diamond or snowflake is a sign for cocaine; a capsule emoji indicates MDMA; a needle indicates heroin (Demant et al., 2019). Again, emojis and indicative messages/adverts will vary over time and space. Depending on the in-built app technology, potential purchasers may be able to see which suppliers are nearby, contact the seller to see if their preferred drug is available in a convenient timeframe and acceptable price, and, if so, arrange for the face-to-face exchange to take place (Bancroft, 2023, Chapter 5). Sellers may, or may not, prefer to move communications to a more secure communication app such as WhatsApp or Wickr as these messenger services provide sellers with end-to-end encrypted communication. A successful purchase will commonly involve 'face-to-face' public meetings or home drop-offs, although it is clear from some message board activity that select sellers are willing to post purchases to much wider geographical boundaries.

## Methodological Approach

Curious to understand more about how app-based drug exchanges were operating and being experienced by those using them, Moyle et al. (2019) set out to explore the motivations for, as well as the particular risks and anxieties associated with, the purchasing of drugs through mobile phone applications. Consideration of motivations, perceived risks, and concerns was the primary focus as these are also key issues in both traditional offline markets (Coomber, 2006; Jacobs, 2000) and for many that engage in drug cryptomarkets (Aldridge and Askew, 2017; Barratt et al., 2014, 2016; Martin, 2014a).

To pursue this, a multistage approach using three different methodologies was employed: an international online survey was followed by rapid face-to-face *in situ* interviews (Measham and Moore, 2009) and in-depth interviews, all in the latter half of 2017. The survey recruited 358 responses from a target sample of those 'having sourced or who had considered sourcing, drugs through a mobile phone app'. The online survey produced baseline quantitative data on the demographics of app users, the apps they used, the drugs they purchased, the frequencies with which apps were used, and the perceived benefits and risks of using them. We also intentionally recruited drug-using respondents who had considered but had not used apps to source drugs to help us understand some of the perceived barriers and anxieties associated with using apps to access drugs. The resultant sample provided insights from (mostly) Australia, Canada, the UK, and the USA. Issues and topics raised in the online survey requiring further insight were followed up with face-to-face, *in situ*, 'rapid' interviews (Measham and Moore, 2009) in a Brisbane (Australia) night-time economy 'main-strip' (Fortitude Valley) with 20 individuals either queuing for nightclubs or outside the bars, who met the inclusion criteria. This approach (online survey and rapid interviews) provided important preliminary data to inform the in-depth interviews with 27 drug purchasers that then followed with mostly 18- to 32-year-old students of a fairly even gender split

(14 men, 12 women, and 1 non-binary). Due to the convenience sampling strategy employed, the final depth-interview sample was almost exclusively UK based (see Moyle et al., 2019 for further detail on the full process and ethics considerations).

## Reasons for App-based Drug Purchasing

The primary perceived benefits of purchasing illicit drugs via darknet cryptomarkets are widely understood (Bancroft and Scott Reid, 2016; Van Hout and Bingham, 2013b; Barratt et al., 2014) to be safety (no face-to-face interaction with unknown sellers and, due to protective darknet access, less risk from law enforcement); drug quality (drug sellers are graded by previous buyers as to the quality of the drugs they sell); and reliability and predictability (sellers are graded as to their responsiveness and speed). The primary disadvantages, however, are a need for relevant social capital/accessibility (accessing darknets safely requires IT skill/knowledge that is a barrier to many); delivery delays; and delivery dilemmas (drugs have to be posted and arrive safely). For those that use them, however, cryptomarkets provide a sense of security, trust (in product), and safety that cannot be generally found in street-level face-to-face markets (Aldridge and Askew, 2017; Barratt et al., 2016; Martin, 2014a). Informal institutional standardisations like the rating system, a classification system helping users navigate across different marketplaces, and seller's reputation scores are some of the technological affordances used with cryptomarkets to establish trust and create a sense of safety (Tzanetakis, 2018b). Such issues, unsurprisingly, bleed into motivations for app-based drug purchasing.

### *Ease of Access, Immediacy, and Familiarity*

App-based exchanges appear, at first sight at least, to also retain a certain amount of the benefits found in cryptomarkets but without having to navigate the technological barriers that purchasing via the darknet presents. The survey and follow-up interviews provided good insight in this regard, with ease of (immediate, if required) access through familiar social media platforms a clear 'pull factor' for most (78.8%) respondents. Ease of access and perceived benefits are summed up by Alex (27-year-old from Plymouth, UK) as being like an epiphany:

I felt like I'd woken up in the 21st century and that everyone around me was idiots. It was safe, easier, and twice as quick as trying to nail down someone on the end of a line. The drugs turned up with the guy, and I paid him, and they were amazing. I never looked back.

The desire for near immediacy (the rapid interviews and depth interviews revealed that unplanned spontaneous desire to access/use drugs would often occur when on a night out) was the second (58.8%) most important perceived advantage of app-mediated supply and meant that those who had used an app to access drugs were instead far more likely (92.7%) to connect with sellers nearby.

App-mediated purchase was also increasingly normal for respondents, with 8.8% of respondents having used an app only once to purchase drugs, over half (58.8%) reporting using apps for drug purchases 10 or more times, and the vast majority (84.3%) reporting the intention to continue to use apps through which to purchase drugs. This intention to continue using apps was also conveyed in interviews, with respondents describing the convenience, visual appeal, and perceived security features as key benefits associated with their use.

Although social supply, where users access drugs via friends and acquaintances, clearly still predominates as a preferred form of access for many and was identified as such by our international survey sample (see also Barratt et al., 2014, 2016; Coomber and Moyle, 2014), for those without reliable social networks of that kind (e.g. many students had moved locations), the new social media platforms provided both platform familiarity plus increased opportunity. Zac (22 years old from London) related how this independent connectivity worked for him:

It just seemed like a simple, modern way to buy things. I'd gotten pretty sick of the darknet because I never really got it, so had to always have a friend on hand to help me out. With apps it's super simple; I get it and in no time I've managed to connect with strangers who I would've never been able to access before. Plenty of dealers in this area exist solely on Snapchat, so without it, I would've kept relying on people approaching me in the street or randomly bumping into people in clubs.

### ***Range and Availability of Substances***

As with cryptomarkets (Bancroft and Scott Reid, 2016; Barratt et al., 2014, 2016), the range of substances available from social media platforms was also reported as an important 'pull' factor. Buyers reported purchasing substances such as mushrooms, LSD, and prescription stimulants/benzodiazepines in addition to the 'usual suspects' of cannabis, MDMA, and other common stimulants. Cannabis is the most widely bought and sold illicit drug in those countries that made up the sample, and this was echoed in the survey in which just over half of respondents reported buying cannabis via social media apps. LSD was next in terms of prevalence at 7.9%, followed by ecstasy/MDMA (6.5%). Tim (23 years, London), like numerous others, considered this aspect to be one of 'the best features of apps [as] ... it is very rare to find a dealer out and about who carries psychedelics in this country', and similarly Jess (23 years, Coventry): 'I couldn't get hold of oxy or codeine any other way because I didn't know anyone selling them, so the first time I had both I bought them through apps'.

It should be noted that these qualitative findings (primarily a UK sample) differed from the broader international survey where there was a less clear experience – a third of app-using respondents reported that it was 'hard to find the drug I am after' (34.7%) but almost a quarter (23.4%) reported the benefit of having a 'wide range of drugs available'. This difference is likely due to the characteristics

of the international survey sample, all active forum members who might be understood as a more experimental and/or seasoned group of users with more specific preferences with regard to the strain, strength, or brand of substance required. It is likely also related to the different contexts in which apps are being used, with the UK app market perhaps more responsive to demand for psychedelics and prescription drugs (see Lee, 2018; Lewins, 2018).

### *Safety/Security*

The ‘security’ offered by end-to-end encryption and other messaging services, where user messages are not stored was, unsurprisingly, reported as desirable and a clear advantage. Kik, Wickr, and WhatsApp – apps that function primarily as instant messengers, but with added social networking features – were found to be the most prevalent of these apps used by international survey respondents. Many in the interviews relayed that, for example, WhatsApp was now so ubiquitous that it was hardly thought of as an ‘app’ as such and was considered more like an everyday accompaniment to normal life and as ‘a natural extension of texting’ (Sam, 21 years, London). Encryption was the most commonly reported security feature associated with apps. The fact that some other apps, such as Snapchat and Wickr, were able to provide transient ephemeral messaging, through auto-destruction or ‘burn on read’ settings, also provided the somewhat illusionary assurance of the protection of their digital trace (Décarry-Hétu and Aldridge, 2015).

These functions were emphasised in numerous interviews, both in the UK and Australia, as well as being noted in various online communities where users contrast between the insecurity of text messages and phone calls and the comparative ‘safety’ of Snapchat, where it was acknowledged that it ‘does not store a database of users’ snaps’ (including still photos, videos, and text). As such, not dissimilarly to how the advent of mobile phone technology in the 1990s provided a new, cheap, and convenient form of communication deemed more secure than pagers and public phones (Natarajan et al., 1995), social media platforms and encrypted messaging services appear to be increasingly utilised by vendors of illegal substances who, in contrast to vendors on cryptomarkets, take advantage of technology that does not require specialist knowledge (Van Hout and Bingham, 2013b) and also offers some well-known security features that are expected to provide effective protection to them from enforcement detection and prosecution.

### *Visual Dealing Practices and ‘Seeing’ the Quality*

Apart from convenience and accessibility, another key advantage of using apps to purchase drugs was related to the images and videos posted by sellers on social media platforms and sent via encrypted messaging services, which was perceived by some to provide an opportunity to assess drug quality and safety. Respondents commonly referred to the practice of sellers’ using social media technology in novel ways to facilitate sales. Broadly known as ‘dealer spam’, such practices included: sellers ‘following’ users (on Facebook, Instagram, and Snapchat) with the aim to get potential customers to notice them and then ‘follow’ them back;

sending group messages to existing customers advertising new deals, prices, and stock through WhatsApp and Wickr; posting multiple videos and a range of different images of the advertised product to followers on social media platforms such as Snapchat and Instagram. Sometimes this would happen several times a day. Other ploys would be to ‘prove’ the quality and legitimacy of the product they had to sell by posting videos of ‘themselves smoking, hanging with their stashes, or with their mates cruising on deliveries’ (Lucy, 19 years, Cardiff). Several respondents explained that pictures of pills, white powders, and prescription medicines and videos of drugs being used or opened were uploaded to advertise substances, which for them provided ‘valuable’ and ‘important’ evidence that the substance was legitimate:

The first time I bought coke it was through an app and I thought it was a better idea to buy it that way because I could look to see if it seemed cut with anything which is really common for coke you buy on the street around here. (Olly, 18 years, Birmingham)

As Bancroft and Scott Reid (2016) have argued, drug users often make judgements of drug quality based on colour, texture, smell, and structure (regardless of how effective this is in reality (cf. Evrard et al., 2010; Coomber et al., 2014)). Again, highlighting the ‘visual’ nature of many apps, a notable number of app-using respondents felt that they were able to use photos and videos posted on social media apps to ‘see’ that a drug was unadulterated, safe, and reasonable quality. Unlike cryptomarkets, however, where vendor rating systems (similar to those on eBay) provide detailed comments regarding the perceived potency/quality of substances (Martin, 2014a), apps, and the ability to preview products provided only illusory reassurance that was perceived as unavailable in offline markets, and potential purchasers only had access to rudimentary feedback in the form of ‘likes’ on platforms such as Instagram.

So, as one interviewee opined, one of the main perceived benefits associated with purchasing drugs through apps was the so-called ‘transparency’ of transactions. With regard to the level of drug information available, social media apps therefore seemed for many to offer ‘far less than the dark web, [but] far more than the streets’ (Danny, 23 years, London), regardless of how illusory in reality.

### ***Drug Quality and Personal Safety***

Though a subset of those interviewed conveyed a level of confidence in their capacity to draw upon the features of certain apps to discern quality and safety, this was not felt across the board. Respondents from the international survey expressed more concern regarding the quality of the product they were purchasing than those (perhaps more experienced users) interviewed. When questioned about key anxieties in relation to using apps to access drugs, the survey sample was found to be most worried about ‘receiving poor quality or fake drugs’ and ‘receiving a substance that was the incorrect weight’. Some interviewees also had similar concerns:

You have no idea if a teenage kid is just trying to sell you rubbish [or] cut substances ... [and the] main issue [with apps] is the lack of trust in the dealer as there are so many online, social media dealers. (Emma, 21 years, Bristol)

### *Personal Safety Concerns*

In the same way that app-based supply using visual media to provide assurances about quality offers little in the way of reliability (but nonetheless worked for many), fewer app-based buyers than might be expected (23.4%) felt that meeting an unknown seller face-to-face was potentially dangerous or risky. This is in stark contrast to many cryptomarket buyers who regarded darknet platforms as a preferred method for the exposure to ‘violent’ street drug markets (Barratt et al., 2016; Martin, 2014a). Our interviewees also reported a relative lack of concern about this aspect of the transaction process; in Brisbane, one young woman admitted that she had not even considered such risks (despite having met sellers alone and unaccompanied) prior to being asked about them in the research context. By way of meaningful contrast, however, those who had only *considered* purchasing drugs from an app seller were significantly more anxious about the possible risks, with 68.3% indicating this to be a concern.

Although a minority of respondents employed strategies such as always taking someone with them when meeting a seller, most app users had well-rehearsed narratives that they used to justify (to themselves and the research team) their continued confidence in purchasing substances from unknown suppliers on apps. A common trope was that it is ‘bad for business’ for dealers ‘to be bad at business’.

### *Law Enforcement and Detection*

Respondents who had considered but not actually used an app to source drugs were found to be most worried about ‘law enforcement becoming aware of the transaction’ and reported ‘a potential encounter with law enforcement’ as the most common reason for choosing not to use apps (65.2%). The digital ‘trace’ (Décary-Hétu and Aldridge, 2015) between buyer and seller that was associated with online interactions was the aspect deemed most problematic. This ‘trail’ (Olly, 18 years, London) was broadly perceived as having the potential to expose users to undercover officers or provide sufficient evidence of drug possession or supply offences:

I have worries about the input of personal information, directly contacting a dealer and meeting them is not the issue. The issue lies with the process before you actually get hold of the drug itself. The planning, using personal information and having to actually go out of my way for it, is something that is not attractive to me. (Sophie, 23 years, Slough)

An understanding of app security was important in influencing the degrees of anxiety surrounding the use of apps to source drugs. Those who had only *considered* using apps to purchase drugs or those who had only ‘dabbled’ with them for this purpose had also typically spent less time researching the security aspects of apps, and as a result, they admitted feeling uncertain as to the risks therein. In Brisbane, for example, several respondents were unclear about the security of Facebook Messenger. Although a small number of respondents claimed the service was encrypted, and ‘not monitored by the Australian Government’ (LM, 03, Brisbane), others described feeling ‘uneasy’ or ‘nervous’ arranging deals through this app, stressing that they could not be sure that they were not being monitored. This lack of knowledge led many ‘would-be’ or infrequent app users to conclude that it just ‘wasn’t worth the risk’ (LM, 05, Brisbane). In contrast, more experienced app users (i.e. those who had used an app over 10 times) conveyed greater confidence in the security of apps, rating risk as lower than those who had only gained access on one occasion.

Despite the majority of users being unable to guarantee that they could not be targeted by law enforcement, app technologies seemed to promote ‘feelings’ of security, often through the assumption that law enforcement would ‘have a hard time penetrating apps’ (male, 22 years, Belgium) and reasoning that the likelihood that they would be ‘personally targeted by law enforcement’ (Vicky, 20 years, Bristol) was very low. This logic and the additional security features and safeguards provided by some apps therefore seemed to provide enough protection to persuade many app users that occasional purchasing was safe and would go undetected.

## **Surface Web Supply: NPS, Performance and Image Enhancing Drugs, Cannabis**

While social media app drug supply provides us with insight into how ubiquitous mainstream technology is now integrated into the supply of drugs, there are also other common online technologies beyond the darknet where drug supply is increasingly prevalent. The rest of this chapter will now consider these forms and how they seem to be developing the broader milieu of online drug supply.

The development of surface web illicit drug markets can be traced from the early use of the Internet for information on manufacturing drugs to the current state of bespoke digital platforms facilitating in-person illicit drug exchanges. The ‘surface’ or ‘clear’ web are terms used to describe Internet content that is indexed by conventional search engines (e.g. Google) and accessible to individuals without additional programs. Though there was some early evidence that Internet chat rooms could be used to arrange illicit drug sales (May and Hough, 2004), in this first generation of online drug cultures, the surface web primarily hosted a range of online communities and ‘drug information libraries’ (Bogenschultz, 2000) where guides on synthesising and extracting substances were provided to online communities (Halpern and Pope, 2001). Archived forum posts from *The Hive* (<https://the-hive.archive.erowid.org/>), a popular forum that ran until 2004, demonstrate the liveliness of the forum in topics relating to clandestine chemistry

matters such as substance extraction and manufacturing equipment for substances (see also Schneider, 2003).

The ongoing transformation of the Internet and the rapid growth of e-commerce platforms such as eBay and Amazon afforded opportunities for the next generation of surface web illicit drug markets to host electronic markets of grey market pharmaceuticals with digital transactions and reliance on postal delivery systems (see Craciunescu and South, Chapter 7). Here, a grey market is regarded as one that distributes goods through unofficial, unauthorised, or otherwise unintended channels from the trademarked owner of the goods (Chaudhry, 2014). Over time, particular goods have come to be associated with grey markets on the Internet (e.g. popular fashion brands and electronics) (Berman and Dong, 2016), and in the current context, there has been a significant growth in online retailers of pharmaceuticals (e.g. performance and image enhancing drugs, PIED) and NPS. These surface web markets will now be discussed in turn.

The number of online retailers advertising 'no prescription required' pharmaceuticals with fast home delivery has blossomed over the last two decades (see Orsolini et al., 2015). In particular, there is a burgeoning market of online retailers for lifestyle drugs such as performance and image-enhancing drugs (Koenraadt and van de Ven, 2018). Analyses of the prevalence of these online markets show how easily these retailers can be accessed through Google search terms (e.g. 'buy steroids online') (McBride et al., 2018; Vida et al., 2017). However, many PIED purchasers will also avoid buying from online channels due to concerns about the quality of the products and a lack of trust in online markets (Coomber et al., 2014; Santos and Coomber, 2017). Despite many PIED users having reservations about online PIED markets, there is a wealth of evidence documenting the popularity of the Internet as a sourcing option in these cohorts (Bonnecaze et al., 2020; Smit et al., 2020). This is likely to be the case because of the features of many of these surface web markets that actively attempt to minimise feelings of uncertainty and risk to customers (e.g. product reviews, product guarantees, discreet shipping) and vendors who employ social supply business models and customer service to instil trust in prospective customers (van de Ven and Koenraadt, 2017). In addition, even when individuals may prefer purchasing PIEDs from offline sources, there is the potential that the initial purchase of the product was made online (Kraska et al., 2010), particularly as many individuals will purchase raw powders and other derivative compounds for homebrewing purposes to sell onwards to offline contacts (Turnock, 2020).

The surface web also hosts a considerable number of online retailers for various NPS. There is no universally agreed upon way of categorising NPS, and the term itself has been criticised (see Potter and Chatwin, 2018), but this collection of substances can broadly be divided into synthetic stimulants, synthetic cannabinoids, synthetic hallucinogens, and synthetic depressants (Shafi et al., 2020). As with online PIED markets, NPS markets can be located via Google searches (Brunst et al., 2017), and this ease of access online appeals to NPS buyers (Barnard et al., 2016). NPS and many other associated 'legal highs' have been subject to ongoing legislative changes in various countries seeking to restrict the distribution of these

substances, but these surface web markets nevertheless remain resilient to the laws of local jurisdictions as the hosting websites and e-vendors are located elsewhere globally where these laws may not apply (Wadsworth et al., 2018). Information seeking on Internet forums has formed a vital part of the risk minimisation strategy for successfully navigating NPS markets and avoiding fraudulent dealers and the constantly changing legal status of various substances (Kalo et al., 2017).

As briefly described above, the bulk of scholarship on surface web illicit drug markets tends to describe the sale of pharmaceuticals/lifestyle products and NPS. Recent innovations in the supply and access of substances over this visible section of the Internet has seen the rise of online retailers and exchange mediators for commonly used illicit drugs. For example, there is recent evidence of the online classifieds website Craigslist being used to organise illicit drug exchanges (Liu and Bharadwaj, 2020; Tofighi et al., 2016), although the degree to which this occurs is moot (Barratt, 2017). In a single case study of heroin purchasing via Craigslist, Tofighi et al. (2016) describe how the use of codewords in the advertisement followed by text messaging between buyer and seller assuaged uncertainties, which then resulted in a prompt face-to-face meeting for a heroin exchange. This documenting of evidence of illicit drugs and other prohibited drug paraphernalia (see Loomes, 2019) being sold through online classifieds websites and other popular e-commerce platforms (e.g. Wish shopping) illustrates this most recent generation of surface web drug buying, which has also produced bespoke drug exchange websites such as LeafedOut.

LeafedOut ([www.leafedout.com](http://www.leafedout.com)) originated in the United States of America within a context of regulated cannabis supply to connect buyers with local businesses. However, because of the geolocation technology used by the platform, this website has also emerged as a sourcing option in countries that still mostly restrict the sale and supply of cannabis (e.g. Australia and the United Kingdom). In research examining the use of LeafedOut in Australia, interviews were held with 11 buyers and 9 sellers who used the platform (Childs et al., 2021). The ease of accessing this platform through Google was appreciated by buyers and sellers involved in this website as there was no requirement to possess expertise related to dark web drug buying, have drug buying contacts on personal social media accounts, deal with 'dealer spam', or gain access to hidden groups in social media spaces where substance exchanges are arranged. Compared to other online sourcing options (e.g. dark web and social media) that LeafedOut users were familiar with, the platform's emphasis on cannabis supply was also key in differentiating this source from other options that advertise a wide range of products and hence potentially attract greater attention from law enforcement. This specialisation in cannabis supply embedded cultural aspects (Sandberg, 2012) into this market participation, as dark web markets in particular were seen as spaces that were untrustworthy, taboo, and risky for drug supply.

Purchasing illicit drugs from a surface web supplier on LeafedOut could entail greater exposure to law enforcement compared to other online-mediated sourcing options because of the retrievability of digital traces associated with website interactions (e.g. IP addresses). As a result, buyers and sellers of cannabis on LeafedOut developed distinct risk minimisation strategies to

guard against these risks in the exchange. In a similar manner to how social media purchasers attempted to cover their digital traces, buyers and sellers on LeafedOut would transition to a different digital channel on an encrypted messaging application such as Wickr. When moving to an encrypted messaging application, buyers and sellers would use the technological affordances on offer to engage in a practice of sending selfies (a photograph taken of oneself), often with drug paraphernalia (e.g. bongs, cannabis on offer), as a way of ensuring their status as a legitimate person navigating this market. Users were ambivalent about the risks of sending potentially incriminating photos online, and the distribution of these photos served an important function in the representation of authenticity for buyers (including their products on offer) and sellers. This study also provided more details on how buyers and sellers move from an encrypted messaging application to an in-person exchange, detailing how the risks of meeting a potentially unknown exchange partner were minimised by mutually agreeing on exchange locations in low-risk settings (e.g. public spaces) before potentially offering home delivery if the trust was established after multiple exchanges.

## **Conclusion**

The findings from Moyle et al. (2019) and Childs et al. (2021) highlight the emergence of this mid-range market space that sits in between the technologically demanding dark web cryptomarkets and pure 'offline' street dealing. Explorations of drug market activity in these online spaces – social media applications, surface web markets, and encrypted messaging applications – demonstrate the hybridity of drug transactions as they combine existing online (e.g. cryptomarkets) and offline (e.g. in-person meeting) elements throughout the process of the drug exchange. This chapter has particularly emphasised as a key theme the navigation of emergent risks and the methods used by buyers and sellers to establish trust when using these new technologies for drug supply. Platforms in this mid-range market space may not provide the same protections that cryptomarket drug buying does, but buyers (and sellers) are aware of this and yet still adopt platforms where the security is deemed 'good enough' or make decisions to shift to an encrypted messaging application to organise the meeting location. In addition, without clear trust ratings and user review systems that are widely used in dark web cryptomarkets to verify the legitimacy of suppliers, buyers and sellers employ new strategies such as looking at the number of followers and 'likes' a vendor may have and attempting to visually discern the quality of drugs for sale via photos and videos. These illustrative examples, discussed in detail throughout this chapter, show how these new digital spaces have clearly emerged as differentiated (Coomber, 2015) online drug markets. There are substantial and important distinctions between dark web cryptomarket drug supply and this mid-range space, which has critical implications in understanding contemporary drug market practices and how individuals navigate these markets. As illicit drug markets continue to change in response to new technologies and the unique affordances of technologies for drug market exchanges, there

will likely continue to be an increased diversification in the types of platforms used (dark web, social media, surface web), the ways that platforms merge and produce hybrid forms (Childs et al., 2020; Barratt et al., 2022), and the unique practices of users operating in these digital spaces to respond to established and emergent risks in drug supply.

## Chapter 3

# Trust in Cryptomarkets for Illicit Drugs

*Kim Moeller*

### Abstract

The growth in cryptomarkets has reinvigorated the research on illicit drug distribution due to the availability of large-scale data. This data has enabled researchers to ask new and detailed questions about how participants in these markets trust each other enough for the market not to collapse. This question deserves more attention because it has become a taken-for-granted notion that repeated transactions and social categories create trust. Whether online or on the street, economic exchanges under illegality are more uncertain than transactions in the legal economy. This puts higher demands on trust, as there is less information and the stakes are higher. In this chapter, the author presents definitions, typologies, and disciplinary contributions to the study of trust and examine how it has been operationalised in a sample of 13 peer-reviewed articles. These articles focus on three dimensions of trust: process-based trust that derives from repeated transactions with known partners; character-based trust measured by the networked reputation scores; and institutional-based trust in the platform and its administrators. In practice, the trust bases are intertwined. Drawing on the broader social science literature on trust, a mesolevel operationalisation that centres on networked reputation scores as embedded in processes and institutions can draw the research together in a multidisciplinary framework.

*Keywords:* Trust; cryptomarkets; drug markets; co-offending; uncertainty; anonymity

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## Introduction

The question of how co-offenders trust each other in the context of product illegality has attracted scholarly attention for decades (Gambetta, 1988). With the advent of cryptomarkets,<sup>1</sup> researchers now have a novel opportunity to observe drug markets in action on a large scale. The dramatic growth in the number of individuals who participate in these markets and the digital traces they leave has reinvigorated the field of drug market research and enabled new insight into the trade dynamics that stabilise and facilitate drug markets (Barratt and Aldridge, 2016; Décary-Héту and Giommoni, 2017; Resnick and Zeckhauser, 2002; Van Buskirk et al., 2016). Research on cryptomarkets focusing on illicit drugs often notes that trust is a pivotal factor in enabling transactions. However, there is little agreement on what this trust actually entails. The ensuing lack of conceptual clarity is not exclusive to drug market research. Gambetta (1988, p. x) included a statement on this in the foreword to his anthology:

Scholars tend to mention [trust] in passing, to allude to it as a fundamental ingredient or lubricant, an unavoidable dimension of social interaction, only to move on to deal with less intractable matters.

Cryptomarkets are a suitable empirical environment to examine theories of trust due to the high uncertainty and non-trivial risks for the actors involved (see Colman, 2023, Chapter 6, this volume; Norbutas et al., 2020a). The anonymity of online identities exacerbates the conventional trust problems in drug distribution and introduces three new sources of uncertainty. Firstly, untrustworthy sellers are able to mimic their reliable counterparts by generating false accounts and fake positive feedback (Holt et al., 2016; Norbutas et al., 2020b). Secondly, the past evidence, from reviews and the reputation system, does not eliminate the risk of future malfeasance (Bancroft et al., 2020). Thirdly, cryptomarket administrators compete on having a trustworthy infrastructure to create loyalty and encourage future purchases (Mao et al., 2020; McKnight and Chervany, 2001). Buyers have to trust not only the technical infrastructure but also the administrators themselves not to abscond with funds. Trust, especially under illegality, is hard to establish and remains fragile once achieved.

The purpose of this chapter is to describe how trust in cryptomarkets for illicit drugs has been examined in a sample of peer-reviewed articles.

To contextualise this quite recent research, I give various definitions and describe the dimensions of trust and highlight how they derive from economists' and sociologists' disciplinary modes of thinking. These discussions are relevant

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<sup>1</sup>Note on terminology: I prefer the term 'cryptomarket' as it emphasises the use of encryption technology. The encryption of identities and payments has transformed the online trade in illicit drugs.

for achieving a more nuanced understanding of how cryptomarkets persist despite scamming vendors and law enforcement efforts to shut them down.

## **Trust Definitions**

Several authors have noted how trust is a ‘subtle, diffuse, and elusive’ concept (Nooteboom, 1996, p. 990) with no a scholarly definition (Gambetta, 1988). For economic transactions, the central factors for trust are uncertainty, risk, and willingness to be vulnerable (Mayer et al., 1995; McKnight and Chervany, 2001; Rousseau et al., 1998). Granovetter (2018) suggested that trust can be represented as a continuum, ranging from the purely instrumental calculation of interest to non-rational normative commitments and emotional attachments, such as the trust a child can have in a parent (see also Lorenzo-Dus and Di Cristofaro, 2018; Swedberg, 2009). For the purpose of this chapter, I am most interested in the calculative types of trust that pertain to economic transactions. However, the illegality and associated uncertainty imply that normative elements are also relevant.

Moreover, trustworthiness and cooperation are two closely related concepts. Trustworthiness is the probability that a trustee ‘will perform an action that is beneficial or at least not detrimental to us’ and ‘is high enough for us to consider engaging in some form of cooperation with him’ (Gambetta, 1988, p. 217). It hinges on a perception of intentions and motives, and involves an assessment of integrity, benevolence, and ability (McEvily et al., 2003). Cooperation is occasionally used synonymously with trust, and the distinction may be unclear. Importantly, cooperation does not necessarily put any of the parties at risk and can also occur without trust (Mayer et al., 1995). What appears to be trust between co-offenders may actually be cooperation that involves testing trustworthiness, risking trust, or fatalistic attitudes (Von Lampe and Johansen, 2004). Trust is the underlying psychological condition that can cause or be the result of assessments of trustworthiness and the process of cooperation.

## **Dimensions of Trust**

Several typologies highlight how to operationalise trust analytically. A few examples will illustrate this. From the legal online economy, Mao and colleagues (2020) study of the Airbnb platform departed from a distinction between personal trust (in the host) and institutional trust (in the platform) and concluded that a more comprehensive trust formation framework could include five overlapping dimensions: experience-, calculative-, cognition-, personality-, and institution-based trust. McKnight and Cervany (2001) proposed a typology for analysing e-commerce consisting of three elements: a dispositional element (trust in general others) inspired by psychology and economics, an institutional element (trust in platforms) from sociology, and interpersonal trust (trust in specific others) from social psychology and economics.

Rousseau and colleagues (1998) also applied an interdisciplinary approach. They identified four shared understandings across social science disciplines.

A *deterrence-based trust* relies on sanctions for breaches – for example by imposing switching costs. This means that if you cheat, you will have to find a new transaction partner, and that takes time and effort. A *calculus-based trust* applies not only deterrence but also credible information regarding the intentions of another. These are combined with a *relational trust*, derived from repeated interactions with known others, and an *institutional-based trust* that provides a critical mass that allows the other trust forms to exist in the first place. Von Lampe and Johanssen (2004) suggested a mesolevel network approach for analysing trust in organised crime, which consists of four elements: an individualised trust based on rational expectations of how the trustee reacts to sanctions and irrational affections; trust based on reputation and fear of losing this status; generalisations that indicate the person is a member of a delinquent subculture; and, lastly, an abstract individual characteristic of generalised trust in others.

These typologies have several considerations in common but have the most explanatory power when applied to their specific area of inquiry (e.g., the five elements identified by Mao et al., (2020), may be too detailed to apply to the cryptomarket context). For the purpose of this chapter, I will employ Wehinger's (2011) parsimonious typology of three broad ways to generate trust in cryptomarkets: process-based, characteristic-based, and institutional-based. I explain these in more detail later in the chapter.

## **Disciplinary Contributions**

The lack of a unifying definition reflects variation in disciplinary contributions and levels of analysis (McKnight and Chervany, 2001; Rousseau et al., 1998). While psychologists were the first to study trust in the 1950s, with a focus on individuals and personality attributes (Resnick and Zeckhauser, 2002), contributions from economics and sociology are arguably more relevant for understanding the process of exchanging illegal drugs for money. However, economists and sociologists have notoriously different understandings of human agency and economic transactions (Moeller, 2018; Swedberg, 2009).

In economic terminology, cryptomarket buyers operate in a 'lemon' market where they are unable to differentiate between sellers offering quality products and those offering poor quality products (Holt et al., 2016). Economists tend to view trust as either calculative or institutional, focusing on asymmetric information – uncertainty, adverse selection, moral hazard, and choice mechanisms (McKnight and Chervany, 2001).

These issues are often analysed in a game theoretical framework, where participants estimate their transaction partners' propensity for cheating and decide on a course of action (Dixit, 2004). Game theory differs from the isolated transactions assumed in neoclassical economics because a repeated game implies that participants have an incentive not to cheat or act opportunistically. Cheating would damage their reputation and hinder future transactions. Having repeated transactions with the same partner builds trust over time and is economically rational because it reduces risks, information search time, and transaction costs

while increasing predictability and improving decision-making (Wang et al., 2014; McEvily et al., 2003).

However, as Williamson (1975) noted, in practice, trust is most important for non-calculative situations of minor economic significance. If the stakes are high enough, even transaction partners with whom one has had several exchanges may defect or exit the game. Some participants may be inclined towards such a pursuit to their own advantage and use guile and deceit to achieve it. To prevent opportunistic behaviour, contracts and deterrent controls at an institutional level are necessary complements to transactions. While controls may facilitate trust, they are costly and reduce efficiency.

A sociological conception of trust in economic exchanges can also focus on reducing uncertainty (Bancroft et al., 2020; Diekmann et al., 2014; Granovetter, 2018). Sociologists tend to analyse trust as interactions among people in groups and social structures such as organisations (McKnight and Chervany, 2001; Wang et al., 2014). Importantly, they emphasise that trust is not reducible to calculation and profit making (Swedberg, 2009).

Of particular relevance to this chapter is Granovetter's (1985) proposal that a focus on transactions embedded in social networks can overcome the over- and under-socialised conceptions of action, typically found in sociology and economics. He recommended analysing concrete patterns of social relations in networks instead of impersonal institutional arrangements that seek to deter malfeasance. This embeddedness perspective works at an intermediate level of analysis that seeks to integrate microlevel transactional processes with the macrolevel institutional arrangements (see also Diekmann et al., 2014; Rousseau et al., 1998). An example of an intermediate mechanism is the concept of 'networked reputation' (Glückler and Armbrüster, 2003). This networked reputation has practical applications in the analysis of the reputation scores used in both legal online marketplaces and cryptomarkets. The microlevel processes consist of personal experience with transactions involving that particular partner.

## **Method**

To examine how trust has been analysed in research on cryptomarkets for illicit drugs, I retrieved peer-reviewed articles from the following academic databases: Sociological Abstracts, Academic Search Elite, and Google Scholar. Keywords used in the search were 'cryptomarket' and 'trust'. In the Google Scholar search, I added 'drugs' to delimit the number of hits. For Sociological Abstracts, an advanced search for the keywords anywhere in the text of peer-reviewed scholarly journals elicited five articles, while a similar search of Academic Search Elite elicited ten peer-reviewed studies. In Google Scholar, a whole text search for 'cryptomarket' and 'trust' and 'drugs' elicited 746 links. I first excluded all non-peer-reviewed articles. Next, to screen for relevance, I read the abstract for each article. If the abstract did not describe an analytical focus on 'trust' in cryptomarkets, the article was omitted from further analysis. Thereafter, a close reading was conducted to identify articles that were specifically related to trust in drug distribution on cryptomarkets. After sifting through all of the remaining articles

and removing duplicates from the three searches, 13 articles remained to be used in this study. Table 3.1 presents an overview of these articles.

This does not purport to be an exhaustive sample but is merely sufficient for the purpose at hand. Clearly, the selection criteria ‘analytical focus’ could mean different things to different researchers. Some studies examine ‘cooperation’ in cryptomarkets (e.g. Bakken et al., 2018) and could also have been included in a more comprehensive analysis. The retrieved articles were published between 2016 and 2020, with four from 2020 alone. All the studies examined trust empirically, drawing on conceptualisations from a variety of scholarly disciplines but mostly sociology. The articles used both qualitative and quantitative methods. In the following sections, I describe how their findings relate to Wehinger’s (2011) tripartite typology.

## **Trust in Cryptomarkets**

In the legal economy, institutional arrangements enforce rules of exchange and define trading conditions. Buyers expect that fraudulent conduct will be prosecuted and that they will be economically compensated – for instance, if they paid with a credit card (Ladegaard, 2020; Przepiorka et al., 2017). In contrast, exchanges on cryptomarkets take place against the state and between users who cannot easily trust one another. Here, transactions are anonymous, geographically dispersed, executed sequentially, plagued by problems of verifiability, and fraught with the constant risk of undercover law enforcement intervention or scamming (Childs et al., 2020; Duxbury and Haynie, 2018a; Norbutas et al., 2020b).

The underlying problem lies in the incentive structure of a trust dilemma: the seller has an incentive not to honour a buyer’s trust but rather to maximise profit by keeping the goods or sending goods of lower quality than promised (Norbutas et al., 2020b). This entails a paradox where anonymity is required for access to the marketplace, but this simultaneously increases the risk of fraud (Tzanetakis et al., 2016). Unlike the two-party, seller–buyer relationships in traditional offline drug markets, selling and buying drugs on cryptomarkets is a configuration of at least three parties: administrators/moderators, vendors, and buyers (Kamphausen and Werse, 2019; Tzanetakis et al., 2016). Both individual vendors and market operators can scam buyers by earning their trust and then leaving without completing the transaction (Ladegaard, 2020; Moeller et al., 2016; Norbutas et al., 2020b). In addition, law enforcement agencies can intervene and confiscate the drugs during the shipping stage, but buyers cannot be certain that sellers are not responsible for these events (Aldridge and Askew, 2017; Décary-Héту et al., 2016). This causes ‘noise’, as the available information on transactions may be affected by uncontrollable exogenous events (Norbutas et al., 2020b).

In the following sections, I examine how these problems have been analysed in the 13 peer-reviewed articles. I begin each section with a brief description of Wehinger’s (2011) conceptualisation of three trust bases – process, character, and institutional. I conclude by discussing how they are associated and how this may inspire future analyses of trust in cryptomarkets.

Table 3.1. Sample Description.

Authors	Date	Title, short	Data	Methods	Marketplace
Tzanetakis, Kamphausen, Werse, von Laufenberg	2016	The Transparency Paradox	32 Vendor interviews, 4 vendor case studies	Qualitative interviews, case studies	Agora
Przepiorka, Norbutas, Corten	2017	Order Without Law	5,675 Item prices	Regression	Silk Road 1.0
Décary-Héту, Giommoni	2017	Do Police Crackdowns Disrupt Drug Cryptomarkets?	226,297 Listings, 7,280 dealers	Interrupted time series analysis	Agora, Cloud-Nine, Evolution, Hydra, SR2
Masson, Bancroft	2018	Nice People Doing Shady Things	9 Interviews,	Qualitative interviews, ethnography	NA
Lorenzo-Dus, Di Cristofaro	2018	'I Know This Whole Market is Based on the Trust You Put in Me ...'	~250 Million words	Corpus Assisted Discourse Studies	Silk Road
Ladegaard	2018	Instantly Hooked?	2,218 Forum posts, 2,116 vendors	Ethnography, regression	Agora
Duxbury, Haynie	2018a	The Network Structure of Opioid Distribution	763 Actors	Social network analysis	Cryptomarket

(Continued)

Table 3.1. (*Continued*)

<b>Authors</b>	<b>Date</b>	<b>Title, short</b>	<b>Data</b>	<b>Methods</b>	<b>Marketplace</b>
Kamphausen, Wersé	2019	Digital Figurations	Forum posts	Qualitative content analysis	Abraxas, Agora, Dream Market, Nucleus, Outlaw PFM
Bancroft, Squirrel, Zaunseder, Rafanell	2019	Producing Trust Among Illicit Actors	Forum posts	Ethnography	PFM
Norbutas, Ruiter, Corten	2020	Believe It: When You See It	6,374 Items, 9,244 feedback messages, 390 seller profiles, 3,192 buyer profiles	Logistic regression	Abraxas
Norbutas, Ruiter, Corten	2020	Reputation Transferability Across Contexts	7,500 Seller accounts, ~2.5 million feedback messages	Longitudinal multilevel regression	Abraxas, Agora, AlphaBay
Ladegaard	2020	Open Secrecy	~1,000,000 Transactions, ~3,000,000 messages	Ethnography, interrupted time series analysis	Silk Road, Silk Road 2.0, BlackMarket, Agora, Evolution
Childs, Coomber, Bull, Barratt	2020	Evolving and Diversifying Selling Practices	965 Forum posts	Thematic analysis	NA

### ***Process-based Trust***

In Wehinger's (2011) typology, the production of trust can be process-based, relying on information collected during past exchanges. This is a common element in trust typologies, where, for example, Mao and colleagues (2020) conceptualised the idea of experience-based trust, consistent with the economic understanding of trust as derived from a 'repeated game'. Repeated exchanges with the same others are preferred because information about them is cheap, detailed, and accurate (Reuter and Caulkins, 2004; Rousseau et al., 1998). Both the vendor and the buyer have an interest in maintaining a good relationship and ensuring ongoing business (Beckert and Wehinger, 2013). This form of trust is common in conventional drug markets where interpersonal relationships evolve over time (Tzanetakos et al., 2016). The temporal dimension implies that a more sociologically inspired analysis can include both the rational expectations of sanctions and an element of irrational affection (Von Lampe and Johansen, 2004).

Five of the selected studies empirically examine process-based trust by quantitatively measuring the popularity of individual vendors and counting transactions. Norbutas et al. (2020a, p. 2) found that buyers' previous exchanges with sellers affect their subsequent decisions on whom to buy from. Repeated exchanges 'between the same dyads of buyers and sellers play a crucial role in maintaining trust over time'. It was very rare that buyers 'came back to a seller after posting negative feedback'. Less than 0.5% of all exchanges were made with vendors with whom buyers reported having a 'negative experience ... in the past'. Conversely, 'cooperative sellers get awarded by repeated exchanges' (Norbutas et al., 2020b, p. 150). This preference for repeated transactions with the same partner affects the cryptomarket as a whole. Décary-Héту and Giommoni (2017) and Duxbury and Haynie (2018a, p. 936) found that 'buyers rarely make purchases outside of their own community of 1–3 established vendors'. A small fraction of dealers is responsible for a large portion of total sales. Duxbury and Haynie (2018a) concluded that vendors' process-based trust is more important than the price of their products or the variety of products they offer. These vendors increase the overall activity on the cryptomarket and make it more difficult for scamming vendors to impact the overall network structure.

Décary-Héту and Giommoni (2017) noted that the concentration of sales on a few vendors also has implications for the potential effectiveness of law enforcement interventions (Warren and Ryan, 2023, Chapter 4, this volume). Police crackdowns on individual cryptomarkets reduce activity but displace transactions to other markets. Central to this adaptive capability is the concentration of transactions with fewer but trusted dealers. Crackdowns have not hitherto been able to limit the scope of total cryptomarket activity (Décary-Héту and Giommoni, 2017). These effects of crackdowns represent both continuity and change in the adaptive capacity of drug markets. It has always been difficult for law enforcement to disrupt drug markets. Buyers and sellers invent strategies to avoid and mitigate arrest risks and crackdowns (Moeller et al., 2016). On cryptomarkets, technological innovations can support these adaptive strategies and make law enforcement efforts less efficient. Ladegaard (2020) examined this aspect and found that when

an individual market suddenly closed down, users were aware that their trusted exchange partner could participate in future transactions on another cryptomarket platform. Targeting the most popular dealers, and not market administrators, may therefore be a more efficient strategy for law enforcement.

Childs et al. (2020) analysed the practice of direct dealing where vendors and buyers do not rely on the cryptomarket infrastructure but rather move communications to encrypted messaging applications after contact has been made via the cryptomarket. They found that direct dealing is more likely to occur between vendors and buyers that have established sufficient process-based trust, perhaps related to the number of prior transactions (Childs et al., 2020). The advantage of direct dealing is to avoid administration fees. This is an example of the trade-off, also known from conventional drug markets, between operational security and economic efficiency (Moeller and Sandberg, 2015). Trust reduces costs.

To be successful in competition with other cryptomarkets, a platform needs to have some trustworthy vendors who will attract buyers. A process-based trust may be the key component in stabilising cryptomarkets generally, as it strengthens the structure of individual marketplaces. Over time, the process-based trust increases the reputation scores of vendors, which may have the result of them achieving verified status granted by site administrators. In this way, the process-based trust affects the other dimensions of trust, both the characteristic-based trust as well as the institutional-based trust of the cryptomarket infrastructure.

### ***Characteristic-based Trust***

Characteristic-based trust is known from research on organised crime, where trust is commonly ascribed to family members, those with a common ethnicity, or a local community (Wehinger, 2011; Von Lampe and Johansen, 2004). Knowledge about common backgrounds enhances the willingness to work together and be vulnerable, as based on expectations and generalisations (Von Lampe and Johansson, 2004; Mayer et al., 1995; Mao et al., 2020). This type of information is not readily available online. However, the reputation systems substitute for the characteristic-based generalisations. In the legal online economy, more than two dozen studies have analysed the effect of sellers' reputations on the probability of product sale and selling price using eBay auction data (for a review, see Diekmann et al., 2014).

Sellers do not cheat, because it might ruin their good reputation and hinder future business. In economic terminology, a reputation system deters moral hazard and adverse selection because a good reputation has a market value (McKnight and Chervany, 2001; Resnick and Zeckhauser, 2002). However, Przepiorka et al. (2017) noted that much of this research is based on small-scale laboratory and field experiments or from online markets embedded in functioning legal systems. We therefore cannot assume that the cryptomarket reputation systems are as efficient in reducing fraud as in the legal online economy. In cryptomarkets, the systems are compromised by problems with manipulation and transferability issues (Moeller et al., 2017), and eventual economic losses are not protected by credit card insurance or police investigation and legal proceedings.

The reputation systems and written feedback in cryptomarkets are arguably the key benefit over conventional drug distribution (Décary-Hétu and Giommoni, 2017). Most of the articles in the sample examined characteristic-based trust in one way or another. Some focused on communicative signalling, but the majority concerned the reputation systems and their vulnerabilities.

**Signalling.** Given that actual personal characteristics are impossible to ascertain online, signalling is pivotal. Both buyers and sellers have an interest in pretending that something is true (Lusthaus, 2012), and in Gambetta's (1988) approach, signalling theory is concerned with authenticity. The first source of information for buyers is the profile page of a vendor, but vendors can also signal authentic characteristics in the customer feedback system and the discussion forums. Giving written feedback is not usually mandatory, but it is strongly encouraged and a large majority of customers do so (Tzanetakis et al., 2016). Kamphausen and Werse (2019, p. 281) referred to these conversations as the 'communicative constellations' surrounding the logistics of the trade. They noted that buyers preferred vendors to be polite and responsive, to include information about the products and terms of trade, and to be able to handle a quick shipment of the goods.

The reviews concern not only the quality of the product but also the service involved in the transaction. This service includes vendors participating in conversations in an 'earnest, friendly, and respectful' tone (Ladegaard, 2018, p. 241). Lorenzo-Dus and Di Cristofaro (2018) noted that this discursive performance of identity is about signalling integrity and benevolence. The signals are carefully selected performances often concerning technical competence and personal identity (Masson and Bancroft, 2018). Bancroft et al. (2020) described them as being cultivated, mediated, and negotiated between the three parties to the transaction: vendors, buyers, and administrators. Lastly, sellers can perform this discursive signalling by participating on discussions forums. While this could be considered cheap talk because it is not associated with transactions or services; Norbutas et al. (2020b) found that it actually improved vendors' market outcomes. Buyers know that the reputation scores may be compromised. Vendors can add credibility to their scores, their characteristic-based trust, by signalling credibility.

**Reputation System.** Reputation scores are used to assess potential exchange partners and ostracise untrustworthy actors (Ladegaard, 2020). They reflect multiple dimensions of a seller's trustworthiness, operational security practices, product quality, and communication (Norbutas et al., 2020b; Przepiorka et al., 2017). Regarding trust, Tzanetakis et al. (2016) note that reputation systems constitute arguably the most important difference between conventional and virtual dealing. Online vendors try to establish trust proactively by building a good reputation score, as opposed to relying on repeated transactions and process-based trust.

Reputation scores also attract buyers. Duxbury and Haynie (2018a, p. 936) found that reputation scores better predict buyer preference compared to price levels and selection of products: 'One unit increase in vendors' reputation score is associated with a 0.3% increase in the odds of selecting a given vendor for a drug purchase'. Przepiorka et al. (2017) also found that this was the case and that vendors with better reputation scores sell their products faster compared

to sellers with no rating history or a bad rating history. Norbutas et al. (2020b) tested the external validity of findings from legal online platforms concerning the association between high reputation scores and higher prices. The key difference is that the reputation information is less reliable, user identities are unstable, and exchanges are not insured. They found that the association between reputation and prices also held in the uninsured and anonymous context (but see Munksgaard, 2020, for a critique).

Importantly, the perceived level of trust that a vendor had established via the reputation score is transferable between cryptomarkets. Law enforcement crackdowns used to ruin the reputation scores that vendor built up, destabilising the cryptomarket as a whole. However, Ladegaard (2020) noted that technologies for identity verification and information distribution enable the scores to be transferred between cryptomarkets. This bolsters the reputation systems and enables vendors to operate as nomads in a decentralised economy. He concludes that cryptomarket innovation is driven by external pressure from law enforcement. Childs et al. (2020b) also found that reputation scores are maintained across multiple platforms. However, Norbutas et al. (2020a) emphasised that buyers perceive the transferred scores as incomplete and unreliable information. Despite this reduced reliability, reputation transferability embeds trust relations between buyers and sellers beyond a single cryptomarket's boundaries. In this way, buyers can now use feedback messages and reputation scores to punish opportunistic sellers even in future markets. This technological innovation increases the deterrent capacity, promotes compliance, and pushes out untrustworthy sellers from the market.

The problem with online reputation systems is that they can be gamed. Trustful actors can be impersonated and trust signals can be faked (Bancroft et al., 2020). Some sellers manipulate their scores by inhibiting negative reviews and promoting positive reviews (Bancroft et al., 2020; Bolton et al., 2013). An example is that vendors use free samples to rake up positive reviews, cultivate customers, and increase trade (Ladegaard, 2018). Kamphausen and Werse (2019) described a way of gaming the reputation system by 'shilling'. Vendors use secondary accounts to boost their own reputation or have friends vouch for them. They may also maliciously damage the reputations of competing vendors. Bancroft et al. (2020) referred to this practice as 'reputation fluffing' and noted that the reviews posted on forums are a better indicator of vendor quality, as the discursive signalling here is harder to fake (see also Holt et al., 2016).

While the reputation mechanisms are 'technically robust', they are simultaneously 'socially brittle' (Bancroft et al., 2020, p. 3). Vendors who are known as trustworthy can abscond with buyers' funds overnight in so-called exit scams (Moeller et al., 2017). Vendors also have a less ominous reason for exiting. Norbutas and colleagues (2020b) found that reputation scores in cryptomarkets are extremely skewed. Ratings below the maximum value are only posted in extraordinary cases. In their study, 96% of all feedback messages were 5-star ratings, while 0- to 4-star ratings accounted for about 1%. This gives new vendors an incentive to exit the cryptomarket if they receive a negative rating. It is less costly for them to re-enter with a new pseudonym compared to rebuilding a damaged reputation

(Norbutas et al., 2020b). This procedure exacerbates the unreliability of the reputation score information, and it illustrates Gambetta's (1988) statement that trust is not predicated on evidence but rather on the lack of contrary evidence.

Similar to process-based trust, characteristic-based trust is intertwined with the other dimensions of trust. A reputation score is going to be interpreted by buyers. Some of this interpretation concerns noisiness (i.e., whether the score has been transferred from elsewhere), and some of it concerns an assessment of the administrators (i.e., if they are perceived as efficient in vetting dishonest vendors). Lastly, the score will be interpreted against dyadic process-based experience. Norbutas et al. (2020) concluded that buyers consider negative ratings from other buyers before making their first purchase but that the weight of this information decreases as the number of transactions between a specific vendor and buyer increases. This finding echoes Granovetter's (1985, p. 489) sentiment that buyers are mostly concerned with how honest sellers will be in any exchange with them; in other words, they are 'less interested in *general* reputations than in whether a particular other may be expected to deal honestly with *them*'.

### ***Institutional-based Trust***

In the legal economy, trust in economic exchanges is supported through institutions such as courts, credit rating agencies, and other impersonal structures that reduce the negative effects of product uncertainty (Beckert and Wehinger, 2013; Glückler and Armbrüster, 2003). All of the trust typologies reviewed for this chapter include an institutional element – for example, Mao and colleagues (2020) 'trust-in-platform' and the observation that legal online transactions are protected by insurance from credit card companies.

Illicit transactions obviously lack this institutional protection, and cryptomarket administrators go to considerable lengths to demonstrate that users can trust that the marketplace is relatively safe. Lorenzo-Dus and Di Cristofaro (2018) specified that Silk Road users must trust that the marketplace can effectively mediate transactions, protect them from law enforcement surveillance, and will not defraud them intentionally. Deterrence mechanisms that sanction breaches and encourage cooperation through self-interest are examples of institutional measures to promote trust (Rousseau et al., 1998). Specifically, cryptomarket administrators can increase the costs of opportunistic behaviour by introducing fees for opening a seller account and monitoring and banning untrustworthy sellers (Norbutas et al., 2020b). A less repressive alternative is the dispute resolution mode where administrators adjudicate between the vendor and the buyers. Most cryptomarkets have in-built verification and validation methods to encourage users to trust the sites, while others rely on community validation over time, as vendors with no complaints can be awarded a verified status (Masson and Bancroft, 2018; Wehinger, 2011).

A key example of a technology that simultaneously promotes and relies on institutional-based trust is the escrow payment system. Using escrow, the seller must provide the products to the buyer, who then allows the escrow agent to release the funds to the seller. Typically, a forum selects a single individual to

serve as an escrow agent, who has a position of trust in the market (Holt et al., 2016). With cryptomarkets, the escrow agent is usually the marketplace administrator. While not all cryptomarkets employ escrow models (Bancroft et al., 2020), they play an important function in building and drawing on trust where they are instated. Using escrow accounts requires that participants trusts that the administrator does not to steal the money. However, because the service includes a fee, a fixed percent for each transaction, some prefer to circumvent it. Vendors may offer a reduced price for trading directly without the escrow and finalising early, which opens numerous ways to defraud buyers (Moeller et al., 2017). Other than the agent absconding with funds, sellers could also falsely claim to use escrow but never actually follow through on the claim. It is an easy signal to fake for untrustworthy actors (Holt et al., 2016). Masson and Bancroft (2018) noted that only the most trustworthy of vendors are able to finalise early. Buyers can also abuse the escrow system by claiming they never received the item, which leads some sellers to require a direct transfer of money from the buyer (Norbutas et al., 2020b).

Administrators set up rules and moderate the forums, signal competence and trustworthiness, and sanction misconduct. In line with the discursive signalling of vendors, an important way for administrators to build institutional-based trust is to communicate with buyers through the forums, especially in times of crisis (Bancroft et al., 2020). They found that administrators communicated mistrust in the sense that they encouraged buyers to always be sceptical (e.g. act as if the forum is already compromised). To these administrators, this mode of thinking signifies a move away from relying on the technologies of escrow and identity verification. Accordingly, these artefacts were primarily used as ‘(the quote)’ (Bancroft et al., 2020, p. 14).

## Discussion

Several studies and typologies described in this chapter note that trust is a multidimensional phenomenon. Bancroft et al. (2020) explain this as lateral and vertical forms of trust. Solidarity between users on the forums and a recognition of common interest for all users of the cryptomarket constitute a lateral form of trust, while the reliance on administrators and owners is a vertical relation (Lorenzo-Dus and Di Cristofaro, 2018). The position of trust proposed by Rousseau et al. (1998) as an intermediate concept has some interesting implications for future research in this area. They argue that research on trust should integrate microlevel psychological and economic processes with a sociological analysis of character-based elements and macrolevel institutional arrangements.

From the legal online economy, McKnight and Chervany (2001) explained how trust in a platform over time translates into trust towards individual vendors. Rousseau et al. (1998) similarly noted that institutional factors support a critical mass of trust that encourages further trusting behaviour between actors. This is a top-down perspective on trust formation starting at the institutional level. Specifically for cryptomarkets that operate outside of the support of the legal economy, well-functioning deterrence mechanisms and conscientious administrators that ban scamming vendors are required to attract buyers and vendors and for

process- and character-based trust to develop. Similarly, there is also top-down diffusion of trust from reputation scores to the process-based repeated transactions between the same buyer and seller. Vendors with a better reputation attract more buyers and charge higher prices (Diekmann et al., 2014).

This vertical axis of trust also has a bottom-up facet. Vendors who cheat risk having this malfeasance conveyed to the broader group (Lusthaus, 2012). This effect appears to be relatively rare, as the majority of ratings are for the highest score, and vendors who receive low scores may choose to exit the market and re-enter with a new identity. While this could indicate that the reputation systems as a whole are less than reliable, they nevertheless serve an important function through their transferability. In combination with identity verification technology, the transferability of reputation scores reduces the effectiveness of law enforcement interventions, stabilising the cryptomarket system as a whole (Norbutas et al., 2020b). Following this notion of several cryptomarkets forming a landscape, it is noteworthy that the bottom-up trust towards the institutional arrangement also has a lateral component. While the vertical component consists of trust in anonymising technologies and deterrence mechanisms, the lateral component concerns the assessment of the technical competencies and honesty of individual administrators.

Bancroft et al. (2020) proposed that mistrust could be a guiding concept for understanding how the lateral aspects of trust influence behaviour. In their examination of how the process-based interactions between buyers and vendors combine with the technical infrastructure of the market, they concluded that the shared orientation to security in the specific cryptomarket was more important than the technological infrastructure alone. They referred to this mistrust as a building block for the generation of trust. Sztompka (2006) similarly proposed that mistrust should be given separate attention. Lack of trust does not immediately turn into mistrust, which is the belief that the partner has an interest in cheating. Mistrust stems from the high levels of uncertainty that persist because many vendors, administrators, and law enforcement officials have managed to circumvent these protections (Moeller et al., 2017). This is highly relevant for future cryptomarket research because mistrust shapes all the participants' behaviour and affects their readiness to trust.

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## Chapter 4

# Drugs and the Dark Web: The Americanisation of Policing and Online Criminal Law From an Australian Perspective

*Ian J. Warren and Emma Ryan*

### Abstract

This chapter argues that the Americanisation of online policing has questionable impacts in Australian prosecutions involving drugs obtained and distributed through dark web cryptomarkets. The authors describe several Australian prosecutions of mid- and low-level dealers who have accessed drugs through the dark web and contrast these with the United States (US) case against the cryptomarket, AlphaBay. The discussion in this study emphasises how Australian police and courts view the relative weight of dark web activity associated with the domestic and transnational supply of illicit drugs that result in formal prosecutions. The authors suggest that large-scale forms of online and dark web police surveillance undertaken by US enforcement agencies reflect Ethan Nadelmann's (*Cops across borders: the internationalization of US criminal law enforcement*, University Park: Pennsylvania State University Press, 1993) thesis on the Americanisation of global policing through transnational communications networks. The authors then explain how key elements of transnational dark web drug supply appear to have a marginal bearing on criminal investigations into low- and mid-level traffickers in Australia, which rely on conventional surveillance tactics to identify clandestine mail pickups, physical distribution methods, and irregular money trails. However, the authors then illustrate how the Americanisation of online policing that targets high-level entrepreneurs and seeks to dismantle or eliminate dark web cryptomarkets has

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**Digital Transformations of Illicit Drug Markets: Reconfiguration and Continuity, 45–57**



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important implications on Australian reforms aimed at enhancing online surveillance powers to target a range of crimes that are often wrongly associated with illicit drug cryptomarkets. The authors conclude by demonstrating how intensive dark web surveillance has limited direct impact on routine drug policing in Australia, with dark web communications simply another medium for facilitating the physical detection of illicit transnational drug transactions.

*Keywords:* Dark web; criminal trials; evidence; investigations; Australia; law

## Introduction

An increasing number of criminal cases in Australia refer to the accessibility and potentially devastating effects of drugs obtained through dark web<sup>1</sup> cryptomarkets. The distribution of illicit drugs through the dark web serves as a supplement to conventional physical domestic and international drug markets. The significance of cryptomarkets rests with the speed of communication that can facilitate more transactions, the anonymity provided by encrypted dark web technologies, their transnational reach, the potential ease of purchasing, and the perceived superiority of the product (Barratt et al., 2014; Colman, 2023, Chapter 6, this volume). While the ease of illicit drug supply through cryptomarkets appears to generate networks that are sometimes associated with other online crimes, including credit card fraud, dark web vending can also reduce the harms and associated illegal by-products of conventional drug markets, including the level of violence associated with street trading (Martin, 2014a, 2018; Munksgaard and Martin, 2020b). Research also indicates many dark web vendors and purchasers are involved in low- to mid-level trafficking that is not necessarily sustained, highly profitable, or global in nature (Tzanetakos, 2018b).

Such findings suggest dark web markets are substantively different from conventional drug markets. However, we demonstrate that dark web markets are a form of ‘Uberisation’ of drug distribution that simply speeds up the communication process between willing consumers and suppliers, while utilising rather crude methods of transportation through conventional mail systems (see Craciunescu and South, 2023, Chapter 7, this volume). In fact, many relatively innocuous forms of low-level drug trafficking service small markets of friends and risk becoming labelled by law enforcement as highly serious because they utilise the dark web for transnational drug distribution. Further, even if dark web cryptomarkets impose ‘explicit market prohibitions on contract killing and child exploitation activity’ (Martin et al., 2019, p. 61), law enforcement often conflates these offences, which contributes

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<sup>1</sup>Australian legal cases use the terms ‘dark web’ and ‘darknet’ interchangeably. We adopt the term dark web in line with Gehl’s (2018, p. 9) view that it helps to limit discussion to web technologies, rather than Internet technologies, such as email, that can be routed through network software to enable anonymous or encrypted communication (see also Martin et al., 2019, pp. 13–14).

to an increasing array of contentious remote (Warren et al., 2020) and undercover surveillance tactics (Bleakley, 2019). These measures can have profound impacts in reshaping police investigative procedures in the open and dark webs as well as the laws that sanction the admissibility of evidence obtained through cooperative transnational investigations involving multiple law enforcement agencies. Regulatory concerns over the seemingly impenetrable nature of advanced encryption technologies within the specific places of the dark web (Bowling and Sheptycki, 2011) potentially generate a troubling expansion of covert extraterritorial surveillance often aimed at protecting United States (US) commercial and law enforcement interests. However, these processes can also undermine individual liberty and due process in other jurisdictions (Mann and Warren, 2018; Warren et al., 2020).

Our argument demonstrates how the policing of low- and mid-level drug trafficking that uses the dark web to facilitate distribution is reliant on many physical attempts to control and eliminate illegal drug markets. We also consider how the transnational nature of illicit recreational drug supply through dark web cryptomarkets reflects two regulatory anxieties indicative of the US approach to the global war on drugs (Andreas and Nadelmann, 2006) and more recent efforts to shed light on illicit activities in the dark web (Kerr and Murphy, 2017). These developments generate two mutually reinforcing tiers of drug law enforcement that mirror and build on the conventional distinction between trafficking and use. At one level, most conventional drug enforcement activity targets the activities of low-level users and dealers at the end point of the distribution chain, through the interception of mailed packages or the laundering of the proceeds of criminal activity, who are commonly detected through conventional surveillance processes but have used the dark web to gain access to or facilitate the distribution of their product. At the higher end, law enforcement uses sophisticated and highly technical forms of surveillance to target the managers and administrators of dark web cryptomarkets. At this level, there is the greater impetus for enhanced legal powers to undertake dark web surveillance and various forms of cross-jurisdictional intelligence sharing targeting both drug and non-drug crimes and potential criminal conspiracies (Mann and Warren, 2018). These measures aim to eliminate illicit dark web cryptomarkets.

Central to these processes is the transnational scope of dark web activities. While global drug trafficking markets in the pre-Internet era generally involved some degree of transnational communication and organisation, the dark web adapts these processes to enable faster and more direct communication among geographically dispersed suppliers and consumers. This creates an interesting dimension to dark web cryptomarkets, as it is also common for many dark web vendors to avoid transactions with people in jurisdictions with enhanced surveillance of regular mail, such as Australia and the USA (Martin, 2014a; Bancroft, 2020), which is not a direct result of enhanced dark web policing. Rather, this development reflects the convergence of physical and online enforcement measures involving the interconnected nature of illicit drug distribution and cryptomarket activity.

We document several representative cases involving evidence that illicit drugs have been procured through the dark web, which are derived from a broader sample of 20 Australian legal rulings handed down between January 2018 and

November 2020 contained in the Lexis Advance Pacific subscription database. We also examine the US decisions stemming from the takedown of the AlphaBay website. Legal records reveal the types of evidence obtained by police that sustain criminal charges when illicit drug transactions have been arranged through the dark web, as well as any parallel offences raised in these scenarios (Warren, 2011). This information is useful given the limited public disclosure about police operations in dark web cryptomarkets. For example, court decisions can provide some accountability for police surveillance practices in drug investigations, given that mandated processes for documenting how and when communications interception warrants are granted to police tend to omit key information, such as the types of offences or circumstances that justify lawful interference with private digital communications (Molnar and Warren, 2020). Before outlining key themes that emerge in our sample, it is important to identify how broader developments in the Americanisation of drug and online criminal law enforcement have the potential to shape the investigative processes that lead to criminal prosecutions for activities in dark web drug cryptomarkets

## **The Americanisation of Drug and Online Policing**

Ethan Nadelmann's (1993) landmark study of the Americanisation of modern policing shows how US law enforcement agencies used offshore liaison officers to help build the capacity of foreign law enforcement agencies to combat transnational drug trafficking. Since Nadelmann's work, these processes expanded markedly throughout Central and South America. This was largely through the establishment of bilateral treaties negotiated by the US, often accompanied by considerable US funding, which sought to build the capacity and degree of cooperation between law enforcement agencies throughout the region (Kontorovich, 2009). A common site for drug trafficking and law enforcement activity is the maritime region between South and North America, where extensive resources have been dedicated to limiting the illicit smuggling of drugs, people, and weapons into the US. Bilateral enforcement treaties commonly conferred expanded investigative and arrest powers on foreign law enforcement agents, which streamlines the transfer of evidence and suspects to face criminal charges under US law (Kontorovich, 2009). These processes enable prosecutions to proceed even if the drugs have been destroyed, there is limited evidence they were destined for the US, or if the suspects had never previously set foot on US soil (Warren and Palmer, 2015).

Bilateral treaties formalise otherwise informal agreements between domestic police agencies that shape the trajectory of transnational law enforcement cooperation (Bowling and Sheptycki, 2011, 2015). We argue two main problems stem from these developments. First, the tactics associated with general drug policing become globally fortified through a logic of zero tolerance that reflects US political, economic, and law enforcement interests. These values are then promoted as the desired approach in regional and global drug regulation (Andreas and Nadelmann, 2006). Second, specific rules, procedures, and enforcement tactics adopted by US police agencies infiltrate the law enforcement processes of

foreign police agencies. This process normalises various forms of police practice that are determined by US norms and standards. Examples include various forms of paramilitarisation and undercover surveillance activity, as well as procedures for search and seizure, evidence collection, and the apprehension and transfer of suspects in regions where treaties are in place. These processes reinforce the logic of zero tolerance, while the US subsidises the development of law enforcement approaches that seek to eliminate drug trafficking by extending these preferred ideas of appropriate police practice and the rule of law to neighbouring or partner countries. The result is the gradual Americanisation of both the laws and substantive methods for drug law enforcement, which is further prompted by the deployment of liaison officers to help coordinate and oversee these transnational operations (Nadelmann, 1993; see also den Boer and Block, 2013).

Contemporary developments in the policing of transnational online offending and dark web cryptomarkets mirror these processes in ways that build on the processes identified by Nadelmann (1993) and Kontorovich (2009). Two examples illustrate how measures led by the US to police transnational online crime can have direct impacts on the laws and law enforcement processes of other countries.

The first example involves the case of Kim Dotcom. After a request by the US Federal Bureau of Investigation (FBI) that raised allegations of systematic criminal copyright violations in the peer-to-peer file-sharing website Megaupload, Dotcom's home in Auckland was subject to the largest raid in New Zealand (NZ) policing history on the morning of 20 January 2012 (Palmer and Warren, 2013). After extensive litigation on various technical points of law, the Supreme Court of NZ in *Ortmann et al. v. United States of America* (2020) authorised the extradition of Dotcom and three co-accused to the US in 2020 to face 12 charges involving criminal copyright infringement and racketeering offences linked to this 'mega conspiracy' (Boister, 2017). Extradition for a single count of conspiracy to commit money laundering was denied because there were no equivalent NZ laws to deal with this US charge. While numerous legal technicalities have been examined in detail in the NZ court system, further legal review will examine procedural irregularities with some evidence that were overlooked in one of the many previous hearings (Hurley, 2020; *Ortmann et al. v. USA*, 2020). Ultimately, the complexity of these issues is a symptom of a broader

extension of domestic policing power under external [US] influence and [demonstrates] how securitisation of law enforcement cooperation can remove existing domestic legal barriers and penetrate the enforcement of domestic law and order. (Boister, 2017, p. 241)

These issues extend well beyond the legality of the initial NZ police raid in January 2012 (Palmer and Warren, 2013), covering important, and highly technical, questions of criminal procedure designed to prevent the abuse of police power under NZ and US search and seizure laws, including ill-informed 'fishing expeditions' to obtain incriminating evidence (Boister, 2017, p. 233). Cases examining the NZ police raid generated proven allegations that NZ police engaged in the unauthorised and unlawful transfer of evidence to US authorities, including

documents, bank records, and digital devices such as encrypted hardware, mobile telephones, and pagers, as well as the seizure and sale of assets derived from Megaupload profits under NZ asset forfeiture and US fugitive disentitlement laws (*USA v. Bataato et al.*, 2016). There have also been significant concerns regarding the level of potentially unlawful surveillance of Megaupload's activity by the NZ Government Communications Security Bureau (GCSB), including debate over whether these intelligence records should be disclosed to assist the defence (Boister, 2017). This has raised additional questions about the availability of human rights relief and monetary damages for alleged privacy violations by the GCSB and several other NZ government agencies (*Dotcom v. Attorney General*, 2020).

The economic and political fallout from this protracted investigation is extensive and highly complex. However, this saga aptly demonstrates why a more coherent approach to transnational police investigations into serious online offences is required to ensure greater procedural transparency (Bowling and Sheptycki, 2015). Equally, it illustrates why the transfer of police powers under bilateral anti-drug trafficking treaties (Kontorovich, 2009) should not automatically reshape the processes of justice administration in other nations, because existing domestic legal protections can provide meaningful accountability for transnational police activity that is otherwise missing from these cooperative arrangements, even if they are legally complex and highly protracted.

The second example involves the FBI's role in dismantling the Silk Road dark website, which raised similar problems involving transnational access to admissible evidence (Mann and Warren, 2018). Much investigative activity, in this case, targeted Ross Ulbricht, aka Dread Pirate Roberts, a US citizen who was the leading Silk Road site administrator undertaking the bulk of allegedly unlawful dark web activity from within the US. However, the FBI and US government devoted significant investigative and legal resources towards identifying and apprehending several offshore accomplices who allegedly helped with the administration of the Silk Road cryptomarket. This included Irish citizen Gary Davis, who resisted extradition for several years due to legal uncertainty over the FBI's decision to seek evidence of his connection to Ulbricht directly from the Microsoft Corporation, which owned servers in Ireland that contained online communications between the two. This case shows the difficulties associated with relying on mutual legal assistance requests with foreign governments to access digital evidence (Warren, 2015). However, the willingness of US authorities to bypass the mutual legal assistance process in the Silk Road investigation was explicitly designed to 'send an unmistakable message' to people engaged in online offending that 'the dark web does not cast shadows long enough to protect criminals from the long arm of the law' (Department of Justice, 2019).

The evidentiary problem in the Davis case has been rectified by the Clarifying Lawful Overseas Use of Data (CLOUD) Act. This US law seeks to replace mutual legal assistance procedures for the transnational exchange of admissible evidence. It enables the US to negotiate bilateral executive agreements that enable law enforcement agencies to obtain data in the control of technology companies operating in preferred nations that can later be used as admissible evidence in

criminal trials (Daskal, 2019). Mirroring the maritime drug enforcement treaties mentioned by Kontorovich (2009), the CLOUD Act is a US-led legislative response to rectify the problems of transnational surveillance and evidence exchange that reflects US demands to shed light on the dark web through streamlined procedures (Kerr and Murphy, 2017). These executive agreements suspend the geographic constraints of criminal jurisdiction through ‘a unidirectional spatial dispersal of paper rules’ (Boister, 2012, p. 277) that shape the domestic laws of other nations when dealing with cooperative transnational investigations into serious online crimes. Ultimately, these processes enable the US

to apply its own criminal laws, access extraterritorial evidence with domestically authorized search warrants and request the extradition of alleged coconspirators to face trial in the US before any other nation [has] activated its domestic jurisdiction. (Mann and Warren, 2018, p. 254)

These developments are backed by considerable scholarly support for upholding US standards of law and investigative integrity to enhance ‘privacy and civil liberties’ in other nations (Daskal, 2019, p. 1048). Such supportive attitudes within the US legal and scholarly fraternities are seldom open to external challenge or are usually supported by reference to vague or undocumented norms of police cooperation and intelligence exchange operating independently of a coherent body of transnational procedural law or selectively applied ‘rule with law’ (Bowling and Sheptycki, 2015). In other words, although it is reasonable to argue that other nations may not be offended by foreign surveillance to investigate serious transnational crime (Kerr and Murphy, 2017) or the establishment of informal agreements allowing for undetermined levels of transnational intelligence or evidence exchange with any number of countries to police various dark web crimes, these processes must ultimately remain subject to domestic laws and procedures that respect due process and territorial sovereignty (Ghappour, 2017). In the next two sections, we examine whether these developments influence domestic Australian prosecutions involving evidence of drugs obtained through the dark web and how these patterns might be mirrored in other large-scale investigations led by the US aimed at dismantling dark web cryptomarkets.

## Australian Drug and Dark Web Cases

We have traced 20 reported cases decided between January 2018 and November 2020 that mention drugs obtained via the dark web by a convicted or sentenced person in the Lexis Advance Pacific subscription database, which documents significant rulings involving points of law, procedure, or sentencing in Australia. This database is also linked to equivalent databases spanning the South Pacific, the USA, and the UK. The only specific dark web cryptomarkets mentioned in our sample are AlphaBay (*North v. DPP (Cth)* [2020], para. 8; *R v. Grey*, 2020) and Dream Market (*R v. Azabal*, 2019, para. 25). No specific vendors are mentioned in any of the rulings. Each prosecution appears to be based on evidence

obtained through conventional drug policing methods, including the surveillance of incoming mail, questionable financial and banking transactions, or other behaviour indicative of low-level drug trafficking. This confirms the findings of Munksgaard and Martin (2020b), which indicate much illicit drug trafficking facilitated through the dark web in Australia is of low- to mid-level frequency and involves moderate quantities of illicit drugs, financial sums, and degrees of organisational complexity. No reported Australian cases involve the takedown of a dark web drug cryptomarket, although Australian law enforcement agencies have been involved in transnational investigations involving child exploitation material (Bleakley, 2019). Evidence of dark web activity has been used by two suspects to conceal their identities in the hope of avoiding serious charges, including the planning of extremist violence and large-scale social disorder (*DPP v. Noori*, 2019; *Kennedy v. R*, 2018). In addition, Bitcoin has been used to purchase credit card details to commit frauds (*Re Abaker*, 2018). A further case involves a drug conviction from dark web activity that has affected a person's ability to practice as a registered nurse (*Health Care Complaints Commission v. Holbrook*, 2019). One New South Wales case involved an application by the state for an interim detention order against a serious career offender with numerous prior assault and drug convictions, who purchased cannabis oil on the dark web after being diagnosed with bone cancer (*State of NSW v. CT* (Final), 2019).

Reported Australian cases show how the transnational supply of illicit drugs through the dark web combines the sophistication of encrypted communication to organise the transaction with manual supply via the postal system. This process is described in *North v. DPP* (2020, para. 7) as the 'scattergun' approach. In this case, federal prosecutors alleged that North used the dark web on two separate occasions to arrange separate shipments of no more than one ounce of MDMA each to be mailed in envelopes through circuitous routes from Europe to the UK and eventually to Perth and Melbourne, Australia (*North v. DPP*, 2020, para. 7). This process was intended to reduce the prospect of detection and minimise financial losses. Interestingly, North was detected when selling unspecified 'marketable quantities' of the powder that had been converted into 'pills which bore a kangaroo stamped impression very similar to the Qantas Airways logo' to an undercover federal officer working in AlphaBay (*North v. DPP*, 2020, para. 8). This is not likely to have been an accidental encounter, with targeted surveillance potentially leading to the undercover operation, much in the same way as the infiltration of child exploitation networks (Bleakley, 2019). This investigation produced other charges involving pill manufacturing and the failure of the suspect to reveal computer passwords to assist investigators.

Despite evidence indicating that many dark web vendors are reluctant to transact with people in Australia or the US due to the tighter surveillance of overseas mail (Martin, 2014a; Bancroft, 2020; *Gallagher v. Western Australia*, 2019), several cases in our sample involved the transnational supply of illicit drugs detected through the Australian postal system. For example, the Northern Territory case of *Edmonds v. R* (2019) involved an appeal against a six-year imprisonment term on a charge of supplying a commercial quantity of methamphetamine and less than a commercial quantity of cannabis plant material. The court found that

the use of Bitcoin and the dark web to purchase the drugs elevated the gravity of the offending because it demonstrated a degree of sophistication (of a sort), and it gave rise to obvious and intended difficulties in detecting the activity. (*Edmonds v. R*, 2019, para. 28)

However, this statement was qualified by the suggestion that all attempts at supplying commercial quantities of illicit drugs involve some form of subterfuge. Hence, the use of the dark web is considered simply an extension of conventional methods for clandestine drug supply. It can also be assumed that police suspicion of illicit drug distribution led to the surveillance of Edmonds' finances. This evidence appears at the start of the ruling and indicates that over a period of one-and-a-half years, Edmonds deposited 293,195 Australian dollars (AS) into his regular bank account to purchase A\$275,000 in Bitcoin, even though his annual tradesman's salary was only A\$66,000. Over a subsequent three-month period, police intercepted eight packages matching the types and quantities of drugs he purchased using Bitcoin. While over 100 grams of methamphetamine and 28 grams of cannabis were intended to be distributed 'to his nominees in the Darwin area', the court recognised 'there is nothing to indicate' this level of trafficking 'involved an extensive network or high level of activity over an extended duration' (*Edmonds v. R*, 2019, para. 41). Edmonds successfully argued for a 14-month sentence reduction. The remainder of his imprisonment term was suspended provided he complied with parole orders requiring him to remain in the Northern Territory and enter a residential rehabilitation program with mandatory electronic monitoring and regular drug testing. This outcome was assisted by his guilty plea.

The apprehension of a person who has obtained drugs through the dark web can sometimes involve circumstantial discovery. This was the case in *R v. Azabal* (2019), where the illicit drugs were linked to the cryptomarket Dream Market. The suspect was discovered after another person, Murray, was arrested for possession of cocaine and MDMA at a hotel in regional New South Wales. Murray's phone records revealed he received up to 23 grams of cocaine from Azabal in small quantities over the period of a month. While on conditional bail, an international parcel addressed to Azabal containing 138.96 grams of cocaine was intercepted by Australian Federal Police, with further packages detected on a tracking app after his arrest. One of these contained 250 grams of ketamine. Azabal received a total effective prison sentence of five-and-a-half years with a non-parole period of two years and six months. This result was calibrated against five other state and federal dark web trafficking cases. The court in *Azabal* (2019, para. 25) noted that dark web trafficking is a sign of 'calculation and organisation', with the range of drugs imported in the five comparative sentencing decisions including MDMA, illegal steroids, and carfentanyl.

A final case demonstrates a more serious domestic cannabis trafficking operation involving over 600 orders estimated to be worth an annual turnover of up to A\$400,000 (*R v. Grey*, 2020). A husband-and-wife partnership arranged the transactions on AlphaBay using the vendor name 'Weeeeeed'. The police operation also produced evidence of several international transactions involving

MDMA, ‘Coke’, and methamphetamine, with various quantities of these substances seized at multiple locations (*R v. Grey*, 2020, para. 12). Significantly, the investigation involved the tactical interception of mailed packages destined for various locations within Australia, supported by evidence of the husband’s ‘large scale purchase of express post parcels and lodgement of those parcels for distribution’ (*R v. Grey*, 2020, para. 14). Once the operation was detected, police discovered ‘diligent and organised records of the customer base, tracking numbers for each package used to supply the customers, and the amounts supplied’ (*R v. Grey*, 2020, para. 9). The husband’s initial sentence of nine years imprisonment for the major trafficking offence, which included terms for less serious charges, was slightly reduced because it failed to incorporate time served in pre-sentence custody. The wife’s fate remains undisclosed in available court records, save for a brief reference to the forfeiture of A\$308,887.23 in jointly held criminal proceeds, including ‘Porsche and BMW cars’ purchased through the ‘trafficking and production business from their family home and two other properties’, which was considered an important measure of the couple’s ‘lavish lifestyle from the profits they made’ (*R v. Grey*, 2020, para. 25).

## **Alphabay and the US Courts**

AlphaBay was a leading cryptomarket for the distribution of illicit drugs in Australia and internationally. It was also ‘designed to facilitate illegal sales of malware ... guns, stolen financial information, and counterfeit documents around the globe’ (*United States v. All Monies, Funds, & Credits*, 2020, p. 2). As with Silk Road, the key to dismantling this cryptomarket involved detecting its founder and main administrator, Canadian citizen Alexandre Cazes. The FBI and US Drug Enforcement Agency engaged in several undercover transactions with vendors in AlphaBay, resulting in the purchase of controlled substances as well as ‘fake identification documents and an ATM skimmer’ (*United States v. 2013 Lamborghini Aventador*, 2018, p. 9). These items were shipped to the Eastern District of California, which provided the legal basis for US authorities to exercise their investigative jurisdiction extraterritorially.

After Cazes accidentally disclosed a personal email address in an AlphaBay welcome email and password recovery instructions in December 2014, US enforcement agents began remotely monitoring some of his dark web activities. In 2017, US agencies worked closely with the Royal Thai Police, which obtained a warrant to search Cazes’ home in Bangkok. This resulted in the seizure of a laptop containing direct links to the ‘Admin’ account controlling AlphaBay and related financial information from sales commissions through the site. Cazes was believed to have committed suicide seven days after his apprehension in Thailand. Civil forfeiture proceedings were then commenced in California targeting the allegedly illicit finances derived from Alphabay held by Cazes and his widow. These cases reveal the economic motives behind dismantling dark web cryptomarkets.

While both forfeiture rulings were default judgments in favour of the US government, they remain the major forms of public transparency associated with this investigation. The main allegations raised at trial and on appeal suggested that

the assets identified by US authorities were ‘directly traceable’ to ‘transactions of illegal controlled substances’ conducted via AlphaBay (*United States v. All Monies, Funds, & Credits*, 2020, p. 12). US arguments for the right to seize these illicit funds were supported by an admission by Cazes on AlphaBay in 2014 that he sought to create ‘the largest eBay-style underworld marketplace’ (*United States v. 2013 Lamborghini Aventador*, 2018, p. 6).

The US federal District Court for the Eastern District of California ordered the forfeiture of various luxury vehicles; funds in eight specified bank accounts; properties owned by Cazes in Thailand, Granada, Cyprus, and Antigua; unspecified amounts of Bitcoin and various other cryptocurrencies; and cash held in the names of Cazes and his wife identified through records stored in the AlphaBay servers (*United States v. 2013 Lamborghini Aventador*, 2018). These profits were attributed to commissions charged for each transaction within AlphaBay. Cheques issued by Cazes to the governments of Grenada, St Kitts and Nevis, and various other countries where he sought to obtain citizenship when he believed he was under investigation were also forfeited (*United States v. All Monies, Funds, & Credits*, 2020, p. 15). The sweeping nature of these claims is similar to fugitive disentanglement actions against Kim Dotcom, which sought blanket default judgments allowing the seizure of all assets held in NZ and Hong Kong, based on allegations that Megaupload had generated US\$175,000,000 from the US\$500,000,000 in illegal losses it caused to legitimate copyright holders (*USA v. Batato et al.* 2016, 418). While the accuracy of these estimates is debateable, there is the clear financial impetus for these transnational enforcement measures to redress the economic harm experienced by the US government and legal businesses from clandestine online activity through sites such as Megaupload, AlphaBay, and Silk Road. However, even when small-scale secondary or parallel dark web cryptomarkets are detected and dismantled, new markets headed by new entrepreneurs tend to emerge in their wake (Dorn and South, 1990; Ladegaard, 2019).

## Discussion and Conclusion

Our analysis demonstrates the ambiguity and complexity of Australian investigations involving drug transactions via the dark web. These developments mirror the history of drug regulation in many jurisdictions by attempting to dismantle illicit drug markets through formidable criminal penalties and asset confiscation processes (Dorn and South, 1990). The Americanisation of online surveillance and enforcement activity targets the speed and hidden nature of communications through dark web cryptomarkets and financial transactions using cryptocurrencies. However, while key legislative and enforcement responses target encrypted communications flows, our analysis shows that mid- to low-level Australian drug prosecutions where the dark web has been used generally involve conventional forms of police surveillance that focus on the physical legacies of drug dealing, such as access to mobile phone communications records, mail interceptions, irregular money trails, or evidence of lavish and unrealistic financial expenditure.

The transnational investigation of dark web cryptomarkets targets high-end entrepreneurs by stretching the territorial scope of US criminal investigative jurisdiction. Here, the Americanisation of online policing produces important regulatory anomalies that undermine efforts to ensure police investigations are open, transparent, and accountable through due process of law. The selective use of myriad domestic laws that favour particular enforcement ends, which Bowling and Sheptycki (2015) define as ‘rule with law’, enables US investigators to influence transnational online surveillance and drug interceptions in other jurisdictions. Only in rare cases involving high-profile entrepreneurs are these processes subject to detailed and open scrutiny, such as the protracted examination of the investigation into Kim Dotcom and his compatriots under NZ’s extradition laws.

However, our analysis also suggests that dark web cryptomarkets are simply another communication tool for organizing mid- and low-level trafficking activity that is generally viewed by Australian courts as having a minor level of sophistication. In other words, only attempts to dismantle dark web cryptomarkets such as Silk Road and AlphaBay can provide meaningful inroads into the illicit transnational supply chain by tracing the relationships between site administrators and individual vendors (Tzanetakis and Marx, 2023, Chapter 10, this volume). These high-end investigations require the kinds of multilateral coordination promoted through bilateral agreements between law enforcement agencies and governments that are currently driven by the US (Mann and Warren, 2018).

These forms of enforcement cooperation might also capture mid- and lower-level dealers and users. However, none of the Australian cases we have examined contained specific reference to investigative activity concerning the dark web that might have led to an arrest or prosecution. It is also unclear how police determined whether mail to be searched was identified through routine postal surveillance or targeted interceptions derived from dark web activities. This issue requires more research given the comparative rigour of the warrant requirements for opening and reading mail under the US constitution (Desai, 2007), particularly as Australia has no individually enforceable Charter or Bill of Rights. Moreover, the lack of transparency in reporting obligations applicable to telecommunications interception warrants (Molnar and Warren, 2020) means that there could be considerable online surveillance and information exchange within Australia’s police forces that also extends transnationally, yet is subject to limited public knowledge, judicial oversight, or external accountability (Bleakley, 2019).

The development of mutually compatible bilateral online investigative processes that can enhance transnational investigations into cryptomarkets builds on previous generations of agreements forged by the US (Kontorovich, 2009). This enhances the surveillance of both conventional online and dark web activity through executive agreements that reshape the rule of law in partner jurisdictions. In January 2020, the US finalised a CLOUD Act executive agreement with the UK, while negotiations with Australia proceeded throughout 2020 (Greaves and Swire, 2020). The Australian agreement is linked to proposed legislation introducing international production orders that allow Australian law enforcement agencies to directly obtain evidence from US technology companies, and ‘network activity warrants’ that will enable Australian investigators to seize and operate

dark web sites as clandestine honeypot sites, or ‘poisoned water holes’. These powers aim to identify individual dark web users regardless of their geographic locations or the nature of their allegedly unlawful activities (Parliament of the Commonwealth of Australia, 2019–2020). Such enhanced enforcement powers are direct legacies of the difficulties US authorities faced in accessing admissible evidence against Gary Davis after the Silk Road cryptomarket takedown under mutual legal assistance procedures (Mann and Warren, 2018).

Any benefits of using the dark web to procure illicit drugs identified in the empirical literature (Munksgaard and Martin, 2020b; Tzanetakis, 2018b) are dismissed by the negative associations of its hidden nature in regulatory and law enforcement discourse (Kerr and Murphy, 2017). Concealment also offsets the very real concern that non-consensual extraterritorial law enforcement activity pioneered by US law enforcement agencies against Silk Road and AlphaBay might be frowned upon by other nations despite its noble intent (Ghappour, 2017). For example, the clear aim of Australia’s recent legislative reforms is ‘to better enable’ federal law enforcement agencies

to collect intelligence, conduct investigations, disrupt and prosecute the most serious of crimes, including child abuse and exploitation, terrorism, the sale of illicit drugs, human trafficking, identity theft and fraud, assassination, and the distribution of weapons. (Parliament of the Commonwealth of Australia, 2019–2020, p. 2)

Enhanced law enforcement cooperation in the South and North American regions was justified by questionable associations between illicit drug trafficking and ‘the potential unlawful smuggling of people and weapons of mass destruction by terrorist organisations’ (Warren and Palmer, 2015, p. 277). Similarly, intrusive and opaque surveillance powers that aim to shed light on the dark web are considered so incontrovertible as to be morally unchallengeable (Kerr and Murphy, 2017). This is because politicians and law enforcement agencies in the US commonly employ false and conflated notions of exceptional risk to justify ubiquitous surveillance and modes of evidence exchange unfettered by the technicalities associated with obtaining foreign government consent in specific investigations.

We consider that such expanded online investigative powers are symptoms of the Americanisation of online policing that evolve with minimal public discussion of alternate methods for dealing with the transnational supply of illicit drugs or other dark web activities. Such processes, and their underlying rationales, consider all dark web activity as evil due to its hidden nature. However, our analysis suggests high-end forms of dark web surveillance appear to have minimal impact on routine Australian drug policing. Indeed, the major source of dark web harm appears to be economic rather than physical or moral. It is, therefore, important to revisit the role of criminal law in this area by stripping away the emotive justifications for enhanced transnational law enforcement surveillance that characterise recent legal developments in this field.

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Part II

## **Understanding Drug Demand Online**

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## Chapter 5

# ‘Waiting for the Delivery Man’: Temporalities of Addiction, Withdrawal, and the Pleasures of Drug Time in a Darknet Cryptomarket

*Angus Bancroft*

### Abstract

In this chapter, the author examines the way in which the purchase and delivery infrastructure of darknet cryptomarkets shapes the experience of opiate drug use and dependence. It uses the concept of social time and posits that the illicit drug distribution system reshapes two temporal dimensions shaping the experience of drug users. There is the experience of time located in the pharmacology of the drug and in the body of the drug user, which evokes experiences of withdrawal and dependence. Then there is the socio-technical embedding of the delivery system and governance structures which support or impinge on the autonomy of the user. This ‘drug time’ is both a benefit and a cost of engaging in cryptomarket use. The market infrastructure can give users the opportunities to more carefully manage their drug time, while also creating new risks of non-delivery that can sharpen experiences of dope sickness. The author concludes that the growing professionalisation, digitisation, and commercialisation of the drug market increasingly embed drug time in material infrastructures mediated through technical systems.

*Keywords:* Drug delivery; social time; heroin; opiates; commodification; infrastructure

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Digital Transformations of Illicit Drug Markets: Reconfiguration and Continuity, 61–72



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## **Introduction: The Temporal Infrastructure of Illicit Digital Markets**

When his junk is cut off, the clock runs down and stops. All he can do is hang on and wait for non-junk time to start. (Burroughs, 1977)

Time is culturally significant in popular accounts of the lives of dependent drug users. The title of this chapter alludes to the Velvet Underground's 'I'm Waiting for the Man', a song about waiting – and being made to wait – to score heroin from a dealer. Burroughs (1977) was one of many authors whose description of dependent drug users reduced them to the rhythm of their physiological addiction, wholly dependent on the internal 'clock' of addiction and withdrawal. Though that was a reductive and inaccurate framing, it captures one element of the relationship between time and the dependent drug user. What Burroughs (1977) characterised as 'junk time' is one culturally powerful element of the drug chronotype which encompasses a range of rhythms and trajectories. They are embedded in consumption rituals, biographies, treatment systems, criminal justice processes, and other structuring factors which shape the time of the drug user (Fraser, 2006). For example, time is structured in particular ways within treatment institutions, and it can be used as punishment. Deliberately producing 'waits for treatment' is one way of inducing dope sickness as a punishment for wayward and less privileged dependent users in treatment (Bourgois, 2000). Waiting can be a clinical imposition and a clinical-treatment construct. Letting dependent users wait requires them to perform as 'proper' patients rather than manipulative 'addicts' (Bourgois, 2000).

Here, I intend to examine one particular way in which time is structured for drug users, through the social time of a set of online drug markets. I use a study of experiences of time among users of cryptomarkets, which operate as anonymous digital markets. I pull together the findings of many studies of cryptomarkets that have examined the way in which the buying process shapes buyer identity and behaviour (Aldridge and Décary-Héту, 2016; Barratt et al., 2016). My argument is that processes of drug buying that are mediated through the cash nexus structure are user and dealer capacities and identities (Beckert and Dewey, 2017). The way in which drug markets pattern and direct drug buying is critical to both the way in which users position and identify themselves and experience their drug use.

Illicit drugs are sold online in a diverse ecosystem of social media platforms, messaging apps, and websites (Childs et al., 2020; Coomber et al., 2023, Chapter 2; Demant et al., 2019; Moyle et al., 2019). Cryptomarkets are one element of that. They are unusual as they are custom designed to sell illicit drugs and sometimes other illicit goods and services (Barratt and Aldridge, 2016; Rhumorbarbe et al., 2018). They are hosted on the Tor darknet and benefit from features such as obscurity, encryption, and secure communication. Combined with distributed accounting systems like Bitcoin or Monero, cryptomarkets allow transactions to take place in relative anonymity, with buyer, seller, and host not immediately known to each other. Though the process is theoretically anonymous, there is

an imbalance as the seller will know the buyer's shipping information and whatever name they are given. Drugs are purchased and delivered through courier or postal systems or left at dead drops. Online drug markets create new contexts for dealing and risk, and Aldridge and Askew (2017, p. 106) describe illicit transactions in this domain as “stretched” across time, virtual and geographic space, and handlers’. The reconfiguring of time and space is a key feature that patterns the experience of drug users interacting with the market. It recreates some aspects of the face-to-face market – for example, a bifurcation between those buying for personal use and social supply versus bulk purchases for secondary redistribution (Demant et al., 2018).

Human and non-human elements interact to produce drug use contexts (Dennis and Farrugia, 2017). They configure knowledge, ground truths, pharmacological products, and users’ selves and bodies (Duff, 2014). Given, how cryptomarkets often present themselves, it could be taken as read that they rationalise drug buying by design. Cryptomarkets appear to foreground rational hedonism, promoting choice, hedonic consumption, and utility maximisation (Childs et al., 2020). There are other principles at work as well such as ideological performance and reciprocity (Craciunescu and South, this volume; Ladegaard, 2017; Masson and Bancroft, 2018; Munksgaard and Demant, 2016). This chapter takes a digital materiality approach which examines the ways in which technological solutions embed specific kinds of social and political relationships (Dourish, 2017; Fox and Alldred, 2016). They also create possibilities to rework existing drug market repertoires away from established assumptions about who is participating and how (Chatwin and Fleetwood, this volume; Fleetwood et al., 2020).

One way in which heroin users have been defined is as ‘addicted bodies’, and ‘withdrawal’ has been the primary frame for understanding heroin dependence (Walmsley, 2016) in both scientific and subcultural understandings. Dependent opiate users in the eighteenth century used substitution with alcohol to cope with withdrawal, or mixed opium with wax as a self-care method. Withdrawal steadily came to be viewed as a process too dangerous to be left to self-care, one that could be traumatic, deadly, or just impossible for the user to embark on themselves. In the UK, in the early twentieth century, maintenance was available to some under the ‘British System’, but this was largely social-class based, being available to professionals and private patients (Measham and South, 2012, pp. 697–700; Smart, 1984). The abrupt withdrawal method was used for ‘dangerous’ drug addicts such as prisoners. The Abstinence Syndrome Intensity scale was developed in 1944 to quantify withdrawal. Symptoms of withdrawal were objectified, no longer reliant on subjective self-report, and, as a result, the individual addict could no longer ‘speak’ their condition. Psychological dependence was excluded from the understanding of addiction.

Two truth-producing mechanisms were worked into diagnosis: urine analysis and the Opiate Withdrawal Scale. At this point, treatment was moving to exclude ‘pseudo-addicts’ and the reverse – addicts who claimed to be clean but were not. These truth mechanisms framed the patient as untrustworthy, a framing many addicts accepted. From 1980s onward, heroin withdrawal was defined as destabilising risk management strategies, making the subject resistant to rational,

forward-looking decision-making. The language was now changing, influenced by neuroscience, which redefined addiction as a set of neurobiological mechanisms at work. These truth-producing mechanisms reworked notions of 'addiction' and 'dependent users' (Seddon, 2007) and usually served to exclude pleasure from consideration. Users themselves have recognised pleasure as present in dependent use (Dennis, 2019; Duff, 2011), doing so by moving away from an understanding of it as hedonic leisure and showing it as routine, embodied, material, domesticated, habitual, and intimate. One way of understanding the connection between the everyday routine and the pleasurable is how both manifest in social time.

I aim to examine the connection between materialised market economies and social time by examining the combination of technologies, practices, and users that make up the illicit economy. Developing these ideas, I use the concept of 'drug time' as a form of social time produced by the combination of cryptomarket purchase and associated delivery systems. This can be defined as a multiple set of cultural, structural, and disciplinary rhythms (Sorokin and Merton, 1937), and, in that sense, time is created from cultural referents and material determinants (Munn, 1992). Drug time allows us to understand the combination of drugs as pharmacological products, the sale and distribution infrastructure, and users' preferences and purposes. It applies concepts of eventalisation, trajectory, and career to do this. It tells us how online communities are developing these ways of understanding drug use through processes of asynchronisation and the creation of a community-developed drug ontology (Bilgri, 2016).

'Time' matters because we are overwhelmed with technical and disciplinary forms of 'time' over other social rhythms. Neoclassical economics and data capitalism both establish conceptions of time that are critical in disciplining society and which create their own ways of being, values, and hierarchies. Various temporal patterns and rhythms are encountered in drug and alcohol consumption. For example, a critical part of the commercialisation of alcohol in the UK has involved changing when alcohol can be consumed, liberalising licensing laws and changing the pace of consumption, marketing new easy-to-drink products, and designing spaces that encourage fast, continuous consumption (Chatterton and Hollands, 2002; Measham and South, 2012, p. 709).

Extractive data capitalism presents its own time modes as natural and inevitable (see Tzanetakis and Marx, 2023, Chapter 10; Zuboff, 2015). For users of digital platforms and systems, this is often encountered as a technological construct: platforms record the movements and actions of gig economy workers in intimate detail, placing rapid-fire demands on labourers within it. These principles are then naturalised. Platform users come to expect that their lives will be filtered through and judged according to these data metrics (Lupton, 2016). In a digital society, licit and illicit economies of intoxication have grown more like each other in these terms. Cryptomarkets exemplify this, professionalising and gentrifying production, distribution and consumption, labour organisation, and digital services (Martin, 2018).

Markets function effectively when they are routinised. As noted by Collier et al. (2021), the infrastructure of illicit digital markets is often hidden from the view of observers and participants. This infrastructure involves a large array of

routine labour dependent on shared infrastructure. A wide array of services is provided, such as hosting, site design, call centres, franchise management, data analysis, and banking/cashing out (Kremez and Carter, 2021). The growth of service crime drives down the cost of involvement in illicit digital markets for vendors and buyers. However, this initial efficiency can lead to further inefficiencies, which then require other services to manage.

To take a simple example, markets are typically thought of as places of instantaneous exchange wherein cash or electronic currency are transferred immediately when a drug transaction is agreed. However, this is not the case. Bitcoin, the supposedly decentralised currency, is often used for online drug payments. As Bitcoin has become more valuable as a commodity, more investment has flooded into producing (mining) it electronically. That investment has not, however, led to the payment procedure becoming more efficient. The system has become slower, and transactions can take hours to clear without further payment. The response has been to create a technical and social infrastructure to manage this, using a combination of exchanges and trusted partners to improve the system. The transactions are stretched over time and embedded in this trust infrastructure (Bancroft et al., 2020). Cryptomarket vendors and drug buyers should be understood as entangled in these systems. The focus has often been on the disruptive elements of ‘crime entrepreneurship’; however, dealers and buyers remain firmly entangled in the more mundane and traditional services such as face-to-face dealing and the postal services (Curtis et al., 2002).

## Methods

In this chapter, I explore further effects of the cryptomarket infrastructure, largely through the ways in which it structures the time of waiting – waiting for exchange confirmation and waiting for drug delivery. I began when, reviewing data I had collected from a leading cryptomarket (Bancroft and Scott Reid, 2016), I noticed how often concepts of ‘dope sickness’ (heroin withdrawal) were showing up in the same analytical codes as references to time and waiting. That led me to examine how heroin users’ experience of their bodies as drug dependent incorporates market platform effects such as the structuring of social time introduced by waiting for cryptocurrency payments to go through and for deliveries to appear and the way in which the lives of heroin users come to fit around these social times.

I identified threads focused on heroin users and vendors in the discussion forum of what was a major cryptomarket, Agora. The data had been manually copied from the forum in 2014–2015. Agora was launched in 2013, and it survived the coordinated takedown of cryptomarkets in Operation Onymous in 2014 and thrived afterwards (Décary-Héту and Giommoni, 2017). Agora was large enough to cater to people interested in many different drug types. Though the largest sales volumes were of MDMA, cannabis, and pharmaceuticals (Van Buskirk et al., 2016a), there was a large contingent of opiate users on the site. That interested me as typically cryptomarkets have been thought of as serving a gentrified, more socially and culturally privileged market segment. Users presented themselves as addicted and freely discussed what that meant in the context of the drugs

they were able to buy on the market. Usernames have been changed from the originals in the forums.

## Findings

In the findings, I present two interlocking dimensions which come together to make up the drug time of the cryptomarket. The first is bio-time – the experience of time as lived through the embodied experience of dependence – made up of the combination of the pharmacokinetics of opiates, the body's internalised memory, and adaption to the drugs being consumed. It is expressed through shared experiences of pleasure, desire, and withdrawal. Second, bio-time is overlaid with the way in which the socio-technical infrastructure of the market enables time to be experienced as malleable, extendable, and divisible, expressed in terms of recurrent rhythms and a sense of being stretched and enfolded by the delivery system. An aspect of this is the use of time as governing – something imposed on the body of the opiate users. This is critical to the salience of waiting times. Where waiting times are experienced as imposed deliberately they become harder to bear; they become experienced as hostile impositions on the autonomy of users (Faulkner-Gurstein, 2017).

## Heroin's Bio-Time

Time can be spent waiting for cryptomarket orders to be confirmed, for drugs to arrive through the delivery system, or for dope sickness to start or to stop, and while seeking various useful or pleasurable states such as the euphoric 'nod' (Pearson and Bourgois, 1995). The first time-related concept to identify here is the bio-time of heroin. This is a combination of the bio-pharmacokinetic qualities of heroin which become known through the pharmacological repertoire and the embodied experience of dependence and withdrawal.

Time terminology appears often in drug users accounts in the form of references to rushes, lost time, and blackouts. There is a close relationship between pharmaceutical quality and pharmacokinetics:

As I mentioned earlier, I started off with a 25 mg shot. I had done no opiates for the past week or two, and the 25 mg shot was the perfect amount of dope to get me where I wanted to be. I booted it up, and a few seconds later I had a very familiar warm wave of relief and euphoria slowly creep from my head down to my toes ... It's not a strong rush compared to other opiates like BTH that's high in 6-MAM or hydro/oxymorphone, but it is a very comfortable rush and the way it makes you feel is just plain fantastic. (Forum user 'Juantheman')

Users described a journey towards heroin use, and in this account, the use of heroin consumes the self in both the nod and experiencing withdrawal:

Basically I'm trying to say everyone is different, some are more hedonistic than others, some can simply handle the anxiety, some

maybe even enjoy the lifestyle, everyone is different in their use so it really all depends on the type of person. Basically I use because I used to be depressed all the time and hated my medication, weed wasn't too helpful either (sorry weed, still luv u), but once I started messing around with dope I realized I was either blissfully ignorant and happy all the time, or just going mad with cravings. (Forum user 'Myleetlefriend')

The experience of heroin dependence was an encounter of the body as obdurate and wilful. Many heroin users combined their use with benzodiazepines, as in this account:

Also for me, after dose adjustments it takes about 3 days for my brain to adjust and that is after taking it recreationally for about 6 weeks. In the beginning it's a lot of fun but you sadly rapidly develop a tolerance to the hypnotic/sedative effect of benzos. After I successfully tapered off I will take a month break and then only use it on weekends to smooth out comedowns from opioids or stimulants. It is a lot of fun on its own or as a little helper if you need to catch some sleep after a stimulant binge but taking it recreationally for more than a couple of days in succession is a waste. (Forum user 'FlamedOut')

As with many other accounts, the 'nod' was just one possible desired state (Carnwath and Smith, 2002). Heroin and other opiates could be used to manage workplace stresses and demands, cope with family life, and manage comedowns and fit into polydrug use repertoires.

Heroin was combined with other drugs in users' pharmacological repertoire, through which users form elaborate sets of drug use practices adapted to their lives:

I've shot enough heroin (no needles for 10+ years) and enough speedballs to get as high as some of the legends, but the rush from shooting meth is some type of indescribable 'what-the-fuck' feeling of panic/bliss/orgasm. It feels so good I'll never do it again, basically ... anyways, I just did some meth to get rid of this dope sick ... take care everyone. (Forum user 'Feloniousthunk')

These involved used varied sets of drugs, sometimes multiple opiates and opioids along with opioid agonists:

If you run out of heroin or just decide to stop using, you will want to drink kratom<sup>1</sup> during the period you would normally be

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<sup>1</sup>Kratom belongs to the coffee family of plants. It is a stimulant in smaller doses with a sedative effect in larger doses.

[dope]sick (about 10 days for me). After that, you can keep drinking it (because why not ... it's awesome) or you can stop at any time because unlike suboxone, it doesn't cause withdrawal or dependence – I would know, I've been drinking it with friends for 3 years and we can (and do) stop anytime, with no negative side effects. I can't believe every junkie doesn't keep a stash of it, it's so cheap ... and legal! (Forum user 'Ballboi')

In this example, the novel psychoactive substance kratom is being used to manage dope sickness. Kratom is a plant extract which is used in self-treatment for pain relief and for symptoms of mental ill health, to enhance energy and focus, and as an opioid substitute (Coe et al., 2019). In this account, it is preferred to the prescribed substitution therapy suboxone as it is perceived to not carry a risk of dependence in itself. This example shows where kratom is used to manage opiate effects and maintain opiate use over a three-year timespan. The extended time horizon illustrates how addiction experiences are built up and change over the long term. The experiences are varied and reflected in interactions and social relations with others. The 'we can stop at any time' claim is somewhat belied by the fact that they have continued to use it through this period. The stopping criteria are relevant in evaluating the decision to move from one drug to another. Users of methadone mentioned in the forum that they found stopping difficult and cautioned others against it, similar to this user's comment on suboxone.

Avoiding dope sickness was one motivation that structured users' interactions with the market. It was not completely dominant, however. Experiencing withdrawal was not wholly disastrous as long as there was a sense that it would happen within a manageable timescale. A user in the heroin discussion described this process of controlled waiting:

alright cool so I'm gonna try to snag a bundle from [vendor] in the morning before he sells out. idk [I don't know] why I always wait till the last minute to get more. I'm totally gonna be sick till I get something lol. such an idiot. i had the cash days ago but I'm trying to not spend so much right now. (Forum user 'Mrloverlover')

Their practice was not just about avoiding withdrawal. The production of withdrawal could be sought but also warned against as dangerous, as in this thread on naloxone<sup>2</sup> where a user describes using naloxone to shorten the withdrawal period:

My understanding is forced precipitated withdrawals is not just a short cut to like day 2, it's a short cut to the most intense hell on earth because the rate at which opioids leave your receptors has an effect on the severity of withdrawals. Meaning, it's going to

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<sup>2</sup>Naloxone is distributed as an overdose antidote. It is used when opioids or opiates cause life-threatening breathing difficulties.

be way, way worse to force precipitated withdrawals than if you let yourself go into withdrawals naturally. Like way worse. There is a reason 'rapid detox' is usually done under anesthesia and undermedical supervision. I am not a pro so I don't know any of this for sure, but please wait until somebody who knows for sure responds. (Forum user 'Okstupid')

There was a sense of the body being vulnerable and punished by the administration of naloxone. In addition, naloxone could be a serious risk. On the other hand, many users described using naloxone to avoid dangerous overdoses, and in that sense, it could be a safety valve. Another use of the drug was as a time skip:

Hey again! So bit of a funny one. I was given a naloxone injector as part of a drugs training thing (with 5 doses in it). I've always thought that could be a great way of skipping ahead to day 2 of withdrawals. Well, 1= is that possible? The other thing is, I can't inject myself and my wife flat out refuses, thinking it's a bad idea. She always says I have bad ideas and she's always right, so I'm inclined to side with her a bit. Sooo ... 2= what else can I do with this liquid? Put it on my tongue, mix it with a drink and swallow, put it up my ass? I'm guessing it's a full on NO. (Forum user 'Instaspam')

Naloxone could be used to manage the waiting time that users were wary of. There was a sense of time being stretched in these accounts, with naloxone and fentanyl being used to manage this empty time.

Information was relevant to managing bio-time. In this discussion, users described how to parcel tracking information was helpful – having an expected time for the parcel to arrive allowed them to use their pharmacological repertoire to manage any withdrawal symptoms they might encounter while waiting.

This example from a discussion of heroin vendors describes the work needed to make the drug useable which adds to the waiting time:

My last order with [vendor] took a total of 8 days, which set a new record for me. ... I would not have cared so much about the 8 days if it was fire [extremely potent], but it sadly was not ... I did not feel so great the next day, wasn't sure if it was the dope or lack of sleep, but usually lack of sleep just makes me a zombie. I eventually cleaned it with some dry acetone and it took out all the brownish tint and somewhat of the iodine smell. I will probably do that for every order here on out. My dilemma now is I'm out and I am eyeballing the leftovers from my cleaning that I let dry in a jar, my mind says no but my heart says yes! Urg I should just bin it. (Forum user 'Partybusk')

This malleability and uncertainty about the drug as an object are common to many users. The individualised context of use was apparent in this account and

more typical of darknet market users. They tended to buy and consume individually and were attracted to the darknet because it allowed them to do that and to share their experiences with users of the same drugs online.

## **The Material Rhythms of The Market**

This dimension captures the way users experienced the market and delivery systems as compressing and expanding time, generating recurring rhythms dependent on their operation. As above, some substances such as naloxone and kratom could be used to manage time, temporarily suspending heroin use or curtailing withdrawal. The technical infrastructure of the market could also impose its own structure on the time available. Shipping speeds, vendor response times, and the time Bitcoin payments took to clear all patterned the time available.

Problems arose when these systems started misbehaving. Time being stretched when waiting for deliveries that never came could induce panic:

My connect went MIA [missing in action] for almost 10 days. I didn't know what the fuck to do, I waited and waited 'til finally I couldn't any longer. I went through someone else, and I'll admit, I was pretty hesitant, he gets me the BEST black tar heroin. Problem is, the reviews and hype around my shit are for what I normally get. This stuff I got here is only maybe a little less potent. There's no cut, nothing like that. (Forum user 'Friedspam')

The expressed attitude of vendors when deliveries were stuck mattered in how delays were experienced:

Well, I have to say this about [vendor] so far, he keeps you informed of everything. I got a message about my order, he said he sent me a gram of molly instead of my heroin, (meth shipped fine) and he immediately sent the heroin to fix the mistake. Good deal ... so far I am pretty happy with my dealing with him. However, I am in that state of anxiously awaiting my shards and minor depression and not having them. 2 months sober does strange things to my head ... lol xoxo. (Forum user 'Girlboss')

The delivery system also provided sensory pleasures. One heroin user described the anticipation and excitement of delivery and the smell and sight of high-quality heroin:

Within 5 minutes of receiving I anxiously ripped the letter apart (I've been sick all morning so this couldn't have come at a better time) - was going to test it, but opened my paraphernalia container and realized I'm out! I was not too concerned however, because of other user referrals. So I get [vendors] gear open (all shakily from w/d [withdrawal]) and the oh so lovely smell hits me! WHACK! I

put about ~50mg out, tooted and waited a few to see if I needed more ... NOPE! The product looks exactly as the picture. ... Best bang for your buck EASY! (Forum user 'Feedthebeast')

Waiting can be traced through to the classic 'waiting time' of the 'dope fiend' where time appears as a quality to be manipulated by the dealer. The queue is a typical ordering principle. Market time-management practices are observable in face-to-face markets; for example, a 'free for all' can be contrasted with the ordered, governed queuing in a street market (Kleiman, 1988). There are obdurate times dictated by the delivery infrastructure, such as shipment times. These become part of the social time – the salience of which is defined by the drug user's sense as to whether the time they must spend waiting is intentionally imposed. If he or she regards delayed shipments as the responsibility of vendors or due to deliberate indifference on their part, then this time is experienced more harshly. Dope sickness becomes more painful, and anxiety grows where that is the case. One reason for that is that the user is concerned that the drug may not arrive at all. This feature of the infrastructure then changes the texture of social time for the user. It reminds them that the power in the relationship fundamentally lies with the vendor. The user worries that they may be thrown back on an unreliable 'face-to-face' market or have to go without. Social time becomes upended.

This user describes the anxiety induced by these platform limits:

Placed a little order and will report back, but interested to hear others' thoughts. I ordered and supposedly the order was 'shipped' from [vendor] 9 days ago. In resolution [the market's formal administrative dispute resolution system, part of the escrow system] now. Told him it was going there if he did not start communicating about the location. 4 days ago he asked for the zip code. Then nothing until I went to resolution. Then he asked for the zip again and said he would get back after shipping everything out. Sent it with privnote [an encrypted, self-erasing messaging system] this time and then he said he couldn't open it (though I got the 'note has been read' notice). He wanted it again in PGP [encrypted]. Sent it AGAIN 9 hours ago. He has been on 6 hours ago. No answer. Still waiting. (Forum user 'Montychristo')

Time can be perceived as being used as a punishment, by enforcing waiting: waiting to be admitted to a programme, for treatment to start, or for doses to become effective, as in this example of being prescribed methadone by a clinic. Delays can be experienced as deliberately punishing and harder to bear than withdrawal when coming between sessions of heroin use:

At the clinic (the one I went to) the lowest they start you is 15 mg/day. But if 0.5mg of Buprenorphine keeps you good, I would imagine 5mgs of methadone would be along the same lines ... I was in the clinic for 3 years on 140 mg/day, lost my job, and had to

quit cold turkey from 100 mg/day. I was sick for a month. Methadone is a road best treaded carefully. (Forum user 'Timeout')

Waiting time became more salient in the context of medicalised methadone and suboxone prescriptions compared to waiting for a delivery of heroin. Waiting for medicalised substitution drugs was different in two ways. It was mediated by a clinic or other service which required the user to adapt to the service's timescale. It also was not going to produce a pleasurable experience but solely allay withdrawal symptoms.

Clinical time might be perceived as protective or as deliberately hostile depending on the context. The cryptomarket infrastructure allows users to share social time constructs and to some extent to manage time themselves without being subject to the will of dealers or the governance processes of the treatment and criminal justice worlds. The market itself, however, is not purely experienced as a convenient, consumer-centred infrastructure. It produces its own governance systems and demands which users also have to adapt to and incorporate into their novel sense of social time materialised through a digital market.

## Conclusion

Most users quoted here are experienced polydrug users. Opiates stand at the centre of their drug use repertoire, with kratom, meth, subutex, benzodiazepines, naloxone, and other substances employed to manage their drug use in the context of their lives. Overall, cryptomarket customers were attracted by predictable supply, greater choice, and reduced risk. The ability to integrate the drug purchasing process into the social time of heroin dependence was highly valued.

Heroin's drug time appears as a comprehensible, graspable form of sociality which is articulated through the infrastructure of the cryptomarket. It is one way in which a recognised shared cultural understanding of time in the context of drug use is reproduced and transformed through the digital market. The experience of time waiting for the drug is now distributed through several novel systems: the market infrastructure itself, the associated payment systems, the discussion boards, and the postal/courier system. As described in the beginning, many heroin users have experienced institutional time as a sometimes supportive, sometimes alienating experience.

Drug time was a concept that encapsulated the intricate ways in which the body and mind of the user and the market systems interacted. It is a materialisation of the social relationships that exist between user and dealer, the market infrastructure, and the delivery services that mediate the purchase process. It is made up of many different technical times, from the sluggish bitcoin transaction process to the various speeds of postal and courier services, and various socially recognisable rhythms, such as the dealer response time and the expectation of dope sickness. The extent of drug time defines the capacity opiate users have for self-governance through the cryptomarket environment. Social times are embedded in products, markets, communities, and spaces, each configured differently according to a range of factors. Other drugs and intoxicants will have their own configuration of social time manifesting in the context of the user.

## Chapter 6

# When Home Delivery Trumps a Shady Warehouse Deal. An Exploratory Study of Belgian Cryptomarket Buyers' Profile and Their Motives to Buy Online


*Charlotte Colman*

### Abstract

Although we have achieved a greater understanding of cryptomarket specifics, evidence on the consumer side of cryptomarkets is still needed – not only regarding the role of cryptomarkets on individual drug-using careers but also on the motives for buying illicit drugs from cryptomarkets. Moreover, research has indicated that national differences exist regarding different variables relating to cryptomarket use and prevalence, as well as to why users are drawn to these markets. In this chapter, the author presents the results of a Belgian case study focusing on drug cryptomarket buyers. Using an online quantitative survey ( $N = 99$ ) and semi-structured interviews ( $N = 10$ ), we gain exploratory insight into the motives of Belgian buyers sourcing illicit drugs from cryptomarkets and how they believe these cryptomarkets affect their drug-using careers. Results indicate that most of the respondents had bought drugs offline before buying them from cryptomarkets and that the frequency of their drug use did not change once cryptomarkets were accessed. Almost 60% of our respondents, however, consumed different drugs or a wider range of drugs following their cryptomarket use. Furthermore, most of the respondents purchased from cryptomarkets for their personal consumption, and some of them also shared their supply with friends, that is, social supply. The alternative drug offer was the principal reason why they were using cryptomarkets, followed by curiosity and the price and the quality of the drugs. Although

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the respondents in this study were well aware of different risks related to market vendors, market administrators, and law enforcement, these risks were considered to be minimal and part of the cryptomarket environment. The results of this case study are informative and highlight areas requiring further research.

*Keywords:* Drug cryptomarkets; illicit drugs; Belgian buyers; drug acquisition; motivations; risk minimisation

## Introduction

Cryptomarkets<sup>1</sup> offer an unprecedented opportunity to monitor trends in drug markets. Evolutions visible in cryptomarkets may expand our knowledge about emerging new substances, the quality of these substances, and distribution strategies. Insights gathered through monitoring and analysis could identify and guide evidence-informed practices for both the demand and the supply sides (Barratt and Aldridge, 2016; Martin, 2023, Chapter 9).

To date, researchers have gained insight into, among others, the profile of cryptomarket consumers and vendors (Van Hout and Bingham, 2013b, 2014), the drugs purchased (Broséus et al., 2016), and the structure of cryptomarkets (Duxbury and Haynie, 2018a). Many of these studies focus on Silk Road 1.0 (Christin, 2013; Aldridge and Décary-Héту, 2014) and their most well-known successors, such as Silk Road 2.0 and Alphabay (Christin, 2017; Tzanetakos, 2018b). As such, these studies have provided early and general insights into the profile of cryptomarket vendors and buyers (Bancroft, 2023, Chapter 5; Bancroft and Scott Reid, 2016; Barratt et al., 2016; Kowalski, 2019; Van Hout and Bingham, 2013b, 2014). Although we have achieved a greater understanding of cryptomarkets, more detailed insights are required regarding the consumer side of cryptomarkets, including the influence of cryptomarkets on individual drug-using careers but also the motives and rationale for buying drugs from cryptomarkets (EMCDDA and Europol, 2017). Moreover, research has indicated that national differences exist regarding the different variables that relate to cryptomarket use and prevalence, as well as why users are drawn to these markets (Barratt et al., 2014).

Belgian drug policy starts from an integral and integrated approach in which the drug problem is considered a public health matter (Belgische Kamer van Volksvertegenwoordigers en Senaat, 2001). Central in the Belgian drug policy are prevention, treatment, and risk reduction focused on people who use drugs. Repression is seen as a last resort and should target people who are involved in

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<sup>1</sup>Following Martin (2014b, p. 356), we define a cryptomarket as an online forum, located in the dark web (see *infra*), where goods and services are exchanged between parties who use digital encryption to hide their identities.

the production and trafficking of drugs. The Belgian Framework Note on Integral Security (2016–2019) is the first Belgian (drug) policy document that targets the use of new technologies and the Internet to sell drugs and stresses the need to monitor this phenomenon. In-depth scientific evidence on Belgian cryptomarket consumers was, however, lacking. Therefore, in 2019, the first exploratory study<sup>2</sup> on Belgian vendors and buyers active on drug cryptomarkets was conducted (Colman et al., 2020).

In this chapter,<sup>3</sup> we focus on the results of this first Belgian study on cryptomarket buyers, shedding first light on their experiences and motives for using cryptomarkets and how they believe these cryptomarkets affect their drug-using careers. By conducting country-specific research, we might glean further information on national trends and dynamics regarding the demand side, compare it to international findings, and inspire practitioners and policy-makers to draft evidence-informed answers to these new developments.

## **Methodological Approach**

These research questions are answered by using a multimethod approach.

Before starting the data collection process, our research preparation included a passive online presence (Barratt and Maddox, 2016). The two main researchers – one Flemish speaking and one French speaking, with basic knowledge of the cryptomarket environment – initiated their passive presence on different dark web<sup>4</sup> discussion forums and cryptomarkets, as well as on drug-related forums on the clear web,<sup>5</sup> such as Drugsforum.nl, in March 2019. This passive presence offered several benefits. First, it supported us in getting to know the cryptomarket environment. It also provided us with adequate knowledge to be able to do a ‘translation’ of the logic of the participants into a logic that outsiders would understand (Agar, 2011). Second, our passive presence allowed us to stay up to date with events such as law enforcement interventions or the exit of certain cryptomarkets. Furthermore, during this preparation phase, specific attention was dedicated to ethics and the establishment of a data management plan.<sup>6</sup>

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<sup>2</sup>For more information about this study, see Colman et al. (2020). This study focused on the profile of Belgian vendors by scraping three cryptomarkets – Dream Market, Wall Street Market, and Empire Market – and gaining insight into the profile of Belgian buyers by means of a survey and semi-structured interviews.

<sup>3</sup>Parts of this chapter have been published in Colman et al. (2020).

<sup>4</sup>In this chapter, we define dark web as a small part of the deep web that is intentionally hidden and not accessible through standard web browsers but only through specific software such as the Tor browser.

<sup>5</sup>In this chapter, we define clear web as the visible part of the Internet, accessible through standard web browsers.

<sup>6</sup>Further elaboration of the methodological and ethical issues arising from this research may be found in Colman et al. (2020) or by contacting the author to obtain the full report.

Active data gathering by means of distributing the online survey and conducting the semi-structured interviews started in June 2019. To raise our chances for acceptance on the different online platforms, we followed Van Hout and Bingham (2013b) in requesting permission from gatekeepers (platform moderators or administrators) on both clear web and dark web platforms. We introduced ourselves in private messages to these persons, stating our names, affiliations, and research purpose.

First, an online survey was designed through which data on several quantitative variables (see further) relating to drug-using careers and drug-purchasing behaviour was gathered. Our target population consisted of Belgians who had used cryptomarkets at least once to purchase illicit drugs during the previous 12 months. As such, the following selection criteria were present: (i) adults, having the Belgian nationality or living on Belgian territory, who (ii) bought illicit drugs through cryptomarkets at least once during the previous 12 months. We aimed to reach a diverse population regarding drug-using careers and level of engagement with cryptomarkets, among other variables. As such, a purposive sampling method was used to distribute the survey on a range of online clear web and dark web platforms. This approach was in part inspired by the Global Drug Survey (Winstock et al., 2016). The aim was to gather variables that, first, allowed us to sketch the drug-using career of this specific population. A drug-using career was understood as the development of an individual's drug use, often characterised by the stages of onset, habitual use, treatment/relapse cycle, and recovery (White and Comiskey, 2006). Second, we included questions on demographics (Van Buskirk et al., 2016), variables on prior and present drug use (Degenhardt et al., 2001; Secades-Villa et al., 2015), changes in drug source (Barratt et al., 2016), and cryptomarket purchasers' social environment (Moyle et al., 2019). Additionally, contextual variables were identified, such as information sources used by respondents, the prevalence of social or commercial supply, the perceived impact of market disruptions, means of payment, or reasons for vendor selection (Bancroft and Scott Reid, 2016; Moyle et al., 2019; Van Hout and Bingham, 2013b). The online survey, available in English, Dutch and French, was distributed through (i) platforms that were frequented by drug users that were active online, such as reddit/darknet, Dread, Envoy, and The Hub, and (ii) platforms that were frequented by Belgians, such as Drugsforum.nl and Psychoactif.fr. Platforms and subforums in both categories were to be found both on the clear web and the dark web. In the later stage, the survey was distributed through several offline channels in Belgium, that is, by prevention/health/harm reduction services such as Modus Vivendi, Safe 'n Sound, and Quality Nights. A total of 99 responses were received between 17 July 2019 and 11 October 2019. During data collection, the cryptomarket environment experienced some instability. Dream Market ceased its operations at the end of March 2019. The announcement coincided with a statement from EUROPOL that cryptomarket vendors had been arrested and accounts were shut down as part of an international police operation. Less than two months later, Wall Street Market also ceased operation on 3 May 2019 after an exit scam and a law enforcement takedown.

The data were analysed using the statistical software environment R.

Second, semi-structured interviews were conducted to gain more detailed insights into drug use and cryptomarket purchasing behaviour. While the survey provided some initial quantitative insights into the Belgian consumer side, the semi-structured interviews aimed to gain insight into their experiences, rationales, and motivations to buy from cryptomarkets. We aimed to reach the same target population, that is, Belgian citizens or people living in Belgium and who had used cryptomarkets at least once to purchase illicit drugs during the previous 12 months. The interview respondents were principally reached through the online survey. At the end of the survey, information was included about the content and organisation of the semi-structured interviews and asked if respondents were interested in participating. If so, they were asked to send a message via Wickr: 'AlleyToTheWeb' or an email to the principal researcher. Additionally, the call for respondents was distributed through offline channels (the same prevention/health/harm reduction services as mentioned above) by sharing flyers and posters about the study. As such, filling out the survey was not a necessary condition for participation in the semi-structured interviews, nor were the results of the survey used to start or understand the semi-structured interviews.

Ten persons were interviewed. Seven out of the ten respondents learned about the call for participants through the survey in which they had participated, while three respondents were informed about it through other means (either by word of mouth or offline advertisement). Based on the preferences of the interviewees, three interviews took place through Wickr Me voice call, one interview was done through Jabber (an alternative secure instant messaging application), another one through Discord (an instant messaging and digital distribution platform), and the remaining five were conducted face to face. Seven interviews were done in French; the other three were in Dutch.<sup>7</sup> The topic list was based on, among others, previous qualitative studies studying drug use and online drug-purchasing behaviour, experiences, and motivations (see Bancroft and Scott Reid, 2016; Felstead, 2018; Masson and Bancroft, 2018; Van Buskirk et al., 2016; Van Hout and Bingham, 2013b, 2014). The interviews lasted between 50 and 150 minutes. All of the interviews were conducted between 18 September and 14 November 2019.

The interviews were subsequently transcribed. Coding of the transcripts was done using NVivo software. To do so, a codebook was developed based on the previously identified topics informed by the literature. A first round of analysis resulted in 44 different 'nodes', that is, coded themes encountered in the transcripts. These 44 nodes were categorised under a total of eight higher level nodes: (i) demographics and description of participants; (ii) self-presentation of drug use; (iii) interest in drug policy; (iv) activity on the dark web outside of cryptomarkets; (v) drug use (14 sub-nodes); (vi) drug-purchasing practices (23 sub-nodes); (vii) sources of information on use and harm reduction; and (viii) beliefs about the future of cryptomarkets.

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<sup>7</sup>The quotations used in this chapter were translated from Dutch or French to English.

## Results

Our respondents in both the online survey ( $N = 99$ ) and the semi-structured interviews ( $N = 10$ ) consisted of only persons who identified themselves as males. They were mostly in their 20s or 30s and were highly educated and full-time employed. All respondents identified themselves as adults who are Belgian or who are living in Belgium and who had used cryptomarkets at least once to purchase illicit drugs during the previous 12 months.

### *Purchasing From Cryptomarkets and the Drug-using Career*

In the survey and the semi-structured interviews, we asked the respondents how they believed cryptomarkets affected their drug-using careers, including onset, prevalence, frequency, and range of drugs they used.

The median onset age of the 53 survey respondents who identified their onset age was 17 years. Of the 51 respondents who identified their onset illicit drug, 42 (82%) answered 'cannabis'.

Forty-one survey respondents responded to the question whether they had ever bought illicit drugs offline before purchasing online: only 5% of the respondents stated that they had never bought offline before purchasing online. Of the 45 respondents answering the question whether they had recently bought offline, 87% answered positively, indicating that cryptomarkets are not their single source of supply. Respondents indicated in an additional question that of the total amount of money they spent on illicit drugs bought online and offline in the previous 12 months, approximately 55% went to cryptomarket vendors. Of the 45 respondents describing their online purchase behaviour, 62% indicated that they had never bought any illicit drugs over the clear web.

Lifetime experience<sup>8</sup> with illicit drugs ranged from cannabis to opioids and synthetic stimulants. The use of cannabis stood out from the other illicit drug categories. More than 90% of the 67 respondents who answered this survey question indicated that they had used cannabis at least once. More than 50% of the respondents indicated that they had used it on a weekly basis or more often. The categories that follow – XTC, LSD, psychedelic mushrooms, cocaine, amphetamine, and ketamine – were used at least once by 50–70% of our survey respondents, but on a less intensive use pattern – around 10–15% of our survey respondents used these products on a weekly basis.

Recent experience with illicit drug use,<sup>9</sup> that is, any use during the previous 12 months prior to taking the survey, showed similar results. Again, cannabis was a decisive number one: 80% of the 53 respondents who answered this question had used cannabis during the previous 12 months, and more than 50% of our respondents used it on a weekly basis or more often. Fifty to 70% of our respondents had

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<sup>8</sup>For these questions, no reference was made to the source of the illicit drug – all use is included, whether purchased through cryptomarkets or elsewhere.

<sup>9</sup>For these questions, no reference was made to the source of the illicit drug – all use is included, whether purchased through cryptomarkets or elsewhere.

used XTC, coke, and LSD during the previous 12 months, but roughly 10% of them used these drugs on a weekly basis or more often. It is interesting to note that although only around 12% of our respondents had used opioids in the previous 12 months, about 10% of them used them several times a week.

When inquiring about an increase in illicit drug use frequency (Table 6.1), over two-thirds of the 38 respondents who responded to the question stated that there had not been an increase in their drug use frequency. Of the 39 respondents who described the range of substances they used, 59% indicated that the range of substances they had consumed since their first access to cryptomarkets had changed compared to what they had bought offline or on the clear web prior to their first cryptomarket purchase.

Furthermore, we asked the survey respondents to specify what new illicit drugs they had tried since their first cryptomarket access (Table 6.2). First of all, the 20 respondents who had filled in this question had used, on average, 2.65 new illicit substances since accessing cryptomarkets. The principal categories were LSD, 2C-type, ketamine, and cocaine. Around half of the respondents had newly accessed two of these drugs, that is, LSD and 2C-types, for the first time when they bought them from cryptomarkets.

During the semi-structured interviews, all interviewees indicated that they had started using drugs by obtaining their drugs outside cryptomarkets. This could be offline or (sometimes) on the clear web. Most of our interviewees considered the option of cryptomarkets only after they had a certain demand that they wanted to fulfil, that is, either they had already tried a substance and wanted easy access or they had read about it and wanted to try it but were unable to purchase it in the offline world. In many cases, our interviewees had already made a certain effort to find their desired drug in the offline world through, for example, their social network.

Furthermore, many of our interviewees indicated that they started experimenting and trying out other drugs more than before once they started buying from cryptomarkets. This link between cryptomarket access and the use of new drugs should not be too surprising given that most of the interviewees also indicated that the alternative drug offer was exactly the reason why they started using cryptomarkets in the first place (see below). That is interviewees stated that they moved to cryptomarkets because they wanted to consume substances like LSD, ketamine, or 2C-b, which were difficult to obtain through traditional channels.

Table 6.1. Self-assessment Changes in Drug Use.

Self-assessment Changes in Drug Use		
	No. of Responses	%
<b>Increases drug use since cryptomarket use (<i>N</i> = 38)</b>		
Yes	12	32
No	26	68
<b>Different drugs used than before cryptomarket use (<i>N</i>=39)</b>		
Yes	23	59
No	16	41

Table 6.2. New Drugs Used Since First Time Purchase From Cryptomarkets.

New Drugs Used Since First Time on Cryptomarkets ( <i>N</i> = 20)		
	No. of Responses	%
LSD	12	57
2C-x	10	48
Ketamine	5	24
Cocaine	4	19
Shrooms	3	14
MDMA/XTC	3	14
DMT	3	14
Amphetamine	3	14
Mescaline	2	10
RCs/NPS	2	10
Opioids	2	10
GHB	2	10
Benzo's	2	10
Ritalin	1	5

*Multiple responses allowed.*

Interviewees' offline channels were mostly used for cannabis and, to some extent, for other classic illicit drugs like ecstasy, cocaine, or amphetamines:

It hasn't increased in terms of frequency, but I must say that it has changed when it comes to the type of substances. (Mathieu,<sup>10</sup> 2 years of cryptomarket experience)

Others state that initial offline use of a specific drug, combined with relatively easy access through cryptomarkets, seems to have led to accessing the drug again through cryptomarkets:

The dark net has never drawn me to consume a different drug, but in the beginning, I would for example, only buy MDMA (online), and at that time I did not yet use cocaine. One day, friends pushed me and insisted (to use cocaine), and I gave in and I consumed cocaine for the first time. Afterwards I have been buying cocaine from the dark web because it is easier and less... maybe not cheaper but easier. (Simon, 2 years of cryptomarket experience)

<sup>10</sup>All names are changed to protect the identity of the interviewees.

### *Reasons for Belgian Buyers to Purchase From Cryptomarkets*

Forty-eight survey respondents responded to the question why they started buying from cryptomarkets (Table 6.3). The answers reflected motivations ranging from the offer (60%), curiosity (52%), and the price of the drugs (52%). In contrast, perceived anonymity from law enforcement was only a prime consideration for 31% of respondents, and only 23% mentioned perceived anonymity from others.

During the semi-structured interviews, interviewees clarified that their initial cryptomarket use was motivated by the possibility to buy substances that are difficult to find outside of cryptomarkets. They emphasised that they continued buying from cryptomarkets due to this large selection but also because of the perceived high drug quality (mostly expressed in terms of drug purity) and the competitive prices (particularly for MDMA/ecstasy). They also indicated a preference for ordering from vendors located in Belgium or neighbouring countries due to the perceived risk of not receiving the order when the parcel has to pass many borders:

Let's say you want to buy 2C-b: good luck finding it on the streets, and good luck that it is going to be (good)... That the guy doesn't sell you something totally different. (Axel, 3 years of cryptomarket experience)

When buying ecstasy pills there is already a clear difference between buying a pill at a party and buying it in advance online [...] But there are products for which the margins are even bigger. I have bought MDMA in crystal form offline several times, where the price was usually around €30 to €40. But on the dark web, the price is between €2 and €10. (Jérôme, 1 year of cryptomarket experience)

Table 6.3. Reasons to Start Buying From Cryptomarkets.

<b>Reason to Start Using Cryptomarkets (<i>N</i> = 48)</b>		
	<b>No. of Responses</b>	<b>%</b>
The offer	29	60
Curiosity	25	52
The price	25	52
Ease of use	20	42
Review system	18	38
Service offered	16	33
Anonymity from LE	15	31
Anonymity from others	11	23
Other	6	13

*Multiple responses allowed.*

Survey respondents generally evaluated their cryptomarket purchases more positively than their offline ones, although they did not seem negative about their offline buys. Of the 40 respondents who answered this question, 13% evaluated their offline purchases as mostly negative to very negative; 51% evaluated their offline drug purchases as mostly positive to very positive, while 9% evaluated their cryptomarket purchases mostly negative to very negative and 84% evaluated their cryptomarket drug purchases as mostly positive to very positive.

### ***The Perceived Influence of Market Disruptions on Buying Behaviour***

The survey also included questions on the perceived influence of market disruptions, specifically regarding the disruptions that occurred between March and May 2019, as discussed in the ‘Method’ section (see *supra*). Survey respondents were asked how these events had influenced their behaviour so far and what influence it might have on their future behaviour.

Table 6.4 summarises the perceived influence the market shocks had on participants’ past illicit drug use behaviour. The overwhelming majority of the 29 respondents who answered this question indicated that they continued to use drugs despite these recent market shocks.

Table 6.5 suggests, however, that the market shocks did have some influence on their purchase behaviour. Most of the 29 respondents who answered this survey question did not transfer to alternative, non-cryptomarket channels after these events: 62% of the respondents continued to buy from cryptomarkets; the other 38% had not bought any illicit drugs at all since the market disruptions (14%) or bought through non-cryptomarket platforms offline or on the clear web (24%).

In the semi-structured interviews, the interviewees clarified that they generally feel safe when purchasing their substances from cryptomarkets. Reading about

Table 6.4. Perceived Influence of Market Shock on Drug Use.

<b>Effect of Market Shock on Drug Use (<i>N</i> = 29)</b>		
	<b>No. of Responses</b>	<b>%</b>
Same drugs, same frequency	23	79
Different drugs, higher frequency	2	7
Different drugs, lower frequency	1	3
Same drugs, lower frequency	1	3
Same drugs, higher frequency	1	3
Different drugs, same frequency	1	3
No drugs since	0	0

Table 6.5. Perceived Influence of Market Shock on Drug Purchase.

Effect of Shock on Drug Purchase ( <i>N</i> = 29)		
	No. of Responses	%
Different cryptomarket	10	34
Same cryptomarket	8	28
No purchase whatsoever	4	14
Same offline dealer	4	14
Same clear web platform	1	3
New offline dealer	1	3
New clear web platform	1	3

the purchasing process and experiences of other buyers through different platforms, most prominently Reddit and Dread, seemed to help them feel secure from the outset.

Nonetheless, the interviewees cited several risks that may occur while buying from cryptomarkets, although these were perceived as rather small. The perceived risks identified by our interviewees could be classified into three categories: risks from market vendors, risks from market administrators, and risks from law enforcement.

First, they stressed the risk of engaging with a ‘malicious vendor’, who might provide a different substance than expected, blackmail (doxing) the buyer by threatening to expose personal details online or act fraudulently by receiving the payment but not sending the product. Despite the escrow system that is used to prevent this last threat, one respondent noted that disputes are more likely to be resolved in favour of the vendor.

Second, the interviewees considered the market administrators as another risk factor. All interviewees were aware of so-called exit scams by market administrators in which the administrator shuts down the market and confiscates users’ money that is pending for payment. This risk of exit scams was considered a realistic part of the online buying process:

About exit scams – well, I’d say it’s the risk one runs, as it is illegal so what can you do? If they can make a bit more dough to the detriment of others, why not? I don’t think it is really an environment where there is much moral consideration, so, well ... I think the whole game is worth it ... these are the risks. (Jérôme, 1 year of cryptomarket experience)

Third, regarding risks posed by law enforcement, all interviewees stressed that they considered this risk as low. Specifically, they felt that police forces in Belgium do not prioritise this type of offense. They also believed that Belgian law

enforcement is not sufficiently resourced to effectively follow up on smaller drug offenses,<sup>11</sup> even if their priorities had been different:

I think that law enforcement won't be wasting their time on a kid like me, a kid spending €50 a month on drugs. I think the infrastructure they would need to capture someone like me would be counter-productive and completely inefficient. (Axel, 3 years of cryptomarket experience)

You can never be sure; it's possible, but I order such small quantities and for personal use that Belgian police, who are already understaffed, that they won't be dealing with a minor player like me. If they do [catch me], well, then let them do their thing and I'll undergo my sentence even though I don't agree. (Jef, 4 years of cryptomarket experience)

When discussing aspects of security, several interviewees stated that they were only basically up to date regarding the latest dark web security developments. Others did know about the possible range of measures to hide their actions and transactions, yet they chose to implement only minimal security features. All participants were aware that they could do more than they were actually doing to maximise their security:

Ah, well, it's very basic. I exchange money to cryptocurrency, and that's pretty much it. I truly should [do more], really, but .... You know, people have often told me to [improve security measures], but I don't even use a VPN or anything. (Mathieu, 2 years of cryptomarket experience)

### *Personal Use or (Social) Supply of Drugs*

Of the 38 survey respondents who identified for whom they buy drugs, all but one indicated having bought at least for themselves (Table 6.6). Around half of the respondents ( $N = 21$ ) indicated that they also buy for their friends or family.

Thirty-seven survey respondents identified how much money they spent on cryptomarkets. The median amount spent on cryptomarket drug sales by the survey respondents is €250 to €500 over the previous 12 months. Most respondents (30%) had spent between €100 and €250 on cryptomarkets over the previous 12 months. However, 21% of the respondents had spent more than €1,000 in the previous 12 months – 16% between €1,000 and €5,000 and 5% over €5,000.

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<sup>11</sup>All interviewees indicated that they buy from cryptomarkets for personal use and that they often share it with friends (see *infra*).

Table 6.6. Beneficiaries of Purchases.

<b>Purchases: For Whom (N = 38)</b>		
	<b>No. of Responses</b>	<b>%</b>
Myself	37	97
Friends	20	53
Clients	4	11
Family	1	3
Other	1	3

*Multiple responses allowed.*

Combining the drug beneficiaries and the money spent, we found out that from the four respondents who had (also) purchased drugs for resale to clients – two respondents had spent between €1,000 and €5,000; one respondent had spent over €5,000 during the previous 12 months.

Of the 42 respondents answering the question on the frequency of their cryptomarket purchases, most of them (45%) indicated that they had bought only once or a few times, whereas 31% had made a purchase every two to three months and 7% had bought on a weekly basis or more often during the previous 12 months.

In the semi-structured interviews, all interviewees clarified that they principally buy from cryptomarkets for personal use and that they often share the drugs they purchased with friends (i.e. social supply; Coomber et al., 2016). Most of these friends did not know that the drugs were bought from cryptomarkets, as sharing this information was not considered important for the respondents. When asked whether they had thought about moving to commercial supply, several respondents replied that they had thought about it. Substances such as ecstasy were deemed to be much more financially rewarding, that is, an interesting price-quality ratio, when sourced on cryptomarkets. Yet for many there was a clearly defined red line between sharing with friends and selling for commercial reasons:

It's not my thing, it's really not my thing .... To me it's a bad idea because it's also about meeting people who are perhaps addicted, who are really dependent, and you never know how someone who is very dependent, how they might react. So no, that's always been a no go. (Simon, 2 years of cryptomarket experience)

One interviewee shared this idea and also explained his reason for sharing his supply with friends. He stated that on certain nights out, his friends would be using anyway, and if he did not provide them with drugs, they might buy 'some unknown, expensive white powder, somewhere in a shady warehouse' (Maxime, 10 months of cryptomarket experience).

## Discussion

### *Drug-using Careers of Belgian Buyers on Cryptomarkets: Looking for a Different Menu*

Aldridge et al. (2017) indicate that cryptomarkets might influence drug careers in several ways: customers may gain access to drugs not otherwise available to them locally, cryptomarkets may make drugs available to those who would otherwise not have accessed them through offline markets, or cryptomarket customers may intensify their use.

The Belgian case study illustrates that 95% of the survey respondents had bought drugs offline before buying from cryptomarkets. Additionally, the semi-structured interviews revealed that all respondents considered the option of cryptomarkets only after they had a certain demand that they wanted to fulfil. That is, either they had already tried a substance and wanted easy access through cryptomarkets or they were interested in trying out a substance but were unable to purchase it through traditional channels. This finding relates to other research results (e.g. Winstock et al., 2019) stating that 95% of buyers have consumed drugs prior to turning to cryptomarkets and the fact that most cryptomarket customers have consulted offline markets before turning to cryptomarkets (Bancroft and Scott Reid, 2016; Barratt et al., 2016; Kruithof et al., 2016). For a small subgroup, however, the use of cryptomarkets marked the onset of drug use (Aldridge et al., 2017; Winstock et al., 2019).

Moreover, it seems that for most of the Belgian respondents, the frequency of drug use did not change once cryptomarkets were accessed. Based on our exploratory case study, we could, however, state that cryptomarkets may function to increase the range of drugs used at an individual level. More than half of the respondents were led to taking new, different drugs or a wider range of substances concurrent to their cryptomarket use. For some, cryptomarkets' easy access might have acted as a magnifying element to use a certain substance they had previously accessed offline. However, around or over half of the respondents accessed these products – in particular LSD and 2C-types – for the first time when they bought them from cryptomarkets. The survey indicates that respondents use on average 2.65 new drugs since discovering cryptomarkets. The principal drug categories are LSD, 2C-types, and, to a lesser extent, ketamine and cocaine.

Research on how cryptomarkets affect drug trajectories shows similar results. Based on 17 interviews with illicit drug buyers on Silk Road, Barratt et al. (2016) reported that respondents increased their use and tried new drugs in their first months using cryptomarkets, described as 'the honeymoon period'. However, due to the high availability, the need for drug hoarding and buying larger quantities decreased after some time. In the 2019 edition of the Global Drug Survey (Winstock et al., 2019), 31.1% reported accessing a wider range of drugs than they previously had and 10.1% reported having consumed a different class of drugs than previously. Similarly, the study by Barratt et al. (2016) revealed that a 'greater range' was key in their decisions to source drugs from cryptomarkets.

In their narrative review of literature connected to drug cryptomarkets, Aldridge et al. (2017), therefore, conclude that cryptomarkets are likely to provide a new mechanism for the diffusion of specific drugs into new locales in which they were previously unavailable.

***Belgian Buyers: Buying for Personal Consumption, But Willing to Share***

First of all, it became clear that for most of the Belgian survey respondents, cryptomarket purchases were not their single source of supply as 87% of them had recently also bought drugs offline. From the total amount of money spent to buy drugs either online or offline, approximately 55% was attributed to cryptomarket purchases. The majority of their cryptomarket transactions during the previous 12 months fell within the lower price ranges, that is, between €100 and €250. The median amount spent during the previous 12 months on cryptomarket drug transactions by the Belgian survey respondents is €250 to €500. However, 21% of the respondents had spent more than €1,000 in the previous 12 months. Based only on the price of a transaction, it is not possible to determine whether the purchase is intended for personal consumption only or for resale. Some researchers (Aldridge and Décary-Héту, 2016) indicate that the higher the price of a drug transaction, the more likely it is that these transactions are intended for offline sales, that is, offline drug dealers buying stock or commercial social supply. Transactions above US\$1,000 (around €1,000) are often categorised as wholesale transactions (Aldridge and Décary-Héту, 2016). Therefore, an additional question aimed to discover more about the purpose of their sales. Ninety-seven percent of the survey respondents (also) bought for their own use. More than half of the survey respondents indicated they also bought for friends and 11% for clients. Fifty percent of the survey respondents who had indicated they also buy for clients had spent between €1,000 and €5,000 in the previous 12 months; one of them had spent over €5,000 in the previous 12 months. Furthermore, it is also important to mention that only 24% of the survey respondents indicated that they had bought on at least a monthly basis during the previous 12 months; 45% of the respondents indicated that they had only purchased a few times from cryptomarkets in the previous 12 months.

During the semi-structured interviews, we gained more detailed insights into the purpose of their sales. Nine out of ten Belgian interviewees indicated that they are reluctant to transition to commercial supply. They indicated that they often share their supply with friends, primarily when going out. By doing so, the interviewees believed that they provide their friends with drugs in a (perceived) safer way and a less risky environment than acquiring through offline, traditional channels. The friends they shared their drugs with are mostly not aware of their source of supply, even though the respondents were not actively hiding this information. Only one respondent shared his cryptomarket experiences with friends, although his friends did not seem to be interested in this information.

As such, based on our exploratory case study, we emphasise that most of our respondents purchase from cryptomarkets for their personal consumption, and some of them share their supply with friends, that is, social supply.

These results are consistent with findings from international research, although some authors (Aldridge and Décary-Héту, 2014) stress the potential of cryptomarkets to stimulate innovation and change in drug markets, for example, how retail and middle levels are organised. Several studies suggest that the majority of cryptomarket purchases are for smaller amounts, likely intended for personal consumption or social supply (Christin, 2013; Demant et al., 2018b). Higher drug transaction prices could indicate that customers buy for a group to make up for the time to purchase the product (i.e. buying cryptocurrencies, browsing online for a seller, arranging the sale) and handle the risk of interception by customs by buying a larger amount of drugs at once instead of smaller amounts on multiple occasions (Demant et al., 2018b). However, the most revenue is generated from larger quantities. Based on a quantitative study of Silk Road 1.0, Christin (2013) found that most purchases involved small amounts, suggesting personal use rather than drug dealers sourcing stock, although Aldridge and Décary-Héту (2014) indicated that many Silk Road customers were also drug dealers and that Silk Road should have been characterised as ‘the very location for the middle level of the drug market [...] as a virtual broker, connecting upper, middle and retail level sellers’ (Aldridge and Décary-Héту, 2014, p. 27). Demant et al. (2018b), who have crawled Agora Marketplace and Silk Road 2.0, found that the majority of sales on Silk Road 2.0 and Agora fell within lower price ranges, although a significant part of the revenue occurred in price ranges that might suggest business-to-business dealing.

### ***Motivation to Buy From Cryptomarkets: The Offer Is Key***

Following the Belgian survey respondents, the principal reasons to start buying from cryptomarkets were because of the broad range of offerings (60%), followed by curiosity (52%), and the price (52%) of the drugs. In contrast, anonymity from law enforcement was only a prime consideration for 31% of respondents, and anonymity from others was only 23%. Security concerns, in other words, did not seem to be a principal driver for respondents to start buying drugs on cryptomarkets.

During the semi-structured interviews, more information was obtained regarding their motivation to buy from cryptomarkets. The interviewees stated that they started to use cryptomarkets because they wanted to use specific types of drugs that were hard to find through traditional channels (including new psychoactive substances). The interviewees additionally mentioned the reasons they continued their cryptomarket purchases – namely, high drug quality (mostly expressed in terms of drug purity), the competitive prices (particularly for MDMA/ecstasy), and the large offer of different drugs that are difficult to find elsewhere.

International research indicates that several benefits make people turn to cryptomarkets. Customers can compare information about the quality and the type of drugs, prices, and vendors thanks to the transparency of cryptomarkets (Tzanetakіs, 2018b). Following international scholarship, the leading reasons for

people buying from cryptomarkets are the price (Ormsby, 2016), product quality (Kowalski et al., 2019), and – as mentioned earlier – the wide range of products (Barratt et al., 2014; Van Hout and Bingham, 2013b), including the availability of their drug of choice (Ormsby, 2016). The study by Barratt et al. (2016) also revealed that a ‘greater range’ was key in their decisions to source drugs from cryptomarkets. Participants from samples across Australia, the UK, and the USA indicated the wide range of products as their main reason for purchasing drugs on cryptomarkets, among other motivations such as the convenience of purchasing drugs online and the quality of the products.

It is, however, important to keep in mind that ‘product quality’ could entail multiple meanings such as chemical purity, potency, or predictability of effect and could be studied in different ways, that is, by interviewing buyers assessing the quality of the drug they bought online or by actually testing online samples (Bancroft and Scott Reid, 2016). Similar to the respondents in our study, all participants in the study by Bancroft and Scott Reid (2016) assessed the product quality on cryptomarkets as reliably good. Due to some specifics of the cryptomarket environment (e.g. the product description, the review system, and the payment method, i.e., escrow), cryptomarket vendors might be more accountable to their customers and more likely to sell ‘as-advertised’ substances rather than substitutes or substances with lower drug purity (Aldridge and Décary-Héту, 2014). A one-year pilot project (2014–2015) testing 219 samples from drugs purchased from cryptomarkets revealed that the results of the analysis matched the advertised substance in 91.3% of the samples (Caudevilla et al., 2016). In addition, purity levels (i.e. the proportion of the active principle present in a sample) were high. Furthermore, no adulterants were found in MDMA and LSD samples.

Moreover, all interviewees indicated that they preferred ordering from vendors located in Belgium or neighbouring countries. This result confirms the increased preference for regional shipments rather than global ones, as described in the literature (Tzanetakis, 2018b). Possible explanations are risk aversion strategies and the fact that cryptomarkets are capable of satisfying local demand. In our study, this preference was particularly related to the perceived risk of not receiving the order when the parcel has to pass many international borders.

### ***A Rather Careless Attitude Towards Risks Related to Cryptomarket Use***

The Belgian case study indicated the respondents are well aware of the diverse range of risks, yet they perceived the risk as low. Generally speaking, they feel safe when buying from cryptomarkets. The risks identified by our respondents could be classified in three categories: risks from market vendors, risks from market administrators, and risks from law enforcement.

Similar to the results of other studies, the main risk, according to our respondents, was losing money due to scams, yet this was perceived as a calculated risk and a price they might pay for the convenience of ordering online. Market disruptions (such as exit scams or closedowns due to law enforcement actions) did not seem to negatively impact the Belgian respondents, as most did not transfer to

non-cryptomarket channels but continued to buy from cryptomarkets. Threats from law enforcement were seen as minimal by our respondents, who mainly ordered smaller amounts. Specifically, they assumed that police forces in Belgium do not prioritise the investigation and prosecution of smaller drug offences. They also stated that Belgian law enforcement actors are not sufficiently resourced to effectively tackle this phenomenon. Indeed, this lack of specialised knowledge, resources, and investigation capacities to respond to new cybercrime-related offences has been highlighted already in Belgian research, including by law enforcement actors themselves (Colman et al., 2018).

Although we hypothesised that operational security would be a central focus for our Belgian cryptomarket (Gehl, 2018; Van Hout and Bingham, 2013b), most of the respondents did not focus on security aspects and only took advantage of basic security features offered by the platform itself (i.e. the use of Tor, encrypted messaging, paying in cryptocurrencies). This observed minimal use of security-enhancing features by most of our respondents is not surprising given the results indicated above. After all, research has suggested that differences might exist in the focus on operational security relating to the specifics of a national drug policy and the (perceived) effectiveness of law enforcement in tackling this phenomenon (Barratt et al., 2014).

Thanks to their potential to distribute illicit drugs beyond vendors' physical environment, cryptomarkets could provide a (relatively) anonymous and (perceived) safe platform for illicit drug trades in comparison to offline trade (Aldridge et al., 2017; Tzanetakis, 2015). Although cryptomarkets have the potential to minimise risks and harms, different and other types of risks could occur on cryptomarkets compared to offline drug markets, such as loss of money, (exit) scams, seizure by law enforcement actors, or other types of violence, including doxing (Barratt et al., 2016). Yet, research indicates that there is a (perceived) low level of risk associated with illicit drug trade on cryptomarkets (Barratt et al., 2016). Aldridge et al. (2017) indicated that cryptomarket buyers reported fewer threats to personal safety and less violence than reported in connection with offline sourcing through known dealers, strangers, and even friends. Research conducted by Barratt et al. (2016) showed that a high number of participants reported more threats to their personal safety when they obtained drugs through alternative drug sources such as in-person dealers or open markets. The study also showed that respondents experience higher levels of physical violence while obtaining drugs through offline sources. In addition, market disruptions do not seem to have a significant impact on the perceived level of risk or buying behaviour, which might be explained by the ability of these markets to adapt and refine their operations (payment methods, delivery options, and security systems).

## **Limitations**

The chosen study design entailed some limitations. First, we want to stress the explorative nature of the study, and the online survey in particular. The participants had the choice whether to reply to a certain question or not. As a result, the number of respondents differed by question. Out of the 99 surveys received,

approximately 40 surveys were complete. When referring to the survey, the number of respondents who answered a certain question was mentioned in the text.

Second, the total sample (of both the online survey and the semi-structured interviews) is biased towards respondents identifying themselves as males, making gender-based analyses impossible. Most studies on drug cryptomarkets start from an all/mostly male sample, identifying the cryptomarket environment as being a male-dominated environment (Barratt et al., 2016). As discussed by Fleetwood et al. (2020), the experiences of female buyers and the gender perspective are sometimes absent from these publications, which may lead to unsupported beliefs regarding gender and cryptomarket activities (see Fleetwood and Chatwin, 2023, Chapter 8). Even though most buyers (and vendors) on drug cryptomarkets are men, this study failed to involve women and could have included specific strategies to attract them, such as specifically addressing women in our recruitment process, that is, including a statement in our flyers, posters, and interactions with online/offline gatekeepers that we are particularly interested in including female voices in our research.

Third, the participants' drug-using careers cannot be compared sufficiently to any statistics of drug use in the overall Belgian population. For one, it is uncertain to what degree the sample represents all Belgian cryptomarket users. While there is evidence that suggests purposive sampling surveys can give an approximation of the results achieved by standard household surveys (Barratt et al., 2017), and research is available on drug use in Belgian society (Gisle, 2019; EMCDDA, 2018), there is no detailed information on the degree of cryptomarket use within wider Belgian society. Without this connecting parameter, no detailed comparison can be made. Despite these limitations, the results are informative and highlight areas requiring further monitoring.

## **Conclusion**

This chapter focused on describing the main findings on the profile and motivation of Belgian cryptomarket buyers. In general, the Belgian results mostly correspond to international findings on cryptomarket buyers and reveal several overarching patterns.

First, as demonstrated by international research, the use of cryptomarkets did not mark the onset of drug use for most of the Belgian respondents, as most of them had used drugs before purchasing on drug cryptomarkets. In addition, the frequency of drug use did not change once cryptomarkets were accessed. Similar to international findings, the range of drugs used did change at an individual level, however. More than half of the Belgian respondents took new, different drugs or a wider range of substances following their use of cryptomarkets. This is not surprising given the fact that the alternative drug offer is the principal reason why they are using cryptomarkets in the first place. However, it remains crucial to invest in (longitudinal) multimethod studies to gain a comprehensive view of this phenomenon. While these cryptomarkets continue to grow, we need more longitudinal research with substantial follow-up periods to adequately understand the influence of cryptomarkets on drug-using careers.

Second, the results indicate that most of our Belgian respondents purchase from cryptomarkets for their personal consumption, and some of them share their supply with friends. These results are also consistent with international research, although some debate exists concerning cryptomarkets as a business-to-consumer model rather than a business-to-business model. To date, research generally assumes that business-to-business distribution generates most of the revenues, although most of the transactions could be linked to business-to-consumer distributions, including social supply. More research is needed to unravel how cryptomarkets relate to and impact the different levels of the (offline) drug market, that is, production, wholesale, middle level, and retail.

Third, the results indicate that our respondents feel safe buying from cryptomarkets. The respondents indicate that they are aware of the diverse internal and external risks, though they perceive the risks as low. While other research indicates that cryptomarket users generally focus on operational security, our research indicates that the Belgian respondents follow only some basic security rules inherent to the cryptomarket environment. This relates to the fact that they consider scams by market vendors and administrators as calculated risks and perceive threats from Belgian law enforcement as minimal due to the latter's lack of expertise and resources and the fact that (small) cryptomarket sales are not considered a priority for investigation and prosecution.

This research provided a first glance into the profile of Belgian cryptomarket buyers and their motives to buy online. Although only a small percentage of drug users purchase their drugs from cryptomarkets, illicit drug trade on cryptomarkets is on the rise and has the potential to develop further. As such, it is interesting to monitor and study drug cryptomarkets to enhance our knowledge of drug demand and supply, including emerging new drugs, the quality of drugs, the rationale/motives for buying from cryptomarkets, and distribution strategies, leading to evidence-informed policies and practices. Furthermore, it is advisable to keep investing in country-specific data monitoring and research. After all, it has been stressed that national differences might exist regarding variables relating to cryptomarket use and prevalence, as well as to why users are drawn to these markets, urging tailored national responses.

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Part III

## **Power Relations**

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## Chapter 7

# Cultural Politics, Reciprocal Relations, and Operational Agility in Online Drug Markets

*Nicolae Craciunescu and Nigel South*

### Abstract

Cryptomarkets or darknet marketplaces host multiple ‘vendors’ selling a variety of illicit products. The most sold and sought products on such markets are illegal drugs. These markets use cryptocurrencies as a payment system and provide participants with anonymity through their location on the dark web, and in recent years they have seen continuous growth in revenue and exchange. Existing literature has provided various explanations for this growth, but in 2017 the European Monitoring Centre for Drugs and Drug Addiction and Europol concluded in their 2017 ‘Drugs and the Darknet’ report that current interpretations of trends are not sufficient. This chapter will provide an alternative explanation for this phenomenon by considering web-based drug selling and purchasing in terms of trends towards ‘Uberisation’ and ‘McDonaldisation’ and applying Bourdieu’s concept of cultural capital to the discussion of the dynamic cultures of consumption and different subcultures of the drug world.

*Keywords:* eBayisation; Uberisation; McDonaldisation; cultural capital; rituals; drug cultures

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## Introduction

The marketing of 'drugs' is usually concerned with either medicinal preparations or chemical compounds consumed primarily for hedonistic purposes and their physiological or psychological effects. Both these categories are controlled by laws through either medical prescription or legal proscription, and discursive practices of pathologisation and criminalisation reflect the hegemony achieved by the medicalisation of drugs, making it difficult for drug consumption to be described in terms other than those of medicine or epidemiology (Maitena et al., 2011). This tends to exaggerate the importance of individual characteristics compared to socio-cultural factors such as contexts and cultures of exchange, supply, and consumption. This chapter considers studies of cryptomarkets in terms of a cultural approach to the study of drug consumption and marketing in the digital age and argues that cryptomarket vendors are predominantly individuals with cultural capital belonging to the different subcultures of the drug world rather than the criminal or street culture, but they are not a homogeneous 'group' and instead reflect different motives and styles regarding activity on the dark web.

## Background

According to Decorte (2011), the scientific paradigms, methods, and tools that have dominated the study of drug use and addiction – epidemiology, psychiatry, neurobiology – have tended to individualise and de-contextualise the cultural patterns of drug consumption, making psychoactive substances 'culturally innocent'. This 'pharmacocentrism' led to a marginalisation of other approaches to the study of drug use (such as anthropology, sociology, history, and cultural and gender studies). The study of markets is also dominated by a particular disciplinary approach, in this case, economics, and relatively few studies have been done thus far on actors' motives and choices regarding the use of cryptomarkets from a sociological or cultural rather than economics perspective (Dwyer and Moore, 2010; Moeller, 2018). In cryptomarket studies (EMCDDA & Europol, 2017), early socio-cultural perspectives focused on the now-closed Silk Road site, the first such marketplace (Barratt et al., 2014; Van Hout and Bingham, 2013a, b, 2014), which was representative of a population that was interpreting their activity as a form of socio-political movement (Maddox et al., 2016; Munksgaard and Demant, 2016). Studying drug markets from a cultural perspective has been fruitful in various ways (Autio et al., 2016; Collins, 2011; Duff, 2003b; Hunt et al., 2011; Moeller and Sandberg, 2019; Pilkington, 2007; Sandberg, 2012, 2013a; Sandberg and Fleetwood, 2017; South, 1999a), and this chapter draws on this work.

In terms of methods, as Ritter (2006, p. 454) notes, taking an ethnographic or qualitative approach to understanding drug markets illuminates their complexity, fluidity, and the processes of change related to interactions with competitors, consumers, and law enforcement (see, e.g., Dorn et al., 1992). Furthermore, the 'rich descriptions of diverse drug markets in constant change' that are produced can

provide salutary lessons for other disciplines. For example, economists trying to specify the elasticities of supply and demand may need to exercise caution in specifying the market type and timeframe. (Ritter, 2006, p. 454)

Attempts to ‘delineate differences’ between ‘types’ of drug dealers or markets can, according to Potter (2009, p. 52), ‘gloss over the complexity of drug distribution and the overlap and interplay between what come to be seen as different patterns of supply’, and this applies to the digital marketplace as much as the offline market.

Financial resources are still the key to being able to consume and the levels at which this can be engaged, but by bringing to a screen on a laptop or desk items that may previously have been out of reach (for reasons of geography or fear of contact with ‘undesirables’ – criminals or police), cryptomarkets join the wider (legal) market moves towards making home shopping and doorstep deliveries a normalised activity (even more so as a result of retail changes responding to the COVID-19 pandemic). Here, we do not refer to drug purchase and use as necessarily ‘normalised’ in a ‘static’ sense (Pennay and Measham, 2016), but rather as a part of dynamic cultures of consumption, playing a role in identity construction processes alongside other consumption practices that may otherwise be licit (Askew, 2016; Duff, 2003a; South, 2004). This reflects a cultural (South, 1999b) or differentiated (MacDonald and Marsh, 2002) normalisation, reflecting the high volume of practices, references, and imagery concerning drugs and drug consumption across the social landscape and everyday discourse. The construction of identity or the ‘self’ through consumer goods and branded commodities is partly enabled by the values and properties attributed to these goods through cultural politics, reciprocal relationships between consumers, marketing, and brand management. This chapter aims to explore how such processes have helped to shape cryptomarkets.

In the following sections, we first discuss the connection between consumer culture, branding, digital information systems, and the countercultural movement of the 1960s and 1970s and parallels with (at least the beginnings of) the cryptomarket scene. We then move to the development of darknet marketplaces and analyse some of the main elements they are comprised of. Finally, we outline how the cultural study of drugs has proven fruitful and how this could be applied to cryptomarket studies.

## **History: From Counterculture to Cyberspace**

Going back to the libertarian beginnings of cryptomarkets, when the Silk Road was formed of a population of ‘natives to digital cultures such as gamers, cypher-punks, cryptonerds, phreakers and cyber-libertarians’ (Maddox et al., 2016, p. 115), drug consumption may have also played a role in the identity construction processes of these actors who were spending more of their time in online communities. This online environment provides emotional excitement and chains of interaction (Collins, 2004, 2011), enabling the sharing of drug experiences under

conditions of perceived anonymity without the social stigma that might affect users sharing such information in their offline social circles. Using the online environment as a means to ‘build a new world’ in combination with the ideas revolving around drug consumption (Maddox et al., 2016) is, however, not a new phenomenon. The hackers and radical political activists of the counter-cultural movement of the 1960s were among those who inspired and shaped the creation of the personal computer industry (Markoff, 2005) and the world of information we live in today (Collier et al., 2021, pp. 2–3).

The research culture of the military–industrial complex that emerged during World War II continued its growth through the Cold War era and was, in many ways, ideologically narrow and myopic. However, it was also open to new, interdisciplinary, free-wheeling, and highly entrepreneurial styles of work and willing to embrace new organisational concepts, such as seeing institutions as living organisms, webs of information, and social networks. In the same period, the developing ‘counterculture’ represented a rejection of the conservative values and authority of the military and corporate power elites and celebrated the idea of transcendence – that limits could be challenged (Reich, 1970). This was expressed in critiques of the influence of what Reich (1970, p. 88) called ‘the corporate state’, which encouraged artificiality and untruths and wasteful or fraudulent ‘boondoggle’ projects of big business and government (Markoff, 2005, p. 126). Calls for new ways of living and interacting led to experiments in creating alternative spaces and rural communities, to rejecting traditional political mechanisms and the corporate or industrial ‘low tolerance’ of ‘truths that challenged the mission or profits of the company’ (Markoff, 2005, p. 188), and a turn to holism rather than systems that required psychologically fragmented specialists (Turner, 2006). Importantly, in terms of tracing the legacy of the cultural politics being formed at this time, today we can see ‘curious mutations of the California counterculture’ (Shaw, 2021) in the visions and ambitions of various modern libertarians such as Peter Thiel (2009), founder of Paypal and co-founder of the CIA-backed big data start-up Palantir (which nowadays offers data-mining services to law enforcement agencies, resulting in racial profiling), who has championed online market culture as a space of freedom and criticised state sovereignty over people and places.

According to Markoff (2005), the seeds of today’s digital culture were planted in the LSD scene of the 1960s counterculture, providing the thread of continuity to the idea of embracing a means to achieve disembodied experiences that could unite the world through interconnectedness in a space outside consciousness (Markoff, 2005). Other actors involved at this moment and movement were radical entrepreneurs interested in forming information networks with researchers, hackers, and the rural communes, which led to significant developments in science, technology, and business models. For those involved in these networks of hippies, entrepreneurs, hackers, engineers, and social scientists, the Internet or cyberspace was an idea that was supposed to

flatten organizations, globalize society, decentralize control, and help harmonize people. States too would melt away, their citizens lured back from archaic party-based politics to the ‘natural’ agora

of the digitized marketplace. Even the individual self, so long trapped in the human body, would finally be free to step outside its fleshy confines, explore its authentic interests, and find others with whom it might achieve communion. Ubiquitous networked computing had arrived, and in its shiny array of interlinked devices, pundits, scholars, and investors alike saw the image of an ideal society: decentralized, egalitarian, harmonious, and free. (Turner, 2006, p. 1)

The personal computer, and later the Internet, were to be tools of liberation from the static, corporate-controlled mainframes serving limited communities. This line of liberation ideology leads eventually to cyberspace and the darknet, and these trends can be seen as

bound to strong currents of both techno-utopian and technodystopian visions of possible futures, in which advanced information and communication technologies possess both radical capacities for democratization, free anonymous expression, and the redistribution of power to the masses, and simultaneously terrifying potentials for control, subjugation and surveillance. (Collier et al., 2021, p. 3)

Versions of these ideas, values, and ethics are reported in the study of the discourse of participants in the Maddox et al. (2016) sample, and before that, with an emphasis on drug activism, in the samples of Van Hout and Bingham (2013a, 2013b, 2014).

### ***Continuity and Change in Darknet Marketplaces: Uberisation, McDonaldisation and eBayisation***

Darknet marketplaces or cryptomarkets have been defined as

a marketplace that hosts multiple sellers or ‘vendors’, provides participants with anonymity via its location on the hidden web and use of cryptocurrencies for payment, and aggregates and displays customer feedback ratings and comments. (Barratt and Aldridge, 2016, p. 1)

The darknet or dark web is the part of the Internet that can only be accessed through encryption software. The most popular software used is The Onion Router (Tor), originally developed by the US Naval Research Laboratory to provide a secure communication tool and now made available by a non-profit organisation, partially funded by civil liberties groups, the US government, and contributions from millions of Internet users – varying from IT professionals, military personnel, bloggers, journalists, law enforcement, whistle-blowers, and activists to day-to-day users – who wish to enhance their online security and

browse securely and anonymously (Tor Project, 2019). Tor and the so-called 'dark' web are not inherently 'criminal' software and online mediums. They have been created and are being employed for a variety of reasons and purposes by a diverse range of users. However, in 2011, one particular entrepreneur (Chen, 2011) realised that this environment, together with the newly available cryptocurrency Bitcoin (Nakamoto, 2008; Rauchs and Hileman, 2017), could provide just the right affordances (Hutchby, 2001) to create an online platform where buyers and sellers of illegal goods could run their activities with a minimised risk of detection or intrusion.

The two key underpinnings of cryptomarkets, Tor and Bitcoin, are politically strongly related to both libertarian and anti-establishment ideas. They enable the circumvention of oversight by state and legal institutions (government, law enforcement, banks) and (ideally) transfer power to the Internet user (or the citizen). According to several studies, the Silk Road, the first cryptomarket, was clearly tied to such political aims and to a libertarian ideology. Maddox et al. (2016), in their ethnography of the Silk Road and several other darknet platforms, have argued that for website users, what was being made available was not only a virtual *place* to trade drugs but an *experience* of shared personal freedom and exposure to a libertarian political outlook and framework. In a practical sense, users could also share knowledge about drug use and cryptography. Thus, what was – or is – on offer is a world 'not yet' made, promising the possibility of a different 'reality', but also the means to confront the way in which existing political and social reality works (Maddox et al., 2016).

Munksgaard and Demant's (2016) quantitative study, which used topic modelling to identify the political discourse on multiple cryptomarket forum posts from 2011 to 2015, has shown similar results. The prevalence of the political libertarian discourse increased from 2011 until the end of the Silk Road in 2013, which was then followed by an abrupt change in the discourse. Therefore, it is arguable that even if the first major law enforcement operation against the biggest cryptomarket at the time did not have a major effect on the sustainability of the economy of cryptomarkets, it did seem to have a dampening effect on the political sentiments of users.

If the political ideology behind any given cryptomarket is put aside, however, the elements which comprise a cryptomarket will still have an instrumental role. For example, the success of a cryptomarket is dependent on customers, so feedback ratings and comments that build a reputation are important. These elements create a system of trust (see Moeller, this volume) which gives potential buyers and sellers reassurance about doing business with each other without being afraid of losing their money or product (Tzanetakis, 2018b; Tzanetakis et al., 2016). The need to maintain reputation and trust motivates the seller to conduct business professionally but, given the competitive nature of the market, these characteristics may not be enough to generate high returns (Tzanetakis, 2018a). The competition also drives the selling of reliable quality products that can be marketed or branded as high purity and high strength (Caudevilla et al., 2016; van der Gouwe et al., 2017).

However, it is also the case that purity does *not necessarily* mean quality, especially in the case of substances that may have the potential to cause harm. The concept of drug quality in this context has been explored by Bancroft and Scott

Reid (2016) in their qualitative study of cryptomarket users which showed how users create an online culture of consumer quality evaluation by sharing their experiences and feedback on forums, creating an environment where drug safety and harm reduction are being discussed and assessed openly and freely.

According to Aldridge et al. (2018), cryptomarkets are increasing the amount, the range, and the purity of drugs being sold, which could increase their potential harm, although, at the same time, most cryptomarkets and their associated forums provide information on drug safety, customer reviews of drugs from different vendors, and other advice. Thus, one argument could be that cryptomarket vendors and users share a commitment to increasing drugs availability and to reducing harm, which could lead to less drug-related harm arising from cryptomarkets than from traditional street markets. In support of this, Martin (2018) argues that cryptomarkets take drug sales to a level of ‘gentrification’, displacing the potentially violent norms of traditional markets with friendly and professional relationships between online market actors, thereby further reducing harm. This points towards a drug market population that is rather more concerned about the quality and the safety of drug use than the more instrumental, financial side of the market, such as the maximisation of profit from a user or a seller point of view. A significantly lower risk of victimisation by violence (although there is evidence of online-specific violent behaviour, such as scams, threats, or doxing; see Moeller et al., 2017) and an increase in the transparency of vendor-buyer relations and the quality of the products being sold make this virtual environment a more appealing one for certain drug buyers.

Aldridge and Décarry-Héty (2014) have argued that, at least on the Silk Road, many transactions seemed to be ‘business-to-business’ given the volume of drugs being sold, and therefore cryptomarkets may be servicing a shift in criminal innovation that could re-shape the market by eliminating the need for ‘middle’ level drug dealing, connecting the upper with the retail level dealers, the cryptomarket itself acting as a ‘middle’ level. Thus, the type of ‘subcultural capital’ (Sandberg, 2008) required to deal drugs may be different in traditional markets compared to cryptomarkets. This strengthens the ‘gentrification hypothesis’, considering that the violence that was necessary to gain market share, protect territory, and resolve conflicts required in the offline world (Sandberg, 2008) is replaced in online marketplaces by a need to demonstrate good customer service and satisfy the needs of customers (Martin, 2023, Chapter 9).

Smaller ‘retailers’ can enter the market to sell, and socially based buyer groups can enter to purchase and distribute. Arguably, the trading position and practice of both groups reflect a process of ‘Uberisation’ in the digital market. For example, in their discussion of the growth of the European cocaine trade, the EMCDDA (2019) observes that:

Smaller groups have been able to enter the market by using a range of information technology like encryption, darknet market places, social media for dealing and cryptocurrencies. Entrepreneurship in the competitive cocaine market is evident from innovative distribution strategies [...]. These new methods appear to reflect to

some extent the type of disruption seen in other areas facilitated by the common use of smartphones – a potential ‘Uberisation’ of the cocaine trade – a competitive market in which sellers compete by offering additional services such as fast and flexible delivery options. (p. 14)

Warren and Ryan (2023, Chapter 4) agree that

dark web markets are a form of ‘Uberisation’ of drug distribution that simply speeds up the communication process between willing consumers and suppliers, while utilising rather crude methods of transportation through conventional mail systems.

This may have inappropriate consequences in terms of criminal justice attention in the same way that ‘social supply’ has often been policed and prosecuted as if it entailed organised crime (Coomber et al., 2016, p. 263). As Warren and Ryan observe,

many relatively innocuous forms of low-level drug trafficking service small markets of friends and risk becoming labelled by law enforcement as highly serious because they utilise the dark web for transnational drug distribution.

In this version of the markets of the dark web, forms of social supply have gone online, becoming a digital extension of the underpinnings of ‘normalisation’ that Parker et al. (1995, p. 25) described as the supply of drugs among friends and acquaintances in which drugs had ‘become products which are grown, manufactured, packaged and marketed through an enterprise culture whereby the legitimate and illicit markets have merged’. In this context, digital markets are appealing because there has been an increase in the acceptability of recreational drug use and of social supply, and of the exchange of drugs on a scale different from financially motivated drug dealing. The person ordering drugs online may just be the ‘designated buyer’ for a group, reflecting the continuity of a social practice noted in many studies over the decades (Blum et al., 1972; Coomber et al., 2016; Murphy et al., 1990) where, once an individual became known as someone who potentially had access to drugs, they swiftly became the main point of supply. With requests from friends to ‘get in on the deal’, it ‘made sense’ for everyone (economically) that social suppliers should purchase for them at the same time (Coomber et al., 2016, p. 6). Masson and Bancroft (2018, p. 81) have discussed social supply and sharing in relation to both online as well as offline markets, and report that ‘our findings call on us to rethink how significant non-commercial supply is even in a vaunted fully capitalist market’. Within networks of illicit drug distribution, friendship or acquaintance groups arrange distribution among themselves for low or no profit via social supply and minimal commercial distribution (Coomber et al., 2016). According to Masson and Bancroft (2018, p. 81), this kind of distribution is also characteristic of cryptomarkets, involving

knowledge transfer and a ‘form of sharing’ that ‘becomes transformative in this context’, meaning that when a

cryptomarket buyer shares his or her wares with ... friends, it is not a gift *per se*. It is part risk-management and part deal. Sharing has a role in the construction and maintenance of social order.

If these trends are in part a reflection of the recent market model of Uberisation, only made possible by technology, they are also traceable to an earlier model of innovation and change in business operations – McDonaldisation. This was based on the application of principles of efficiency, calculability, control, and predictability to a fast-food franchise business that permeated popular culture and was easily reproducible. As Ritzer (2019, p. 67) notes, in the earliest forms of McDonaldisation, bureaucracy, industrial organisation, and the assembly line were common characteristics – and these were extended and refined in the case of his classic example of fast-food restaurants. The impact of the model has been profound, and over time, the business operations of the offline world have changed as agility and technology influenced organisational shape. For the new online world, success was also built on being able to avoid some of the constraints of a physical business operation – although as Collier et al. (2021) point out, the burden of actually doing mundane and boring work remains a necessity in the digital as much as the physical world, as the case of Amazon would demonstrate. Indeed, as Ritzer (2019, p. 55) observes, regardless of changes to operations, people ‘still exist in and on these settings’ as ‘consumers (or customers, clients) and producers (or workers)’, although ‘it is important to note that people as exclusively producers are of declining importance in material sites and virtually non-existent on digital sites’ as the provision of services and related administration have become dominant economic activities. Nonetheless, the point is that the platform economy is a perfect base from which to launch and run enterprises that are employee- and asset-light, and, says Ritzer, it is this ‘lightness’ in both paid employees and assets that allows Internet sites to reach new heights of McDonaldisation and with ‘relatively few employees and minimal material assets, Internet sites are freed to maximize the process of McDonaldisation’. Of course, online markets characterised by an ideology rather antithetical to corporate McDonaldisation may also seem to have something in common with the eBay phenomenon which, as Ahuvia and Izberg-Belkin (2011, p. 374) suggest, thrives on ‘individuation’ and ‘self-assertion’ by

creating experiential and interactive platforms that bring together a zealous community of buyers and sellers, where an endless variety of products and props are offered to consumers busy scripting their own characters.

While drawing on certain features of a McDonaldised operation to present a reliable menu (of drugs) with efficiency and guarantee of predictable quality, drugs cryptomarkets also seem to reflect some characteristics of the eBay market place as a

consumption playground [...] allowing consumers to devise products, create original commercial narratives, pursue ideological agendas, and make artistic statements while feeling empowered through the process. (Ahuvia and Izberg-Belkin, 2011, p. 374)

### ***Drug Cultures, Social Motives, and Reciprocal Relations***

Studies of cryptomarkets may reflect various disciplinary or theoretical orientations that are not primarily concerned with the cultural features of markets but are nonetheless illuminating because of the light they shed on matters such as learning, choice, politics, and motivation. The experiences of buyers and sellers; the influence of libertarian politics; the choice to favour online markets to avoid violence and law enforcement operations; and the commitment to harm reduction and drug safety, quality, and sharing of information all point towards cryptomarket users as having cultural capital (Whenua, 2017), being less likely to belong to the culture of the street (Sandberg and Fleetwood, 2017) but having instead an affinity with a culture of commitment to availability and use of drugs.

To take an illustrative study, Sandberg (2012) describes the differing cultural backgrounds of cannabis dealers based on the type of market they are selling in: public, semi-public, or private. In the public market, products are being sold in public spaces, parks, or streets; in the semi-public market in clubs, cafes, or pubs, while in the private market, the selling takes place behind closed doors (e.g. where the dealer lives). Actors from the public market are profit-driven, belonged to the street culture before getting involved in cannabis selling, and are more likely to scam customers based on their knowledge of the products and markets (Jacques et al., 2014). In the private market, on other hand, profit making is frowned upon, and the dealers belonged to the cannabis culture before getting involved in selling it, which means they have an ideological commitment to the culture as part of their reasons for selling cannabis. The semi-public market is more or less a combination of the two, where even if actors are seeking profit, they generally build a connexion or reciprocal relationship with the buyers, either through common cultural knowledge or by sharing anecdotes in a social context (Sandberg, 2012). These market actors are bringing their cultural capital to the market they belong to and are selling their products with an accompanying symbolic meaning which is being both ideologically 'bought into' and transactionally bought by their clients. Similar actors and motives can be found in Dorn and South's (1990) categorisation of types of drug distributors which includes 'opportunistic irregulars' (individuals or small groups that get involved in a variety of activities in the irregular economy, including drug dealing), 'mutual societies' (friendship networks of user-dealers who support each other, buying, selling, and sharing drugs in a reciprocal manner), and 'trading charities' (enterprises involved in the drug trade because of their ideological commitments to certain drugs, as well as the profit). Sandberg's (2012) private market actors would easily fit in the category of mutual societies or trading charities. In the case of cryptomarkets, Demant et al. (2018) argued that, based on their observed demand for drugs (measured

in terms of reviews on two of the marketplaces that followed Silk Road – Silk Road 2 and Agora), most of the drug deals taking place were for personal use or social drug deals, supporting the proposition that middle-level drug dealing was giving way to the operation of cryptomarkets (see also Aldridge and Décary-Héту, 2014) but also pointing towards the fact that a proportion of cryptomarket buyers would belong to ‘trading charities’ as the amounts purchased were more in line with social supply drug deals. Indeed, in the case of cannabis, Demant et al. (2018) have seen a significant tendency towards larger purchases, which could mean that a significant number of the buyers are actors from the private cannabis market similar to Sandberg’s (2012) sample – not aiming for profit but for effective distribution of something they see as (literally) a consumer ‘good’.

### ***Drug Cultures, Representations, and Rituals***

Different drugs may belong to different cultural and subcultural moments and movements but not function as defining elements of the subculture itself. Shapiro (1999) points this out in a discussion of the affinities between certain types of drugs and the different musical movements of the twentieth century in the UK and the USA. For example, in the early 1960s, amphetamine was popular amongst the subculture of ‘mods’ and fans of The Beatles, The Rolling Stones, and The Who, and again in the 1970s among punks who copied icons like Johnny Rotten, the lead singer of the Sex Pistols (his name being attributed to the decayed teeth that result from heavy amphetamine consumption). Around the mid-1960s, cannabis and LSD started to gain popularity as well with the rise of psychedelia, accompanied by outdoor festivals and the counter-cultural movement. The 1980s saw a rise in the consumption of a new amphetamine relative, MDMA, at the same time as the house and garage music were emerging from the USA and Ibiza. All of these subcultural movements, while having certain types of drugs associated with them, do not necessarily represent the context in which these particular drugs are *always* consumed, and, of course, Shapiro’s focus on transatlantic cultural exchanges and influences may now seem limited in a world so dominated by web and social media connectivity. This has implications for how we should think of ‘sub’ cultures, where their genesis and characteristics may no longer be as localised or related to lack of capital as in the past. Reputation and symbols, messages, and beliefs are now so easily shared on a wide scale, and this could apply to those who use drugs cryptomarkets.

The context of consumption also changes the meaning. Collins (2011) argues that a theory of interaction ritual(s) has the potential to explain whether and why psychoactive substances might be accepted and regarded as legitimate (e.g. caffeine), contested by opposing ideologies and/or rival movements (e.g. alcohol prohibition), or subject to taboo and popular scorn (p. 114). This approach sees drug subcultures as rich repositories of ‘rituals, stories and symbols’ and might be applied to the analysis of the branding and marketing of the wide variety of substances sold by darknet vendors, to the contexts of consumption they are ‘recommending’ through their advertising, and to the exploration of social situations in which substances are ingested. A study by Cunliffe et al. (2019) on non-medical

prescription psychiatric drugs and their availability on cryptomarkets explores some aspects of this approach. Their analysis shows that alprazolam (commercially known as Xanax) is the best-selling benzodiazepine anti-anxiety product in the USA and is showing sales growth in the UK and Australia. This popularity rests on an established reputation, with use dating back to the early 1980s, but Cunliffe et al. also argue that there are powerful cultural amplifiers of reputation, such as significant mentions of Xanax in the US rap scene (e.g. related to it being the cause of death of rapper Lil Peep; the musician Lil Xan who discusses his struggle with Xanax addiction yet retains a stage name based on the drug). Moreover, the level of cultural transmission between these countries could also help to explain the rise in online demand in the UK and Australia. The importance of online channels of transmission of reputation has affected, as Ilan (2020, p. 997) notes, ‘many spheres of social life’, including forms of ‘street culture’ which have responded to ‘the advent of digital media and social networks’ with ‘[q]uestions of identity and reputation [...] now negotiated within a framework of omnipresent digital recording devices and all-saturating social media platforms’. The world of online, digital, and social media has transformed the ‘interaction markets’ and ‘material markets’ that Collins (2004, pp. 141–182) first examined in terms of interaction ritual theory and forms of cultural capital. In terms of chains of interaction rituals, individuals are drawn to cultural and material encounters that will be most emotionally and socially rewarding. So to return to the case of Xanax, through forms of cultural reputational amplification via music, Xanax may be perceived as reaching new levels of appeal in terms of style or aestheticism in combination with the clearly antinomian association it already has. As the rap – or drill and grime (Fatsis, 2019; Ilan, 2020, p. 995) or other – music movements win audiences and affiliations, so will substances associated with them, as has happened before in the cultural construction of other musical scenes and their associated rituals and paraphernalia (Shapiro, 1999; South, 1999b).

Drug consumption, besides being a practice undertaken under the umbrella of drug subcultures, is also a practice that represents ideas (discourses, fashions, etc.) in the culture of consumerism in which people engage daily. Consumption of products conveys symbolic meaning, and group identities are created based on their meaning and the norms and values we do or do not want to be associated with (Elliott and Wattanasuwan, 2017). Identity has become a reflection of ‘lifestyles’ closely associated with commercial brands and the commodities they are labelling, as well as the context in which we purchase and consume them (Brisman and South, 2014). Therefore, the interaction rituals of drug consumption (Collins, 2011), what we choose to consume, and the way we consume it all represent our own interpretations of ‘self’ and of the social categories that we feel we belong to, based on consumption goods that symbolise the values we identify with.

## Conclusion

There is much continuity between traditional offline and new online markets, but one key feature of online markets is that they move beyond the physical geography that constrained the old and offer new spaces of virtual bazaars protected

by cryptological security. The technologies of online presentation mean drug distributors have a medium in which they can use textual and visual advertising for their products and services, leading to an extensive use of marketing and branding techniques (Craciunescu, 2020; Fleetwood and Chatwin, 2023, Chapter 8). They can now offer consumer-friendly services such as photographs, ‘customer information’, and ‘time to browse’ and also design advertising of psychoactive substances rooted in consumption ideas and images reflecting contemporary cultural movements and lifestyle aspirations. With the use of branding and brands in the offline and online drug economy, drug sellers are borrowing values and concepts familiar to consumers from their everyday activities, a process which reduces the significance of a distinction between buying drugs online and buying any other lifestyle consumer product online (Craciunescu, 2020).

Drug market entrepreneurs wanting the trust of customers and repeat business may simply follow the strategies of legitimate markets to generate brand fidelity and aim to create an association between certain values and certain brands to build the recognition of the products or substances for sale. This reflects the wider cultural normalisation of drugs as a result of drug references in marketing and media (South, 1999a, 1999b), and also highlights how drug cultures assimilate cultural trends from the overall society, as Sandberg (2013a) points out in his definition of subcultures. None of this should be surprising when we remember the staging posts – the actors and ideologies, the organisational innovations, and technologies – that have marked the journey from Californian counterculture to cyberspace.

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## Chapter 8

# Gender Representations in Online Modafinil Markets

*Jennifer Fleetwood and Caroline Chatwin*

### Abstract

This chapter examines representations of gender in online modafinil markets. While gender has often been absent from scholarship on online drug markets, our analysis demonstrates the ubiquity of gender in representations of modafinil users and sellers. The analysis draws on visual images, blogs, and marketing emails relating to three websites selling modafinil, discussed pseudonymously. We describe the range of ways that notions of gender are represented in advertising. Although women represent around 40% of that buying modafinil online, websites and communications tended not to feature women. Although sexist stereotypes of women were rarely present (in contrast to direct-to-consumer pharmaceutical advertising), the ways that modafinil was imagined tended to focus narrowly on corporate spheres of work and productivity. We contrast this narrow imaginary with female journalists' own accounts of using modafinil to manage illness and enhance creativity. Thus, we conclude that the ways that modafinil has been imagined reflects working assumptions as to who is considered the 'normal' participant in online modafinil markets.

*Keywords:* Modafinil; advertising; gender; women; smart drugs; cognitive enhancers

### Introduction

DarkMarket was notable for its claim to be the first female-run cryptomarket (Digital Shadows, 2019). Their female-led brand was emphasised in blogposts,

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visual imagery, and a ban on trading in weapons and images of child abuse. When DarkMarket was taken down in January 2021 as part of an international investigation, it was reported that its founder and administrator was in fact an Australian man (Caesar, 2021). Nevertheless, the emergence of an apparently ‘female-run’ cryptomarket has important implications for discussions about gender in online drug markets. A cryptomarket run by women should not necessarily be surprising given women’s established involvement in drug markets, including at the very top levels (Carey, 2014; Fleetwood and Leban, 2023). The *novelty* of DarkMarket’s claim to be led by women, however, reveals the widely held assumption that online drug markets are run, and mostly populated, by men.

The emergence of DarkMarket poses interesting questions about representations of gender in online drug markets. Was the claim to be ‘female run’ merely about creating a distinctive brand? Or perhaps an attempt to create an aura of safety and trustworthiness online? We can certainly see the benefit in a context where cryptomarkets are plagued by exit scams. Or perhaps this could be a strategy to attempt to attract women as an ‘untapped market’? These questions are hard to answer given how little is known about gender and women in online drug markets (Fleetwood et al., 2020).

In this chapter, we undertake a gendered analysis exploring the marketisation of the prescription-only medicine – modafinil, on the clearnet – that is, the Internet commonly accessed by the general public through search engines such as Google (Dursun et al., 2019, p. 699). In line with the wider themes of this book, we have chosen clearnet modafinil markets as relatively ‘new’, and in our analysis, we focus on the idea of continuity or change in the way gender representations are performed within and around these markets. Furthermore, women also comprise a significant portion of consumers of modafinil (Maier et al., 2018), making it an appropriate case study.

In this chapter, we argue that gender representations are ubiquitous to text and images which proliferate in clearnet drug markets advertising modafinil. While, we found a surprising lack of sexist stereotypes, online representations tend to replicate long-standing notions that drug cultures and drug markets are populated, and dominated, by men. This assumption limits the ways in which modafinil use is imagined in online advertising. We contrast this with women’s own accounts of using modafinil, which display a much broader imaginary.

The chapter is structured as follows: First, we outline why modafinil advertising makes for an important case study into gendered representations online. Next, we overview research on gender in pharmaceutical advertising. Researchers report widespread use of sexist stereotypes and bias. Contemporary research and theory propose the concept of ‘material-discursive entanglements’ (Johnson, 2017a, 2017b), that is, the two-way relationships between gender and drugs. After that, we examine how modafinil has been depicted in the media, contrasting academic scholarship with journalistic accounts by women. In the second half, we briefly outline our methodology before presenting our analysis of gendered representations in online modafinil websites.

## **Modafinil and Drug Markets**

Modafinil is a wakefulness-promoting drug, legally prescribed in the UK, the USA, and mainland Europe for narcolepsy and sleep disorders, including shift work (Billiard and Lubin, 2015; Dursun et al., 2019). It is relatively new, first synthesised in the 1970s in France as an alternative to amphetamine-based stimulants (Rambert et al., 2006). It was licenced in France in 1992, and then in the USA and UK in 1998 (Billiard and Lubin, 2015). It is commonly used off-label for an array of perceived benefits, including improved focus, concentration, and cognitive enhancement. Modafinil has emerged as one of the most widely available (Hockenhuil et al., 2020) and widely used (Dursun et al., 2019, p. 699) cognitive enhancers, especially by higher education students (McDermott et al., 2020). Off-label use appears to be increasing (Maier et al., 2018, p. 109).

Modafinil makes for an interesting case study for several other reasons. Women's roles as consumers, purchasers, and sellers in drug markets are often downplayed and assumed to be lesser than men's (Fleetwood et al., 2020). This is borne out in relation to online drug markets, with Global Drug Survey figures reporting that 87% of those who report buying drugs on cryptomarkets were men (Winstock et al., 2016). Yet women are major consumers of modafinil online. Global Drug Survey figures suggest that women comprise around 40% of those reporting buying cognitive enhancers online (Maier et al., 2018, p. 106). This relatively large share of the market makes modafinil an interesting case study for gender analysis.

While modafinil is one of the most widely available prescription medicines sold on the darknet (Cunliffe et al., 2019), it is also widely sold through the clearnet. Horton (2015) estimates that 27,500–40,000 clearnet online pharmacies are in operation at any one time. The clearnet is emerging as a significant site of drug sales (McCulloch and Furlong, 2019), including both open-net webpages, encrypted messaging, and social media apps (Bakken and Demant, 2019; Coomber et al., 2023, Chapter 2; Demant et al., 2020; Moyle et al., 2019). An increasing number of websites illegally sell drugs such as cannabis and magic mushrooms, as well as pharmaceuticals such as sleeping tablets and painkillers (Dursun et al., 2019; Koenraad and van de Ven, 2018; Walsh, 2011). Women comprise a significant proportion of those buying prescription and lifestyle drugs on the clearnet (Fleetwood et al., 2020, p. 459). Yet clearnet markets are too often overlooked by researchers, perhaps reflecting sexist assumptions about darknet markets being more 'serious' or significant (Fleetwood et al., 2020).

Online drug markets in general generate copious representations of drugs, buyers, and sellers, including a lot of text and images. This is a major development in contrast with traditional 'street-level' drug markets (i.e. sales to consumers) which have historically relied on degrees of invisibility to function. Yet even in-person selling to consumers demands degrees of visibility: ethnographies of open drug markets describe mostly young men standing at known spots undertaking hand-to-hand drug sales (Akhtar and South, 2000; Bourgois, 1995; Pearson, 2001; Young, 1971). Reputation might be cultivated through word of mouth. In a rare exception, in NYC between the 1970s and 1990s, heroin was sold in branded bags (Wendel and Curtis, 2000), and both brand names and imagery were undergirded

by ‘tropes of machismo, flirtation with death and violence’ (Wendel and Curtis, 2000, p. 241). In contrast to on-street drug markets, women have been described as dealing discretely, often in private settings, relying on word of mouth (Dunlap et al., 1994; Fleetwood, 2014).

Drug sellers have always trodden a thin line between visibility and invisibility. Some contemporary drug markets have embraced digital and online forms of visibility, generating an abundance of text and imagery to attract customers. So far little scholarly attention has examined the imagery and representations employed in online drug markets (Hämäläinen, 2019). Here, we consider gendered representations.

## Gender in Pharmaceutical Drug Advertising

Research on direct-to-customer (DTC) advertising of legal pharmaceuticals theorises gendered representations. This scholarship mostly emerges from the USA and Scandinavia where DTC advertising of prescription-only drugs is legal. Mosher’s (1976) early research noted the rank of sexism in pharmaceutical advertising in the USA in which women were represented in highly stereotypical tropes, such as the ‘overwrought mother; the depressed housewife; the chronic complainer; the dejected housewife’, while men were described as stoic and rational (Mosher, 1976, p. 73). Sexist stereotypes arguably contributed to overprescribing – at the time, women in the USA were prescribed pharmaceuticals 50% more than men (Mosher, 1976, p. 73). In contrast, quantitative research evidences women’s under-representation in advertising for cardio-vascular medications (Ahmed et al., 2004; Riska and Heikell, 2007), while advertising for anti-depressants tends to over-represent women (Lövdahl et al., 1999). These biases reflect, and reinforce, offline biases in medical treatment, often to women’s detriment.

Krupka and Vener (1992) argued that more gender-neutral advertising was apparent by the 1980s; however, gender stereotypes remain a long-standing feature of pharmaceutical advertising (Fisher et al., 2010; Leppard et al., 1993). Advertising for sex-specific medications is replete with normative gender ideologies. Whittacker’s (1998) analysis of pharmaceutical advertising for hormone replacement drugs found that visual narratives reveal ‘traditional patriarchal definitions [...] hegemonic viewpoints that limit the changes that women desire for themselves and their lived subjectivities’ (p. 85). Normal bodily functions – such as menopause and menstruation – are problematised and ‘biomedicalised’ in the process of marketing pharmaceuticals (Mamo and Fosket, 2009; Whittacker, 1998). Whittacker points out a central irony: despite hormone replacement therapy (HRT) being *for* women, advertising reflects the male gaze rather than the female experience.

Advertising offers an idealised ‘slice of life’ (Thomas and Treiber, 2000, p. 358), including notions of health (Asberg and Johnson, 2009). Such representations reflect ‘social and cultural expectations of how the [healthy] body *should* function’ (Coveney et al., 2009, p. 488). Notions of the healthy body overlap with ideas about normal or natural gender roles, expressions, and identities. Asberg and Johnson (2009) examine Viagra advertising in Sweden through the construction

of the ‘Viagra man’: an outdoorsy, rugged everyman. Swedish Viagra advertising is replete with wilderness settings emphasising how Viagra *returns* men to their natural state of virility. This ‘return’ is just one conceptual metaphor common to pharmaceutical advertising. Marjorie Delbaere (2013) finds that medications are often conceptualised with reference to magical or mystical metaphors: giving special powers, offering magical solutions to difficult problems, or (as above) returning one to one’s natural state (p. 23). Furthermore, medicines may also be personified or given human characteristics – as helpers, deliverers, or heroes (Delbaere, 2013, p. 23).

Contemporary feminist science and technology scholarship moves beyond questions of bias and gender stereotype to consider the material-discursive entanglements between gender and drugs (Johnson, 2017b, p. 213); that is, the ways that ‘pharmaceuticals can produce sex/gender and be sexed/gendered in different contexts’ (Johnson, 2017b, p. 211). This novel approach considers (i) how gendered ideologies shape the ways that drugs are used, including shaping notions of acceptable or appropriate uses of those substances, and (ii) how pharmaceuticals may enable the performance of particular notions of gender; for example, hormone therapies enable trans individuals to present as their chosen gender, or Viagra may enable men to meet gendered expectations about male sexuality.

From this perspective, pharmaceutical advertising ‘prescribes’ particular subjectivities, or ways of being (Johnson and Asberg, 2017, p. 88). Pharmaceutical adverts not only construct illness and health but also establish the pharmaceutical product as essential for ‘normal’, healthy identities and relationships. These subjectivities are culture bound, and they reflect (and perhaps even create) expectations about gender, age, class, sexuality, able-bodied-ness, and so on.

This calls to mind Fiona Measham’s theorisation of ‘doing drugs, doing gender’ (2002). She argues that consuming drugs enabled women to enact femininity in a variety of ways across different contexts – as ‘club babes’, for example. Gendered ideas of women as sociable and ‘bubbly’ made drug taking make sense, *and* taking drugs enabled the performance of these gendered ideas. Thus, neither gender – nor the effects of drugs – are ‘settled’, and the entanglements between drugs/pharmaceuticals are open-ended. Modafinil is especially interesting in this respect – unlike Viagra or HRT, it is not immediately tied to the sexed body. It is beyond the scope of this chapter to explore the kinds of gendered subjectivities modafinil might enable. As such, we particularly examine the ways that gender ideology shapes the ways that modafinil use is imagined in advertising.

## Media Coverage of Modafinil

Two studies have analysed press coverage of modafinil in the UK between 1998 (when it was first licenced) and 2006 (Coveney et al., 2009; Williams et al., 2008). These studies helpfully outline the main discourses publicly circulating about modafinil which form the cultural backdrop against which current modafinil advertising is posed. Media are also a key shaper of which medications become known and promoted to the general public (Asberg and Johnson, 2009, p. 148; Williams et al., 2008, p. 851).

Despite being licenced only for the treatment of narcolepsy, Williams et al. (2008) found that early coverage of modafinil reported excitedly on its potential for enhancement, as a 'wonder drug'. For example, *The Independent* suggested modafinil 'could provide the pharmacological equivalent of the electric light bulb' (cited by Williams et al., 2008, p. 843). Following this theme, subsequent articles analysed by Williams et al. (2008) covered medical trials on the usefulness of modafinil for a wide range of conditions, including Parkinson's, ADHD, fatigue relating to shift work, and even general sleepiness. Early enthusiasm for modafinil, however, was soon tempered by concerns of illegitimate or unfair use by physically well people for enhancement so-called 'lifestyle' drug.

Coveney et al. (2009) also focused on the construction of legitimate and illegitimate uses of modafinil by the press. The metaphor of war (combating or fighting sleepiness) legitimated use whether the 'war' was against narcolepsy or other illness or social conditions, including military contexts. Second, the commodity metaphor framed sleep as a consumer good; using modafinil enables the acquisition of wakefulness normally earned through sleep. This metaphor was mainly used in relation to occupations, making normative moral arguments about the importance of wakefulness at work. The third metaphorical framing was around competition, which constructed modafinil as a way to 'beat' sleep. Modafinil was described as offering a 'boost' to performance (whether in study, sport, or the workplace). The last frame often described modafinil in negative terms, as giving an 'unfair' advantage. Ultimately, Williams et al. (2008, p. 852) argue that modafinil resonates with the protestant work ethic and contemporary Calvinism – as a drug that promises enhanced productivity and extended periods of work. But instead, we might wonder at the ways that the neoliberal imaginary (McGuigan, 2014), characterised by self-reliance, consumer sovereignty, and productivity, has limited the potential usefulness of modafinil by defining it as a drug relating to individual productivity and work, rather than home and pleasure.

Neither of these studies considers gender in their analysis. Discourses about sleepiness/wakefulness appear relatively gender-neutral: men and women experience narcolepsy in equal measure. Women are much more likely to report sleep problems than men, however (Arber et al., 2009). Work, sport, and competition are arguably underpinned by traditional notions of masculinity in which men are expected to be physically powerful, competitive, and successful at work. By contrast, the feminist scholarship on pharmaceutical advertising reviewed above places gender front and centre.

Noting this absence, we sought out media accounts of modafinil which explicitly engaged with gender, and found a surprising number of articles. Many articles are structured around interviews with users and prominently include the voices and experiences of women as well as men, whether centring on the use of modafinil for studying (Cadwalladr, 2015; Renton, 2016; Whitehouse, 2016) or work (Daly, 2016; Yashawi, 2019). Interestingly, within the tabloid press, there is a tendency to take this further and *frame* stories about modafinil as a women's issue. Take, for example, an article from the *Daily Mail* (Hoyle, 2018) entitled 'Why are so many women taking brain-boosting pills at work and risking their health and sanity?'. Despite the only statistics cited in the article being gender neutral ('as many as one in twelve

adults have taken smart drugs'), the *Mail's* focus remains firmly gendered. While the women interviewed for the article mainly talk about deadlines at university and the need to keep up with their peers at work, the *Mail's* taglines emphasise weight loss and depression – often seen as women's issues.

Articles such as this one call to mind depictions of women drug users from the 1950s and 1960s, popularised in books such as Susann's (1966) *Valley of the Dolls*, experimenting with the use of prescription medicines like Valium and barbiturates to deal with boredom of the daily routine, to lose weight, or to cope with (male) rejection. The traditional media in the UK continue to employ familiar tropes towards women who use drugs, suggesting that women's drug use is especially concerning, and framing women's drug use as the outcome of particular failings or because something is missing in their lives. For example, there has been a plethora of recent articles suggesting that modafinil use may result in birth defects (The Daily Star, 2020) or stop birth control from working (The Sun, 2016) – meaning, of course, that we should be particularly concerned by women who choose to use them. These representations suggest a continuation of traditional stereotypes in the way gender is represented in relation to drug use.

Perhaps more interesting is the surprising prevalence of women's *own* accounts of their modafinil use, which often sit in stark contrast to the tropes described by researchers. As well as echoing early media coverage which described modafinil as a 'wonder drug' (Williams et al., 2008), women's own accounts also emphasise pleasure, creativity, and potential benefits in their home lives – aspects of drug use which often remain overlooked by policy-makers and researchers alike (Moore, 2008). For example, Brigid Delaney (2016) writes in the *Guardian* about her use of modafinil to get a large amount of work done in a short amount of time; novelist M. J. Hyland (2013) explores the key role modafinil played in helping her manage fatigue from multiple sclerosis; and Bianca writes about her 'love affair' with modafinil that began with a need to keep up with the demands of her job in academia but ended in appreciating its more pleasurable aspects throughout her home life and leisure time in a multitude of ways (Bianca, 2018). A more modern take on Susann's *Valley of the Dolls* is provided by Wurtzel's *More, Now, Again* (2003) which echoes the central theme of out-of-control prescription drug use, but this time in relation to the steely minded (and ultimately successful) desire to write a second novel and have fun while doing so.

In terms, then of the way gender is represented *around* online modafinil markets, we already note much interest. Existing studies of modafinil's representation in the media locate it in the work sphere and may be underpinned by notions of normative masculinity. More recent tabloid articles have focused on women's use of modafinil but framed either as something we should be particularly concerned about or as attempts to improve their appearance and/or mental state. Meanwhile, women themselves are increasingly vocal on the issue and their accounts hint at a richer and more varied range of reasons for modafinil use than seen elsewhere.

Now, in the second half of our chapter, we examine gender representations *within* online modafinil markets. In particular, we assess whether the high number of women reporting use in surveys and news media is reflected in modafinil marketing. After a brief discussion of research methods, we offer three illustrative examples of the ways that gender is integral to the representations of drug use,

buyers, and sellers in online modafinil markets. These are not intended as a representative, but rather demonstrate how gender ideology is implicated in advertising modafinil to consumers.

## Methodological Approach

Our analysis explores depictions of drugs, buyers, and sellers in online modafinil markets. We are especially interested in the ways that texts and images suggest who is (or is not) imagined to be important or present. Our interpretive analysis draws on feminist media analysis (Gill, 2007) and feminist analysis of pharmaceutical advertising (Johnson, 2017a).

Our choice of examples reflects different kinds of websites and gendered representations on the clearnet: (i) a popular and still operating e-commerce website specialising in modafinil sales; (ii) ModafinilCat, a popular e-commerce site specialising in modafinil sales which closed in 2016; and (iii) an unregulated online pharmacy specialising in modafinil sales claiming to be based in the UK. Websites were accessed in February 2020 (i.e. before the onset of the COVID-19 pandemic in Europe) and recorded through screen capture. We also relied on data and screenshots from the Internet archiving site Wayback Machine.<sup>1</sup>

Our first case study of a fully operating e-commerce site also draws on promotional emails sent to their subscribers over the last two years, as well as public postings on the TrustPilot review site.<sup>2</sup> Naming and identifying online communities can be detrimental to their owners and members, even where posts have been made available in the public domain (Potter and Chatwin, 2011), and represents a blurring between public and private spaces (Eysenbach and Wyatt, 2002). While we felt it would not be harmful to identify the websites that have closed, we have taken measures to obscure the identity of the currently operating sites.

Our analysis examines how modafinil use, buying, and selling were constructed in online advertising, and in particular how gender was imbricated in these constructions. We were attentive to discourses about the product, buyers, and sellers, as well as about wider society and relationships (Johnson, 2017a; Whittacker, 1998). We were also interested to note the literal sense in which buyers and sellers were presented in images and text and the kind of activities (work, sport, etc.) people are depicted as undertaking while using modafinil. These images legitimate the use of modafinil, arguably in gendered ways. Finally, we were also keen to trace the limits of how modafinil is imagined in online representations, and so we considered the kinds of gendered subjectivities that *could have* been produced in these material-discursive entanglements (Johnson, 2017b, p. 213) between gender and drugs.

### *Analysis of Modafinil Websites*

The modafinil websites we examined had much in common. All function along the same lines as other web-based shops: the buyer simply clicks on the product,

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<sup>1</sup>Wayback Machine (<https://web.archive.org/>)

<sup>2</sup><https://www.trustpilot.com/>

adds it to the basket, and then checks out with payment by credit or debit card and/or Bitcoin. The shopper then receives a confirmation email and sometimes tracking information. Unlike other online shops though, delivery often relies on ‘stealth’ packaging (anonymous packaging with no description of the contents or name of the company to avoid detection by customs or other law enforcement agencies). All websites were selling essentially the same product, and images of packets of modafinil and the brands (Modalert, Provigil, etc.) are virtually uniform. By contrast, webshops selling cannabis or magic mushrooms have extensive descriptions extolling the distinctive qualities of their product. It is also extremely common for websites to reference the relative safety of modafinil, often drawing on mainstream media reports. Yet, there is a surprising variety in the ways that modafinil and its uses are envisioned. We have chosen three examples that illustrate the variety of ways in which gender is employed in online websites.

### *Current E-commerce Site: Getmoda and Modafinil Mick’s Normative Masculinity*

Since 2018, the site we will call ‘GetModa’<sup>3</sup> has established itself as a well-known online modafinil vendor. Although their branding makes much of their image as an ‘all-American’ company, they ship from India and Singapore to North America, Europe, and Australia. Our analysis focuses in particular on the online persona, which we have pseudonymously named ‘Modafinil Mick’, who is presented as the outward face of the company. The website promises the ‘Modafinil Mick Guarantee’<sup>TM</sup>: ‘the most ironclad satisfaction, delivery guarantee the pharmaceutical industry has ever seen’, promising 100% money back if delivery does not arrive within a reasonable amount of time. Modafinil Mick also responds to reviews on TrustPilot, but it is in weekly promotional emails that we can really get to know him. Here, we show that his online persona reflects contemporary American, neoliberal notions of competitive masculinity through which the use of modafinil, and the company itself, are refracted. This kind of masculinity distinguishes this site from its competitors, *but* it also distinguishes him from the kinds of tough, street masculinity typically associated with the drug trade.

Modafinil Mick is a larger-than-life character – he writes with an unspecified US accent (see next quote) and describes himself as from the USA. Mick’s emails are friendly in tone and peppered with wordplay, references to US culture, and his distinctive sense of humour. Here he describes himself, parodying WWE wrestler Ric Flair:

Quick email here today from everybody’s favorite stylin’, profilin’,  
limousine riding, jet flying, smart drug slangin’ son of a gun ...  
Ole’ Modafinil Mick!

The main purpose of Modafinil Mick’s weekly emails is to direct sales to their website, often by offering discounts or promotional deals in connection to US

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<sup>3</sup>A pseudonym.

holidays such as Labor Day or Father's Day (although notably not Mother's Day). Yet even communiqués about discounts are an opportunity for entertaining repartee and demonstrations of the ways that he is a 'good guy'. At the start of the coronavirus pandemic, he writes to tell customers: 'we went back and forth on whether to do this. Profiting off the crisis isn't our goal here. Trying to avoid those "blood diamond" vibes and karma'. He then offers a 15% discount to enable customers to stock up – 'to be ready for whatever might come'. In a later email, he says:

Due to your continued support ... we've been able to donate tens of thousands of dollars to charities fighting Covid around the world. No matter what happens moving forward with the virus stuff, you've played a part in helping people from Timbuktu to Kalamazoo.

Through these (unsubstantiated) claims to philanthropy and corporate social responsibility, Modafinil Mick aligns himself with legitimate, socially responsible forms of e-commerce. He and his company are the 'good guys', working towards a better society.

Modafinil Mick is an experienced user and arch advocate for modafinil, which he extols at length: 'modafinil provides 12+ hours of that good, good ... that laser like focus and enhanced cognition'. While his emails repeatedly affirm that he is *not* a doctor, he refers to himself as a 'bro-scientist'. His emails sometimes quote from scientific papers, attesting to the wondrous powers of modafinil to enhance cognitive function and productivity, manage depression, and tackle jet lag, for example.

A common theme is how to maximise gains by taking modafinil safely and effectively, including how to combine (or 'stack') with other products. While the theme of an unfair advantage was common in media coverage (Coveney et al., 2009; Williams et al., 2008), Modafinil Mick *promotes* and legitimates the notion of getting an advance over the competition – after all, in business, why would a smart guy *not* want to gain the upper hand? Advice is dished out in a slightly paternalistic tone for the consumption of his (presumably) younger devotees. In an email from early March, he writes to say that he has been experimenting with different modafinil 'stacks': 'there's always ways to up the ante. To get an extra step ahead of the competition'. He recommends taking up to 400 mg of modafinil (double the dose recommended on 'GetModa'), combined with regular meals, three cups of coffee, and nicotine gum. But he warns his acolytes:

This combo is powerful and potent. Almost to a fault .... Do note, this stack is heavy. Not for beginners in the game. Start off with just some Modafinil and one cup of *cafe*. Then work your way up to the big leagues.

Thus, *he* has the smarts to work out ways to maximise the effects of modafinil, as well as the physical toughness to handle seemingly large doses of the drug. His status as an 'expert' is built around his persona as a 'smart guy'.

Modafinil Mick occasionally mentions narcolepsy and sleep disorders – the conditions for which modafinil *is* licenced. However, he is mostly focused on modafinil as a nootropic and as a drug of enhancement rather than treatment. While he never specifies any particular kind of work, he is clear that it is a drug for work, and *not* leisure:

Spending time in the gym when Modafinil is flowing through your veins is a waste of time and focus. We don't waste 'Modafinil hours' getting swole in the gym. We use these 10–12+ hours of focus to get shit done from a work standpoint.

The reference to 'getting swole' is an American expression, meaning getting one's muscles pumped up at the gym. The image of swollen muscles calls to mind male bodies, and subtly rejects a particular kind of 'dumb', physical masculinity (as well as femininity). Of course, as an all-American good guy, Modafinil Mick works out, but here he clearly separates leisure time and productivity: modafinil is a drug for work – not leisure. Indeed, he signs off emails with neat phrases such as 'yours in productivity' or 'here's to the grind'. This theme also appears in a weekly email discussing modafinil and sex – the only time in his emails that gendered/sex differences are mentioned (and as could be expected, sex is discussed in hetero-normative ways). He explains that modafinil can 'hurt erection quality' and offers links to websites selling Viagra. However, he also claims that modafinil can enhance sex for women (he gives no scientific evidence to back up his claim, except for anecdotal evidence from his female colleagues).

The only time that Modafinil Mick permits modafinil outside of work is in relation to lockdown:

There's still a whole lot of ways to stay productive in the coming weeks and months, even if life as we knew it changes for the time being .... Learning a new skill? Tons of free and paid resources online, teaching us everything from coding to knitting to real estate and much more ... We've all got 1–2+ hours a day to study and learn. Poppin' a Modafinil here and there is sure to help you hit that 'exponential curve' in a good way. The world's best damn smart drug is sure to skyrocket your skills.

The emphasis on productivity in all spheres of life – even one's hobbies – reflects an especially US approach to the neoliberal project of the self (McGuigan, 2014). By tapping into widely held cultural values (such as self-determination and entrepreneurship), Modafinil Mick builds a picture of cultural appeal. Modafinil is the best way to become an all-American good guy – just like him.

The larger-than-life persona of Modafinil Mick enables the company GetModa to make claims about modafinil as a legitimate form of cognitive enhancement, as well as making claims about themselves as a legitimate company. The performance of a particular kind of masculinity in his weekly promotional emails distinguishes the brand against competitors, but it also enables them to make a clear

distinction between themselves (as a legitimate business) and other – suspect – websites selling drugs.

If rugged street masculinity underpins traditional drug markets (and recent scholarship debates this, e.g., Jacques and Allen, 2013; Moeller and Sandberg, 2017), then Modafinil Mick represents a different kind of masculinity – he is a good guy and a smart guy rather than a tough guy. After all, toughness has little value online compared to the ‘Modafinil Mick Guarantee’<sup>TM</sup>. Thus, his masculine presentation distinguishes his site from illegal drug markets – literally offering guarantees of trustworthiness. Furthermore, Modafinil Mick is also a role model for modafinil use. And, as such, the kinds of subjectivities that are discursively made available by modafinil are underpinned by notions of normative masculinity – that is, self-improvement, attachment, and dedication to work. While there may be attempts to acknowledge and include women (knitting!), Modafinil Mick’s correspondence suggests that men – smart guys like himself – are the presumed users of modafinil.

### *ModafinilCat: Gender-neutral Branding*

Our second case study is of a distinctive, early success in the clearnet sale of modafinil. By 2016, ModafinilCat.com (not a pseudonym) had emerged as one of the most well-known sellers of modafinil online.<sup>4</sup> Despite only operating for around two and a half years (it suddenly shut down in 2016 at the peak of its popularity), ModafinilCat was a well-known and highly reputable seller, attracting considerable acclaim in online discussion forums such as Reddit. And, regarding our particular interest, it is distinctive especially because of its relatively gender-neutral branding. Indeed, a central part of its marketing was its friendly presence, describing themselves as ‘fast and fluffy’.

The ModafinilCat logo (see Fig. 8.1) is a graphic, bright fuchsia cartoon outline of a cat against a dark purple background. Likewise, the logo of the ‘pharmacy’ (Fig. 8.2) is a bright illustration – again the dominant colour is purple. Their main page said: ‘Order like it’s Amazon. Ordering modafinil online has never been a walk in the park but we’re not your everyday Modafinil online pharmacy’. As they state:

We don’t sell Modafinil – we sell a spaceship that brings you closer to your dreams, you just have to put it together by yourself.

While it is very common in pharmaceutical advertising to employ the metaphor of ‘return’ or ‘restoration’ (Delbaere, 2013), the metaphor of modafinil as a ‘spaceship’ is rather more fanciful, but arguably connotes pharmaceutical exploration connected to the ‘cyber-psychonauts’ (O’Brien et al., 2015, p. 219). Like earlier generations of psychonauts, cyber-psychonauts take drugs at home

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<sup>4</sup>Google metrics suggest that people were searching from ModafinilCat from around August 2014.



Fig. 8.1. ModafinilCat Logo 1.

(e.g. rather than at raves) to explore their subjective effects (O'Brien et al., 2015). The advent of the Internet made available a wide array of new psychoactive substances (which were legal, for a time) as well as novel forums for learning about and documenting drug use (e.g. Erowid). While the eponymous cat is the most distinctive visual, the bright colour scheme and astronomical metaphors create an overall sense of fun and exploration. ModafinilCat presents much more like a head shop than a pharmacy, emphasising fun over treatment.

ModafinilCat established many elements of good service that are replicated in later websites – refunds for packages that get lost or stuck in customs, rapid dispatch, and customer satisfaction:

ATTENTION: only trust communication from our official domain ModafinilCat.com and from the reddit user 'MoaCat'. Bad people are out to scam you into giving away personal information, please be extra careful ... (=^.^=).



Fig. 8.2 ModafinilCat Logo 2.

While some scholars argue that good service is a novel development in online drug markets (Martin, 2018), scholarship on women in online drug markets has in fact reported women distinguishing themselves in the market with good customer service (Fleetwood, 2014; Grundetjern and Sandberg, 2012).

So far, so corporate. Yet, by drawing on counter-cultural drug imagery, their website conjures elements of subcultural cool. ModafinilCat features no depictions or descriptions of humans; however, their imagery reflects supposedly feminine notions – the colours purple and pink match the cutesy, fluffy cat imagery *and* traditionally feminised notions of service (as opposed to competition). Indeed, it is notable that Afinilexpress (endorsed by the ModafinilCat team as their natural successors, and also closed in 2019) also relied on a sense of playfulness – ‘Choo!!! Choo!!! ... We’re extremely happy to have you on board and looking forward to serving you... Hope you enjoyed riding the Afinil Express!’ ModafinilCats’s animal branding is widely copied, that is, Duck Dose, Fox Dose, Shark Dose, etc. This imagery starkly contrasts with Modafinil Mick’s macho posturing and the kind of branding found in cryptomarket vendor names (Hämäläinen, 2019). Yet, for all of ModafinilCat’s fluffy branding, it’s worth remembering that it was, for a good time, a widely acknowledged market leader, establishing norms around fast and reliable service: as they state, they are ‘like Amazon’.

While ModafinilCat does not depict gender in a literal sense, its lack of macho posturing is essential to its sense of fun and arguably its popularity. The lack of representative images of humans (either in images or text) leaves the appropriate uses of modafinil much more open to interpretation and even experimentation. We cannot draw any conclusions as to who the consumers actually are, and we are definitely not suggesting that women would be seduced by a picture of a cat. However, we do argue that ModafinilCat’s lack of macho posturing and emphasis on fun and exploration are much more open to a wide range of possible uses for, and users of, modafinil.

### ***An Unregulated Online Pharmacy: ModafinilGB and Corporate Anonymity***

The final case study is a clearnet website for ‘ModafinilGB’.<sup>5</sup> They describe themselves as an ‘E-pharmacy’, despite only selling modafinil and its variants (e.g. Modalert, Provigil, Modvigil, Vilafinil, etc.). Unlike other online pharmacies (e.g. UKMeds, Pharmacy 4u) they sell modafinil drugs directly to customers without a prescription. As such, they occupy the same legal space as our previous two case studies.<sup>6</sup> Although ModafinilGB promises full encryption, payment is taken

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<sup>5</sup>A pseudonym.

<sup>6</sup>A discussion of the legal status of online modafinil sellers is beyond the scope of this article as it is rather complex. Modafinil is posted from countries where it can be sold without prescription to countries where it is illegal to sell it without a prescription. However, the question of whether it is illegal to receive it is, at best, a legal grey area. In the UK, modafinil is not currently listed as a controlled substance (Home Office, 2019).

using the standard credit/debit card platform as well as Bitcoin. The site has been functioning since 2013, making it our longest-running example of a modafinil e-commerce site.

Their website has a white/navy blue colour theme common to legitimate online pharmacies. Unlike legitimate pharmacies, however, the banner at the top of the home page features a futuristic illustration of a transparent, androgynous person whose glowing brain can be seen against a background combining a double helix and a circuit board saying: 'UNLEASH YOUR POTENTIAL! Modafinil—The World's #1 Smart Drug!' So this is *like* an e-pharmacy, but one with more futuristic, mind-enhancing medicines. But aside from this slightly fantastical/whimsical imagery, the over-arching 'theme' of the website is of legitimacy and normalcy (even to the point of being rather boring).

The online persona of the sellers behind ModafinilGB is characterised by corporate anonymity. Their 'About us' page emphasises the quality of their product, the cost-effectiveness of generic modafinil, and the speed and ease of their prescription-free service:

We take great pride in the knowledge that we stock only the most affordably-priced and sought-after generic medications for the treatment of narcolepsy, concentration deficiency, and all related problems experienced by people in the UK and EU .... Our medications are available to you without a prescription, therefore no need to incur the financial cost and time involved in scheduling a doctor's appointment, obtaining a prescription, and then going to a physical pharmacy to purchase your goods.

Here, they describe themselves in terms of offering an important service for (smart) people who value their time and money. Besides the text, we can see a bright photograph of a white woman receiving a brown paper-wrapped package, emphasising their status as an absolutely normal kind of online shop.

Reflecting the theme of normality, customers are presented as *hyper-normal* – that is to say, professionally dressed, middle-aged, middle-class, heteronormative men and women. In striking contrast to the bias and stereotypes common to pharmaceutical advertising (Fisher and Ronald, 2010; Mosher, 1976), here we find a careful balancing of the numbers of men and women present. Gender is rather downplayed. There is no bombastic masculinity (as per Modafinil Mick), nor do we find sexist stereotypes.

Customers (or potential customers) are depicted at length on the website's blog. Between May 2018 and April 2020, their blog was updated on a nearly weekly basis. Hundreds of posts contain images with accompanying short paragraphs. The text is repetitive, echoing the same themes from the website (delivery, service, etc.), extolling the virtues of particular brands of modafinil for promoting wakefulness and productivity. Blog text employs a very wide range of metaphors, as described in prior research on modafinil in the media – for example, 'beating' sleepiness (Coveney et al., 2009; Williams et al., 2008). While illness features, *enhancement* is more commonly mentioned: 'recharge your brain' and 'greater work productivity'.

More interesting are the choices of stock images (which are re-used across postings). Blog posts typically figure a single person, aged around 20–40, usually dressed in workwear (a smart shirt and/or blazer). They are almost always shown near to a computer and a hot drink, sometimes with other objects associated with work, such as pens or folders. The mug of coffee or tea recalls the normality of mild stimulants at work, again emphasising the ways that modafinil could become part of a person's working life. Images mostly show people either in a state of happy concentration or unhappy sleepiness. Most are white, with an occasional person of colour included for balance. Gender is understood as a binary: women and men figure in nearly equal portions. All are slim and seem otherwise able-bodied and healthy. They tend to be shown working alone rather than with colleagues or clients. Images give no indication of what kinds of professions are being undertaken – the point is rather to depict a form of 'every-job' undertaken in an anonymous office by an 'any-person'.

Here, gender is part of the background advertising of modafinil, and gendered depictions support the overarching theme of normalcy. The implication here is that modafinil is a normal and natural part of contemporary work. Consumers of modafinil are depicted doing normal kinds of work in normal offices, echoing media depictions of modafinil as an aid for productivity at work (Williams et al., 2008). As Deutsch (2007) notes: 'gender, although always working in the background, varies in salience across different situations' (p. 116). This depiction of the 'any-person' subjugates the importance of gender – and yet, ideas about gender are inevitably present.

## Discussion

Gendered representations were ubiquitous to all of the examples we provide, in surprising variation. Such variety recalls gender's mutability (Connell and Pearce, 2014). Despite selling an identical product, modafinil websites draw on different sets of discourses and images to sell their product, and gender is part of these representations. Modafinil Mick reflects the taken-for-granted ubiquity of masculinity in (most) online drug cultures: of course the public face of an online illegal drug company would be a man! And yet, the kind of masculinity on display is culturally and historically specific – good ole' Modafinil Mick is neither Bill Gates nor is he Scarface: he is a good guy, a smart guy who exemplifies the ways that modafinil can be used to get ahead. ModafinilCat cut through the macho posturing common to online drug cultures with its 'fluffy' branding and focus on good service. ModafinilGB, meanwhile, aligns itself with forms of corporate anonymity common online by emphasising the normality of using modafinil to 'beat' sleepiness supported by images of 'normal' men and women at work.

As an aside, drug markets are often associated with particular racial or ethnic groups (Murji, 2007). In our reading, online modafinil markets often rely on whiteness in depictions of drug sellers. GetModa advertises as an all-American brand, and Modafinil Mick is implicitly white; ModafinilGB employs stock images of white people in lab coats to emphasise their branding as a pharmacy. While the meaning of 'race' is nationally distinct, whiteness underpins marketing

depicting modafinil as a legitimate (and safe) way to enhance productivity. A fuller analysis of race is outwith the scope of our analysis. Nonetheless, future research on drug advertising could easily trace the ways that race is part and parcel of online drug markets.

Gender may not always be the most salient aspect of representations of online drug markets, but it is nonetheless ubiquitous, as it is in social life (Connell and Pearce, 2014). And yet, online drug market scholarship has tended to gloss over the significance of gender (Fleetwood et al., 2020). An interesting finding here is that sexist gender stereotyping of women was rather absent, in contrast to legal direct-to-consumer pharmaceutical advertising reviewed above. But this absence arguably reflects a general lack of imagination regarding women as potential consumers of modafinil – surprising, given that 40% of people who report buying cognitive enhancers online are women (Maier et al., 2018).

Gendered representations are not merely decorative but are part and parcel of online drug cultures. They discursively construct how modafinil may be understood and the kinds of uses it may be given. Returning to the notion of material-discursive entanglements (Johnson, 2017b, p. 213), we can note the limited ways that modafinil has been imagined. Within this imaginary, spheres such as home and leisure are absent, as are women, those outside the gender binary, and older people.

Both Modafinil Mick and ModafinilGB locate modafinil as a drug to be consumed alone, at work, exclusively for productivity. As Williams et al. (2008, p. 852) noted, media portrayals of modafinil resonate with the protestant work ethic. Work tends to be associated with notions of men as breadwinners, or even with contemporary, more neoliberal, notions of self-reliance and competition. While women may be nominally included, they are only undertaking the same kinds of corporate ‘every-job’. Teaching or caring do not figure here as the kind of work that could be enhanced. This limited imaginary has implications for the ways that modafinil can be imagined and used, especially for women.

This is somewhat surprising given the media accounts *by* women describing a wide range of benefits from using modafinil. Modafinil is a relatively new drug whose meanings may not yet be settled, and whose uses are yet to be explored. Take, for example, a recent discussion hosted by Massachusetts General Hospital Centre for Women’s Mental Health (2018) in which a female doctor is asked about the potential use of modafinil to combat the fatigue experienced in menopause and responds that ‘menopausal women with fatigue may also benefit from treatment with modafinil’. Yet the use of modafinil for female health issues is not featured in Modafinil Mick’s many blogs or represented in *any* of the sites we explored.

Instead, the gendering of modafinil – as a drug belonging to the competitive corporate sphere – rules out alternative possibilities. Pleasure, leisure, and the domestic sphere are mostly absent in our examples. Perhaps the best way to illustrate this point is to paint an alternative picture – what kinds of uses of modafinil can we re-imagine? Picture the scene: a middle-aged woman is curled up on the sofa, engrossed in a hardback book – she is enjoying her own company and her book, intensely. Her comfort is emphasised by her cosy cardigan and sofa. Or,

in another scene, a young woman plays contentedly with a young toddler – she looks refreshed and not at all sleep-deprived. She and the young child are happily engrossed in a craft project together. Lastly, a short-haired, muscular woman is pictured sailing a boat. She is alone, the sun in her face: she is at the top of her game – physically and mentally.

Our alternative imaginaries forefront women as the ‘normal’ consumers of modafinil. Indeed, it’s easy to imagine how modafinil use could fit into women’s busy and often sleep-deprived lives (Arber et al., 2009), particularly in relation to ‘lean-in’ culture and the desire to ‘have it all’ (Sandberg, 2013b). And yet, the fact that we have to conjure these for ourselves reveals the deeply gendered ways that online drug advertising for modafinil is shaped.

## Conclusion

In this chapter, taking clearnet websites selling modafinil as our case study, we have argued that gender representations are pervasive in online drug markets. Clearnet markets generate an array of text and images, rendering gender visible. Our analysis also demonstrates the ongoing significance of *ideas about gender* within online drug markets. Gender does not disappear online but is part and parcel of working assumptions about who is considered to be the normal user, as well as how the drug may be imagined.

Online representations do not tell us who is really present in online drug markets. Nonetheless, they are part of the symbolic environment and online culture of online drug markets, that is, they are part of the material-discursive entanglements between drugs and gender (Johnson, 2017a). The overall picture is one of continuity: as in more traditional drug markets, men rather than women tend to be centred in representations of presumed consumers, buyers, and sellers. We might wonder whether modafinil advertising influences who does or does not buy modafinil online, that is, do expectations about men as the normal consumers of modafinil influence more men than women to use modafinil? The consumer is the ultimate author of meaning (Whittaker, 1998, p. 85), but representations offer the puzzle pieces for imagining how modafinil may be used. Yet, although the kinds of discourses and images in play offer few resources for imagining women as significant players in the consumption of modafinil, women do appear to imagine modafinil use for themselves.

## Chapter 9

# Cryptomarkets and Drug Market Gentrification

*James Martin*

### Abstract

Cryptomarkets have expanded rapidly since the launch of Silk Road in 2011, offering a significant new mode for the sale and distribution of illicit drugs. One of the key questions accompanying the proliferation of cryptomarkets and online drug distribution concerns how these unique online fora alter relationships between drug suppliers and their customers. Existing research points to an increase in perceptions of safety and respect among people who use cryptomarkets to purchase drugs relative to other ‘offline’ modes of drug acquisition. There is a growing body of evidence that suggests that drug suppliers are also attracted to cryptomarkets by perceptions of increased safety, as well as by market norms and institutional processes that are characterised by respect and courteous engagement. These issues fall broadly under what has been termed market ‘gentrification’ – that is, the substitution of offline drug market norms, which are sometimes characterised by violence, intimidation, suspicion, and exploitation, with relative feelings of safety, respect, and courtesy. This chapter explores the ‘gentrification hypothesis’ and examines how the unique structural characteristics of cryptomarkets, which include user feedback and ratings, dispute resolution systems, and administrator and community ‘policing’ of cryptomarkets, as well as online discussion forums, assist in fostering the development of pro-social norms that appear to be prevalent on cryptomarkets.

*Keywords:* Cryptomarkets; dark web; online drugs; gentrification; non-violence; pro-social norms

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## Introduction

In late 2016, I was travelling through British Columbia carrying out interviews with participants in the local cannabis trade. I met one interviewee in her home – a large, wealthy suburban house behind a white picket fence where she lived with her husband and their school-age children. It was a surprisingly idyllic representation of North American suburban life. The striking aspect was the contrast – this visibly affluent and respectable woman was, in simplistic terms, a ‘criminal’, the owner and manager of an illicit grow operation of thousands of cannabis plants which comprised a small but significant component of the region’s signature illicit export, BC Bud. Of course, this contrast should not have come as a surprise. Participants in the shadow economy routinely belie the stereotypical images that are presented in news media. Nonetheless, I asked the couple whether they felt there was a contrast between the respectability of their lifestyle and the illegality of their work. ‘It’s not as bad as you might think’, the woman replied, pointing out that with federal legalisation slowly approaching, local law enforcement was not prioritising investigation into cannabis growers, and there was therefore little risk of ‘the police kicking in the door’. More importantly, she continued, the local cannabis growers all knew one another, and the trade no longer involved interaction – and possible confrontation – with outlaw motorcycle gangs and other dangerous organised crime groups. The trade was therefore noticeably safer than it had been in previous years: ‘It’s not like the old days’, she explained, ‘if it was, there’s no way we’d still be doing this’.

This exchange was instructive on several levels. Firstly, it demonstrated an intuitive and no doubt well-honed sense of risk perception on the part of a drug market participant with decades of first-hand experience in the local drug economy. Secondly, it showed that the perception of risks in said drug economy could change, and that people use their knowledge of these risks to inform their participation on an ongoing basis. If the level of threat from law enforcement and non-state sources were deemed to be too high, they would find alternative work and the trade would be left to those with greater risk tolerance. If risks were judged to be sufficiently low, more risk-averse actors – such as the woman I was interviewing – would participate in the market. Thirdly, risk, a well understood but exceedingly difficult concept to quantify, seemed at these very low levels to translate into a qualitatively different experience, one where the dangers of arrest, injury, or violent confrontation appeared so remote as to *no longer represent a plausible reality*. And lastly, the perception of negligible risk seemed likely to be self-reinforcing in that it could attract other risk-averse, ‘respectable’ participants – in this case, the other local growers with whom the interviewee associated – whose presence in the market would further entrench norms favourable to conflict aversion and non-violence. In this way, and with the right conditions, it seemed as though a wave of gentrification could sweep through an illicit industry like those sweeping through inner urban areas of the post-industrial Global North.

This anecdote, highlighting the potentially self-reinforcing dynamic between low risk and the attraction of risk-averse market participants, represents just one way that drug markets may experience gentrification. But what exactly does

gentrification mean in the context of illicit drug markets? And what factors precipitate its development? This chapter aims to explore these questions from a criminological perspective with particular reference to cryptomarkets and the dark web trade in illicit drugs. It will define gentrification in the context of illicit drug markets, before discussing the processes by which gentrification manifests on cryptomarkets and the empirical basis that underpins them. The chapter will conclude with some exploratory thoughts that may be used as a basis for further research to consider drug market gentrification both on the dark web as well as in other drug markets.

First, a quick note on terminology. This chapter refers both to cryptomarkets and the dark web. The dark web, also known as the Tor network, is an encrypted sub-section of the Internet. Accessing the dark web is only possible through the use of a Tor browser, which masks a user's IP address, which is the unique identifier that allows authorities to track an Internet user's location, browsing activity, and so on. The dark web is sometimes confused with the deep web, which is a different, much larger part of the Internet which is not accessible via a regular Internet search and is instead behind a paywall or sign-in obstacle of some kind (e.g. a university or business intranet). The clear web, by contrast, constitutes anything on the Internet accessible via a regular search. Cryptomarkets are pseudonymous marketplaces operating on the dark web (Martin, 2014b).

## **Background**

Gentrification and illicit drugs are often considered to be negatively correlated. On the one hand, conventional urban gentrification is associated with the 'transformation of a working-class or vacant area of the central city into middle-class residential and/or commercial use' (Lees et al., 2013, p. xv). It is a process of urban change and renewal that, depending on one's perspective, may seem alternatively inevitable, desirable, or regrettable. On the other hand, illicit drugs, at least in much of the popular imagination, have traditionally been associated with urban decay, with slums and ghettos, junkies and muggers, and with the great destroyers of property value – crime, disorder, and fear. Aggressive gentrification, whether in São Paulo's 'Crackland' or in Sydney's Kings Cross, has been implicated in crack-downs on open-air drug dealing and the displacement of drug users, particularly those who are homeless, socially, or economically marginalised, or whose use is visibly problematic (Amaral and Andreolla, 2020; Dertadian and Tomsen, 2019).

As is the case with many dichotomies, the seemingly polar and mutually exclusive influences of illicit drugs and gentrification are simplistic and false. Rather than gentrification necessarily working in opposition to illicit drug markets or vice versa, both can inform and influence the other in sometimes complex and mutually reinforcing ways. This is due in large part to the ubiquity of drug consumption among both the working and middle classes across much of the world, including here in Australia (AIHW, 2019; UNODC, 2020). Swapping one class for the other therefore does not preclude the development, continued functioning, or even the expansion of local drug markets. Gentrification does, however, necessitate adaptation on the part of drug market participants in response

to changes in the urban environment, such as the destruction or privatisation of formerly public or abandoned spaces in which drugs are sold and/or consumed, shifts in consumer demographics, including their drug preferences and levels of disposable income, and changes in the presence of local law enforcement and the strategies that they employ.

One of the most informative accounts of this process in action is provided by Curtis et al. (2002), who undertook a detailed ethnographic study of the effects of urban gentrification on illicit drug markets in New York in the late 1990s. They explained how an assertive police presence as well as demographic shifts from working to middle class among residents in Manhattan's Lower East Side resulted in the abandonment of open-air drug markets in favour of closed markets where retailers and consumers would meet in private locations. This shift was accompanied by reductions in violence as dealers forewent confrontation with one another over prized drug-retailing 'turf' and instead delivered their products discretely to consumers in their own homes. In addition, critical in this shift was the role of new technologies – in this case mobile phones and beepers – to facilitate drug sales without relying upon inherently risky and problematic physical retailing sites (Curtis et al., 2002). These insights are valuable in that they demonstrate how alterations in the physical, social, and technological environment in which drug markets operate can produce cascading changes in how market participants behave, interact with one another, and experience the drug markets in which they are involved.

Curtis et al. (2002) refer to the changes in the observed drug markets caused by urban gentrification as *drug market gentrification*, though they do not offer any specific definition of the latter. In general terms, we may therefore consider that drug market gentrification is a process through which potentially violent social norms are replaced by more cordial, professional relationships between market participants (see also Martin, 2018). Of course, as Coomber (2006) and others have pointed out, drug markets are marked by heterogeneity not homogeneity, particularly with regard to the prevalence of violence. Not all drug markets experience high levels of violence, and the extent to which they do so is often over-estimated by a general public conditioned by decades of drug war propaganda (Coomber and Maher, 2006; Reuter, 2009). So to do social norms regarding cordiality and professionalism vary significantly between different drug markets, or even within the same markets across different periods of time. Drug markets therefore have significant and perceptible differences in the degrees to which they are gentrified, just as they have variations in endemic levels of violence, competition, profitability, and so on.

While drug markets are typically characterised by differentiation rather than similarity, it is intriguing that cryptomarkets appear to be an outlier in this regard in that they are often remarkably similar to one another in terms of operation, structure, and composition. To some extent, the remarkable degree of homogeneity witnessed across cryptomarkets is a product of the success of the original Silk Road website, which provided the essential template upon which subsequent cryptomarkets have been built (Martin, 2014a). Seller pages, the centrality of customer feedback, escrow, and dispute resolution may all be reasonably expected

to produce convergence in how cryptomarket participants go about their trade. Also, working in favour of similarity is the fact that users, whether buyers or sellers, often migrate from one site to another with the result that in the inevitable event that a cryptomarket is closed, the very same population is able to continue trading, albeit in a different digital space. This is not to disregard differentiation entirely; cryptomarkets may also be distinguished from one another in various ways, such as their size, (in)tolerance for various kinds of dangerous goods and services, and varying degrees of political engagement among their users (Martin et al., 2019; Munksgaard and Demant, 2016). However, the magnitude of differentiation among cryptomarkets is almost certainly narrower than it is among various kinds of offline drug markets. This is significant in that the conclusions drawn concerning cryptomarkets and gentrification, and indeed other aspects of their operation, are likely to have a greater degree of generalisability than is the case with other sites of drug exchange.

## **Non-Violence**

As noted above, violence is a persistent threat, if not a reality, in many illicit drug markets, and systemic drug market violence – that is, violence that occurs as part of the functioning of illicit drug markets (Reuter, 2009) – is in many countries a major driver of serious violent crime, including assault, robbery, kidnapping, and homicide (UNODC, 2020). Causes of violence in conventional, offline drug markets (i.e. those that involve at least some element of in-person exchange) include competition between drug suppliers, predation of suppliers by customers and other offenders, retaliation by market participants against scams and other infringements of market norms, and as a means of promoting discipline within drug supply organisations (Reuter, 2009). A lesser but still commonly cited cause of violence is the psychopharmacological effects of some illicit drugs which may predispose users to aggression, paranoia, and other anti-social psychological states (MacCoun et al., 2003). Underlying and aggravating each of these causes is the illegality of the illicit drugs trade which leaves market participants without the capacity to call upon legal authorities for protection, dispute resolution, or insurance against financial and physical risks.

All of the causes of violence listed above, with the exception of the general illegality of the drugs trade and the necessity to maintain discipline within drug supply organisations, are construed differently and are in some way ameliorated on cryptomarkets. Consequently, cryptomarkets have been distinguished from other drug markets by a conspicuous absence of violence since their inception. Non-violence was an intended feature of the original Silk Road, whose creator, Ross Ulbricht, aspired for the site to offer a radical, utopian-libertarian alternative to the violence associated with conventional drug markets blighted by the global war on drugs (Greenberg, 2013a, 2013b). There is strong empirical support for the notion that cryptomarkets are not associated with violence. This evidence comes from a range of studies, including quantitative surveys of user experiences (Barratt et al., 2016), qualitative case studies (Tzanetakakis et al., 2016; Tzanetakakis, 2015), analysis of cryptomarket discussion fora (Morselli et al., 2017), and

interviews with both consumers and suppliers who use cryptomarkets (Felstead, 2018; Martin et al., 2020; Van Hout and Bingham, 2013b, 2014). One notable study by Barratt et al. (2016) shows that users of cryptomarkets experience both threats and actualised violence at very low rates, even when compared to other drug markets in which violence is rare: only 3% of users reported threats of violence and 1% reported experiencing violence. The conclusion of the authors regarding the prevalence of violence on cryptomarkets is unambiguous:

Cryptomarkets are associated with substantially less threats and violence than alternative market types used by cryptomarket customers, even though a large majority of these alternatives were closed networks where violence should be relatively less common. (Barratt et al., 2016, p. 2)

Intriguingly, this study also provides the only known evidence for the existence of *any* physical violence on cryptomarkets; to date, there has never been a verified case of violence between cryptomarket participants in the history of their operation. That said, non-physical violence, which includes threats of physical violence and intimidation or the release of identifiable, often incriminating information (known as ‘doxing’), is encountered on cryptomarkets, though as Barratt et al. (2016) show, this too occurs at levels lower than is reported in other drug markets.

There are a variety of reasons why (physical) violence is so rarely encountered on cryptomarkets. The first and most obvious is that cryptomarket users do not meet face-to-face but rather have drugs delivered by post, courier, or via ‘dead drop’ where drugs are concealed in a location revealed to the buyer upon receipt of payment. By not meeting in person, both buyers and sellers are protected from the possibility of violence occurring between them. Similarly, an absence of physical interaction also helps insulate buyers and sellers from the possibility of violence occurring at the hands of external parties, including police and other offenders. The physical safety of cryptomarket users is enhanced further by their use of pseudonyms and encrypted communications which delineate users’ online offending from their offline identities. By not meeting in person, and by keeping the names and physical locations of drug suppliers secret, there is effectively no possibility that they can be targeted by those prepared to use violence to relieve them of their drugs or illicit earnings.

As described in the introduction of this chapter, an absence of violence incentivises the participation of traders who are averse to violence, as well as to other forms of conflict. This perspective is described by one cryptomarket vendor interviewed by Martin et al. (2020, p. 10):

I hadn’t ever thought about selling drugs in any capacity because I dislike violence and it just seemed impossible to be involved in selling drugs in ‘real life’ without running into some sort of confrontation pretty quickly .... I was always too scared and slightly nerdy to do that and never really contemplated it seriously until the darknet.

In having a reputation for non-violence, cryptomarkets attract users who have a preference for either avoiding conflict or resolving conflicts via non-violent means. These alternative means are provided by institutional features built into cryptomarkets. In particular, escrow and dispute resolution incentivise honest conduct between buyers and sellers and enable conflicts, in those instances when they do arise, to be resolved by cryptomarket administrators (Tzanetakis, 2015). Discussion forums provide a further means by which conflict can be managed between buyers and sellers on cryptomarkets. For example, Morselli et al. (2017) describe how notifications of scamming behaviour and calls for ostracism shared on discussion forums is the first option typically employed by cryptomarket users in situations of potential conflict. The existence of these fora, and the importance of customer feedback and vendor reputation in attracting new clientele, helps ensure that vendors behave honestly – or at the least maintain a plausible veneer of honesty – which in turn further reduces the potential for conflict.

There are limitations to the notion that cryptomarkets are entirely violence-free. One exception to this concerns those who reveal their identities or locations in the process of either sourcing or selling drugs outside of cryptomarkets – for example, vendors who purchase drugs from an offline supplier but then subsequently sell them online, or who in addition to selling drugs via cryptomarkets also do so in person. In these instances, however, cryptomarkets are not directly implicated in the violence that may result. Another possibility for violence which is harder to decouple from cryptomarkets is the necessity for physical interaction with offline drug suppliers on the part of cryptomarket vendors as part of securing their own drug supply. While some vendors are known to also source their drugs via cryptomarkets, these online-to-online buyer-vendors (OOBVs) are also in the minority (see Martin, 2019) with most cryptomarket vendors sourcing their drugs in person, thus exposing themselves to potential violence.

Another scenario associated with violence related to cryptomarkets is the necessity to maintain discipline within drug vending firms. Relatively little is known about the structure of large-scale cryptomarket vendors. We do, however, have evidence that some large-scale vendors work in teams (Martin et al., 2020), which potentially exposes them to pressures comparable to those of conventional drug supply networks operating in the offline drugs trade and among whom violence is well documented (Reuter, 2009). Comparable to this scenario is the potential for violence not among vendors but within the administrative structure of cryptomarkets. The prime example of this concerns Silk Road and its administrator Ross Ulbricht, who was implicated in ordering multiple ‘hits’ on members of his administrative team (see Greenberg, 2013c). The fact that these executions were never carried out, and that the alleged hitman and at least one target were working undercover for law enforcement (Jeong, 2015), does not invalidate the potential for violence occurring within cryptomarkets as a means of maintaining discipline among members; indeed, it is an example of precisely the opposite – that under extreme conditions, at least one cryptomarket administrator has shown himself willing to employ lethal violence to protect themselves and their operations.

## Professionalism and Cordiality

Professionalism is a term historically reserved for particular occupations such as medical doctors, lawyers, and engineers which, according to Evetts (2003), require specialised knowledge and expert skillsets, serve a public good, and engender and necessitate trust on the part of customers or clients. Professionalism is also associated with institutional control in the form of professional associations which control group membership and set explicit, codified standards for appropriate and ethical conduct on the part of members (Noordegraaf, 2007). While it may appear somewhat of a stretch to apply this concept to illegal occupations, cryptomarket vending has been associated with professionalism since its inception (see Martin, 2014a; Van Hout and Bingham, 2014). This is not simply because vendors often refer to themselves as ‘professional’ or offering ‘professional’-type services; there are several ways in which the workplace activities of cryptomarket vendors meet the various formal criteria of professionalism described above. This section of the chapter will discuss the empirical support for this concept.

Before discussing the ways in which cryptomarket vending and professionalism overlap, however, it is important to note that vendors are not a homogenous group, but may vary according to the size and sophistication of their operations as well as the amount of illegal revenues that they generate. In an analysis conducted on the cryptomarket Alphabay, Paquet-Clouston et al. (2018) find that approximately half of all revenues are generated by an ‘elite’ top 1% of vendors. Beneath these top performers sit a middle band of vendors, comprising 9% of sellers who account for 36% of sales, with the remaining 90% of vendors making very few to no sales. Tzanetakis (2018a) shows a similar degree of revenue concentration among the top tiers of vendors in her analysis of Alphabay. Given that the overwhelming majority of cryptomarket vendors are either inactive or *de facto* so, and generate little to no revenue as a result, it makes little sense to think of them as ‘professionals’. Rather, this section of the chapter is written with reference to both the second and particularly the first elite tier vendors who together make up the vast bulk of cryptomarket sales and revenues.

### *Specialised Knowledge and Expert Skillsets*

There are a variety of studies that show that cryptomarket vendors possess specialised knowledge and expert skillsets that are necessary to trade drugs online safely and successfully. These include managing operational security (OPSEC), marketing strategies, and customer service skills. Operational security refers to the various practices employed by vendors to maintain anonymity and to manage and mitigate risks emanating from law enforcement and other threats. It includes digital aspects, such as knowledge and utilisation of encryption (see Bancroft and Scott Reid, 2016), as well as non-digital ones, such as product concealment (known colloquially as ‘stealth’) which is used to facilitate the covert passage of drug consignments through postal screening. According to vendors interviewed by Munksgaard and Martin (2020), developing a sufficiently robust understanding of operational security requires time, effort and a degree of technical proficiency.

The difficulty in acquiring these skills has been posited as a significant barrier to enter cryptomarket vending, particularly in comparison to the relatively minimal skills and capabilities required in various forms of offline drug supply (Kowalski et al., 2019; Maddox et al., 2016; Paquet-Clouston et al., 2018).

The process of learning operational security is facilitated by access to related discussion forums hosted on cryptomarkets and, increasingly, other dark web sites (such as the discussion forum Dread), as well as those on the clearnet (Kowalski et al., 2019; Martin, 2014a). Other necessary skills, however, such as marketing and branding are more likely to be learnt via an understanding of digital sales and retail operations in the legal economy. As Tzanetakis (2019, p. 68) notes, marketing is not associated with other offline forms of drug supply due to the fact that ‘increased visibility corresponds with an increased risk of law enforcement activity’. On cryptomarkets, however, marketing is essential as it provides one of the only means available to vendors to stand out among intense competition and to rise to the most profitable tiers of vendor activity. Marketing is also used by site administrators to attract users to new and emerging cryptomarkets (Martin, 2014a). The practices involved with marketing on cryptomarkets are diverse and, according to Tzanetakis (2018b), include

indirect activities such as professional communication and visibility on platforms and associated forums, product branding, providing comprehensive information on the drug item (e.g., purity), speedy dispatch of slightly overweight drugs, and activities such as dispatching free sample items, free shipping, special discounts and promotion offers. (Tzanetakis, 2018a, p. 68)

Seller pages provide the first and most obvious context for the use of marketing on the part of cryptomarket vendors, and they include vendor names and logos, photographs of products, and textual information regarding product quality and composition, special discounts and, promotional offers (Martin, 2014a; Van Hout and Bingham, 2014). Ladegaard (2018) provides an intriguing insight into the use of one such marketing practice – the provision of free samples – on the Agora cryptomarket. He notes previous research from Coomber (2003) and others demonstrating the rarity of free samples in offline drug markets, and contrasts this with the widespread prevalence of the practice among cryptomarket vendors. Ladegaard (2018, p. 240) finds that free or low-cost (<US\$10) samples are available across all major drug categories, and that this practice is used by some vendors to ‘introduce themselves and their businesses’ either when establishing a new vending enterprise or when migrating from another cryptomarket. Free samples are particularly useful when provided to established ‘critics’ who will accept these goods in exchange for a (hopefully positive) detailed review posted to a cryptomarket discussion forum (Ladegaard, 2018).

### *Customer Service, Cordiality, and Trustworthiness*

Underpinning and accompanying the various marketing practices employed on cryptomarkets is a widespread commitment to a high level of customer service

and professional, cordial engagement with customers or ‘clients’, as they are referred to by some vendors (Martin et al., 2020; Munksgaard and Martin, 2020). Customer service on cryptomarkets manifests in a number of ways, including a respectful tone of communication, trustworthiness (i.e. carrying out sales honestly), prompt attention to orders and customer complaints, conflict aversion, and deference to customer wishes when possible (Martin, 2014a; Moeller, 2023, chapter 3; Van Hout and Bingham, 2014). As one vendor interviewed by Martin et al. (2020) explained:

I try to provide the best products and service I can, when someone has a problem or claims [their order was] short on pills (as long as they have ordered from me before) I usually take them at their word.

Levels of customer service and trustworthiness are typically proxied via analyses of customer feedback, the provision of which is a norm on cryptomarkets (Kruithof et al., 2016). Christin (2013) shows extraordinarily high levels of customer satisfaction on Silk Road with more than 95% of transactions attracting a positive rating (either 4 or 5 out of 5 stars). The high levels of customer service prevalent on cryptomarkets is, for the most part, driven by both vendor and customer preferences. In qualitative interviews, vendors describe satisfaction in engaging positively with customers and providing quality products in a manner consistent with running a ‘real’ business (Martin et al., 2020; Munksgaard and Martin, 2020; Van Hout and Bingham, 2014). Similarly, interviews with consumers point to the attraction of cryptomarkets as a forum in which quality drugs can be obtained, and exchanges between users are ‘nice’ in contrast to the violence and chaos perceived (often incorrectly) to be inherent to offline drug markets (Masson and Bancroft, 2018).

Cordial engagement and trustworthiness are not only typically embraced by cryptomarket vendors and customers as appealing in their own right but are also associated with business success. In an analysis of the top 20 vendor profiles on Silk Road 2.0, Bakken et al. (2018, p. 449) describe all of the seller pages as ‘written in a service-minded mode: polite, formal and informative’. Décarv-Héту and Quessy-Doré (2017) further posit that cultivating a positive customer experience is a factor in securing customer loyalty on cryptomarkets, which is doubly important given that a majority of customers prefer vendors with whom they have already successfully transacted. Similarly, the importance of customer feedback in attracting sales and revenue incentivises vendors to offer high-quality service as a means to attract new customers and grow their businesses (Prezepiorka et al., 2017). Treating customers with respect, therefore, provides vendors with the opportunity to attain both job satisfaction as well as a successful trading enterprise.

This customer-oriented approach is further facilitated by the safety inherent to cryptomarket drug trading. Unlike those involved in face-to-face forms of drug supply, cryptomarket vendors are not confronted with the potential of violence from their customers. This frees them from the necessity to present

what Topalli et al. (2002, p. 341) describe as a ‘reputation for formidability’ that is sometimes necessary to deter victimisation when selling drugs in offline markets. Cryptomarket vendors, by contrast, report a sense of control enabled by social and physical distance from their customers (Martin et al., 2020). Problematic customers and those suspected of attempting to scam their suppliers can be ‘treated at arm’s length’ and referred to site administrators and formal dispute resolution processes when unresolvable conflict arises and third-party mediation is required. These and other institutional features, particularly customer feedback and escrow, therefore help entrench cordiality and respectful engagement between buyers and vendors as marketplace norms.

While trustworthiness, good customer service, and cordial engagement constitute social norms on cryptomarkets, there are many routinely encountered instances when these are not followed. Exit scams are perhaps the most commonly encountered violation of these market norms. This particular type of fraud occurs either when a site administrator unexpectedly closes a cryptomarket and absconds with funds held in site escrow accounts, or when a cryptomarket vendor accepts payment for goods but never sends the consignments. In the latter of these instances, it may take days for customers to realise they have been defrauded, allowing the vendor to continue accepting payments that they have no intention of honouring before their accounts are shut down. Exit scams, and other types of fraud practiced on cryptomarkets are revealing in that they demonstrate how a commitment to honest and ethical conduct is often contingent upon financial reward. When behaving honestly is in an administrator or vendor’s best interest – as in the growth and maturity phases of their enterprise – it is more likely to be practiced. Likewise, when disregarding honest conduct allows for enrichment – as is the case when an administrator or vendor decides to conclude their business – then dishonest, fraudulent conduct is much more likely to occur.

### *Institutional Control and the Public Good*

It goes without saying that suppliers of illegal drugs do not have their own professional associations. Most drug-retailing organisations are loosely organised and exert minimal formal control over the conduct of their members (Decker et al., 2008). With cryptomarkets, however, circumstances are different and institutional controls are much more sophisticated and more closely resemble professional associations in the legal economy. For example, organisational charters, with explicit rules and standards regarding ethical behaviour and the appropriate treatment of customers are commonplace (Martin, 2014a). Scamming of customers, while routinely encountered (Moeller et al., 2017; Tzanetakis et al., 2016), is universally prohibited, and bans on the sale of goods deemed too dangerous for consumers, including drugs such as fentanyl, are widely prevalent (Martin et al., 2019). Prospective vendors must agree to abide by these rules, which are set down and codified by site administrators when applying for a seller account. Dishonest, fraudulent, and other unethical conduct runs contrary to site rules, which are policed by site administrators, moderators, and customers. Those who violate rules face sanctions, including the closure of their seller account and expulsion

from the cryptomarket and, in serious cases, more controversial forms of retaliation such as doxing (Moeller et al., 2017).

Institutional features that promote ethical conduct and professional norms and regulate group membership not only mimic some of the functions of legal professional associations but also assist in the pursuit of loftier aspirations regarding another aspect of professionalism – the serving of a public good. The original Silk Road laid out the most ambitious mandate in this regard, with the formal charter written by Ross Ulbricht making explicit the libertarian, pro-social values underpinning the site's operations: self-ownership, responsibility, equality, integrity, and virtue (Martin, 2014a, p. 13). The Silk Road Charter, as well as other rules and writings laid down by Ulbricht, link the operation of the cryptomarket with the serving of a public good in facilitating economic activity free from the overbearing and violent influence of the state. While libertarian discourse achieved a dominant position on cryptomarkets in the Silk Road era, subsequent cryptomarkets and their users have increasingly eschewed these political ideals in favour of more pragmatically oriented discussions on topics such as privacy and anonymity, security from law enforcement, and safer usage practices (Munksgaard and Demant, 2016).

The question of whether or not cryptomarkets serve a public good now, or even during the operation of Silk Road, is contestable, and one's answer is likely to be influenced by one's personal views regarding drug prohibition and the global war on drugs (Bewley-Taylor, 2012; Martin et al., 2022). For proponents of drug prohibition, cryptomarkets represent an unambiguous social evil, a dangerous new vector through which an unprecedented range of harmful drugs can spread out into the community. For those who are more circumspect about the intended and unintended consequences of global drug prohibition, cryptomarkets are likely to be seen as serving a variety of purposes that benefit the public. These include the provision of higher quality, less adulterated drugs (Caudevilla et al., 2016); the reduction of systemic drug violence, particularly at the retail end of the distribution (Barrat et al., 2016; Martin, 2014a); and increased access to information regarding safer drug usage practices (Bancroft, 2017).

## **Conclusion**

This chapter has sought to add detail to the concept of drug market gentrification and to explore the empirical support for conceiving of cryptomarkets as gentrified drug markets. Drug market gentrification is associated with non-violent trading practices, as well as with professionalism, which comprises expert knowledge and skillsets, cordial engagement with customers, and institutional controls resembling, at least in some respects, professional associations operating in the legal economy. As this chapter has described, there is indeed a wide range of empirical support for the notion that cryptomarkets represent a unique type of gentrified drug market. This gentrification is the result of user preferences on the part of site administrators, vendors, and customers, coupled with institutional and technological features of cryptomarkets that incentivise honest trading practices and punish those who transgress market rules and social norms. Cryptomarkets

may therefore be perceived as valuable examples of non-violent, self-regulating, and often harmonious sites of drug exchange. These findings add further credibility to the notion that the violence and uncertainty inherent to many forms of drug exchange can be ameliorated in those circumstances when threats from law enforcement and other sources can be effectively minimised.

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## Chapter 10

# The Dark Side of Cryptomarkets: Towards a New Dialectic of Self-Exploitation Within Platform Capitalism

*Meropi Tzanetakis and Stefan A. Marx*

### Abstract

This chapter examines how darknet drug marketplaces operate within platform capitalism. While capitalist power relations remain underexplored in research on digital drug markets, the analysis shows that the basic foundation of cryptomarkets relies on the infrastructure of platform capitalism. The authors use the concept of platform capitalism to explore cryptomarkets in an ideology-critical way. Platforms are infrastructure for the mediation of buyers and vendors; however, they are designed to extract data on the activities of their users. Platform capitalism refers to the process by which the vast collection of user data feeds into the accumulation of capital. The authors use a dialectical method to examine the constellation of digital drug platforms by disclosing a threefold contradiction: state control and self-regulation; visibility and concealment; and legality and illegality. The analysis reveals that darknet drug platforms make a profit not only from the trade of illicit drugs and the collection of user data, but also based on the illegal status of drugs, the associated ideology, and the closed ecology of darknet platforms. Power relations in cryptomarkets thereby mimic those observed in platform capitalism in general. Finally, the authors discuss the implications of platform capitalism for online drug markets.

*Keywords:* Online drug markets; platform capitalism; dialectical method; cryptomarkets; user data; algorithms

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**Digital Transformations of Illicit Drug Markets: Reconfiguration and Continuity, 141–154**



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## Introducing Digital Transformations and Cryptomarkets

This chapter aims to contribute to critical criminology and critical Internet studies by examining ways in which capitalism linked to crime reproduces itself in the digital age. In particular, we will study ways in which digital platforms for the distribution of illicit drugs are embedded in a contemporary form of capitalism that shapes the zeitgeist, namely platform capitalism. By doing so, we ask if the power relations to be observed in the digital realm are essentially 'new' or rather 'more of the same'? Thus, we connect sociological and criminological literature on crime with interdisciplinary studies of the digital economy. Our approach is based on the assumption that crime in a digital society (Lupton, 2015) can be understood and explained by taking into account the political economy it is situated in. This may include broader social, cultural, political, and economic conditions of the given society; in other words, the ways in which the macrolevel determinants shape crime and societal reactions to deviant groups.

As an empirical example, this contribution addresses the field of digital drug platforms, which have also been termed cryptomarkets (Martin, 2014a) and are regarded as a 'transformative criminal innovation' (Aldridge and Décary-Héту, 2014). Since 2011, cryptomarket operators have used a variety of information and communication technologies (ICT), enabling their users to disguise their digital traces and access a wide range of illicit drugs, among other goods and services. Customers may place orders beyond space and time, which are delivered by traditional postal services without the knowledge of the content. What is new to this phenomenon is the combination of anonymising technologies (e.g. Tor browser) with cryptocurrencies (e.g. Bitcoin) as a non-government-issued means of payment where the identity of the user does not have to be disclosed (Barratt and Aldridge, 2016; Martin et al., 2019). The use of these digital technologies enables the systematic distribution of drugs between those who act and those who consume them and makes police investigations more difficult (Tzanetakis and Stöver, 2019).

We suggest that to understand the phenomenon of cryptomarkets in the context of digital transformations (which involve a large number of different developments and entail a negotiable change in society, business, and politics), we need to explore these ongoing transformations as the result of an interaction between digital technologies and people in a social context (Stanfill, 2015; Craciunescu and South, 2023, Chapter 7). Over the past 30 years, these technologies have permeated the everyday life of people in the Global North in very different areas such as crime, communication, consumption, economy, work, health, culture, education, and science (Lupton, 2015). The development of ICT can be divided into three time periods (Lupton, 2015; Stratton et al., 2017):

1. In the pre-Internet era of the 1980s and early 1990s, workplaces and public institutions were increasingly equipped with personal computers (PCs), and electronic data storage and closed private networks were promoted; they resulted in new forms of crime (mainly white-collar) through misuse of technology.
2. The global Internet era of the 1990s and early 2000s was characterised by the increasing prevalence of desktop PCs or laptops and a significant increase in

Internet usage with the introduction of the ‘World Wide Web’. The increasing accessibility of digital information was accompanied by increased opportunities for transgression, including financial fraud, data theft, identity crime, and child sexual exploitation.

3. The age of the interactive Internet since the 2000s is defined by the ubiquity of wireless and broadband Internet access, cloud computing, smartphones and tablets, and social media platforms. These technologies enabled users to be connected to the Internet independently of space and time and to create user-generated content and to share it with other users. At the same time, cyberbullying, cyberstalking, and online harassment have become new deviant cyber phenomena, especially in relation to vulnerable groups such as children and young adults. The expansion of the interactive Internet has also led to the proliferation of markets (e.g. illicit drugs) and content (e.g. child pornography) via the darknet.<sup>1</sup> This short historical outline illustrates that deviant behaviour and criminality are embedded in the digital permeation of all (life) areas, which has an impact on many aspects of social life, social institutions, and social structures.

In this chapter, we argue that the basic foundation of cryptomarkets is based on the infrastructure of platform capitalism. Just as platform capitalism is an attempt to remove unpredictability from the analogue market and merge both control and profits with the platform operators, digital drug platforms are an attempt to systematically remove state control over, and to monetise, the trading of illicit goods (in our case: drugs). In this chapter, we will show how monetisation and its socio-political consequences take place in platform capitalism. Although the avoidance of state control has similarities to traditional illegal markets, it is carried out in a different way digitally. Understanding cryptomarkets from the logic of platform capitalism therefore means disclosing a threefold contradiction which underpins the accumulation and transformation of data as a commodity as well as the legal status of certain goods (drug prohibition).

To develop this argument, we proceed in four steps. First, we will examine continuing conditions of capitalism and changes related to the advancement of ICT. Then we will present some key findings from research on cryptomarkets. We will then clarify the concept of platform capitalism with regard to its relevance to our argument. After that, we present the analytical approach of dialectics as a method and explain the constellation of digital drug platforms using three model<sup>2</sup>

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<sup>1</sup>The darknet is a part of the Internet that requires encryption technologies to access its hidden content (Tzanetakakis, 2018c). Its content cannot be indexed by regular search engines.

<sup>2</sup>A model is a conscious abstraction and simplified image of reality. Since reality is complex, a model aims for significance rather than completeness. A model is a part of the constellation. In our analysis, the constellation addresses the capitalist economic system while our model refers to platform capitalism.

contradictions in order to explore cryptomarkets in an ideology-critical<sup>3</sup> (Jaeggi, 2009) way: state control and self-regulation; visibility and concealment; and legality and illegality. To conclude, the chapter will discuss some implications of platform capitalism for the phenomenon of cryptomarkets.

## From Analogue to Digital Capitalism

Referring to Marx, analogue capitalism can be understood as an ‘immense collection of commodities’ (Marx, 1980, p. 49) in relation to which the ‘custodians’ or ‘guardians’ (Marx, 1980, p. 99) – who possess the commodities – face each other in complex exchange relationships. Drawing on Marx, digital capitalism is, then, an immense collection of data in which users leave traces while moving through digital spaces. This means computer-mediated activities are extracted and analysed with an unprecedented breadth, depth, and scale (Zuboff, 2019). Data from which information can be extracted has become an important resource. But how is this data created? It is delivered by the users of digital infrastructures.

Platforms represent infrastructures for mediation between providers and consumers (vendors and buyers on cryptomarkets) (Helmond, 2015; Srnicek, 2017). Such infrastructures are designed (programmed) to extract data from the social interactions between the user groups (user-generated content and behavioural metadata), analyse them profitably, and use or sell them (Poell et al., 2019; Srnicek, 2017; Zuboff, 2019). Digitisation is also a process of reinterpretation of society into ‘digitisation material’ (Nassehi, 2021, p. 57). This means ‘the representation of the world as data within methodically controlled procedures’ leads to the creation of the ‘intrinsic value of the data’ (Nassehi, 2021, p. 69). The intrinsic value can then be converted into profits. This positioning is the reason for the political and economic power of platforms.

As early as 1858, Karl Marx expressed in his notes the assumption that social knowledge can become a productive force and bring social life under its control (Marx, 1980). Social knowledge is a fluid common good and an open resource for human potential. It enables social progress through technological advancement; however, once it is solidified as a means of production, it transforms into ‘a barrier for further innovation’ (Harvey, 2018a, p. 123). Moreover, it transforms into a tool with which to shape the ‘nature, social relations, production systems, reproduction through daily life and mental conceptions of the world’ (Harvey, 2018b, p. 219) along class lines. According to Harvey, Marx’s topicality for the analysis of digital capitalism lies within his search to prove that the revolutionary changes ‘in the productive forces are ultimately antagonistic to the very social relations that spawned them’ (Harvey, 2018a, p. 125). Social knowledge is transformed into a means to create labour surplus while simultaneously serving to ‘discipline the

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<sup>3</sup>Ideology critique is a method based on Marx’s thought, especially historical materialism. While ideology attempts to justify existing social injustice, it is the task of ideology critique to point out the mismatch between linguistic description and reality and the roots of its emergence (Marx, 1980).

laborer within the labor process' (Harvey, 2018b, p. 221). Consequently, digital platforms become investigators and mediators of social knowledge. The behaviour of their users has become a resource, while the evaluation of the never-ending stream of data has become a new form of digital labour. Social knowledge is thereby transformed into an asset for large-scale industrial monopolies. We will return to this aspect later. Derived from this observation, digital capitalism is also a 'user-generated capitalism' (Daum, 2017, p. 123) in which we supply the digital structures that are then used to exploit and, to a certain extent, control us.

Above all, however, digital capitalism is no longer about the distribution of scarce goods on an ideal-typical free market<sup>4</sup> but about the availability of access to services, which are financed by compulsory fees or the extraction of raw data on private markets. In the case of digital capitalism, we are not dealing with a completely new form of capitalism but with a radicalisation of its basic features or an 'escalation' of its exploitative effects (Seemann, 2021, p. 288), especially social inequality (Staab, 2019). This is because profits are made from 'objectified knowledge' (Marx, 1980, p. 602), that is, through the appropriation and exploitation of collective social knowledge, which in the ideology of digital capitalism is traded as a freely available good for corporate interests but not for individuals.

## Cryptomarkets between Harm Reduction and Efficient Market Structures

In the following, we will discuss two key insights yielded by previous research on cryptomarkets and relevant to our argument. On one hand, it has been suggested that anonymous drug platforms have important implications for harm reduction; on the other hand, it can be argued that cryptomarkets allow for more efficient market structures compared to traditional drug distribution. This initially apparent contradiction, which consists of the fact that efficiency is opposed to drug prohibition while harm reduction is a desirable approach, will be resolved in the course of the analysis.

One strand of research is examining the potential of digital drug platforms to minimise harm induced by drug prohibition (Aldridge et al., 2018; Bancroft, 2017; Barrett et al., 2016; Tzanetakakis and von Laufenberg, 2016). The harm reduction approach does not primarily aim to prevent the use of psychoactive substances *per se*, but rather aims to minimise the health consequences of illegal drug use (Lenton and Single, 1998). Specifically, three aspects have been outlined according to which cryptomarkets can reduce drug-related harm. Firstly, the quality and purity of the drugs are displayed more transparently on anonymous drug platforms, since the information provided by vendors is evaluated by customers. This aspect is relevant as some drug-related harms are related to a risk of adulteration and the content of the substance more broadly which may result in unwanted effects or overdose.

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<sup>4</sup>Free according to the liberal narrative that 'the key to the understanding of society are the laws of the market' (Polanyi, 2001, p. 19).

Secondly, users reported fewer experiences of physical and psychical violence compared to offline drug acquisition (either from friends, acquaintances, or unknown dealers). This can be explained as being due to drug deliveries usually not taking place face-to-face but via regular postal services. In addition, cryptomarkets offer various in-built conflict resolution practices such as the escrow payment system according to which the platform operator will transfer the funds to the vendors only upon the arrival of the shipment with the customer. Thirdly, rating systems and discussion forums enable the exchange of experiences and information among peers about the qualities of the drugs, effects, dosage recommendations, and poly-consumption. This is of particular importance as the drugs field is very dynamic in response to anti-drug laws, including the emergence of new psychoactive substances or special features. In anonymous digital environments, people who use drugs feel safe to discuss a wide range of drug-related issues. Insights about these three aspects open up new possibilities for harm-reducing initiatives, for example, drug services offering harm reduction information on discussion forums or extended drug-checking services.

A second line of research is dedicated to the structural efficiency of cryptomarkets (Bakken et al., 2018; Duxbury and Haynie, 2018b; Tzanetakis, 2018a). In traditional drug markets, the fear of prosecution, the lack of enforceable contractual agreements, and the lack of information about the content and strength of the psychoactive substance, as well as about the trustworthiness of the transaction partners, are constant sources of uncertainty, which is why these have been described as structurally inefficient (Beckert and Wehinger, 2013). In digital drug platforms, however, actors solve coordination problems in new ways and make them structurally more efficient compared to traditional drug markets. These solutions include, for example, the introduction of informal institutional standardisation for signalling the value of goods (e.g. classification systems), the emergence of competition between cryptomarkets and between vendors, and the development of a rating system that promotes trust-building between the exchange partners (see Moeller, 2023, Chapter 3). This means that cryptomarkets allow for more competition, which is a prerequisite for efficient market structures and ensures profit opportunities, even though they operate under conditions of illegality. However, research on digital drug markets has to our knowledge not made any effort to situate the organisation of the cryptomarkets within platform capitalism.

### ***Platformisation of Markets***

In this section, we will elaborate on the effects of the interplay between capitalism and digital technologies to use the concept of platform capitalism for our analysis. Platform capitalism means that it is no longer work and natural resources that determine the accumulation of surplus value but user data (Srnicek, 2017). The concept of platform capitalism describes the structures that make this relationship of exploitation possible. User data is employed to offer personalised advertising and infrastructure services as efficiently as possible. On the surface, platforms are digitised marketplaces where goods can be exchanged, while below

the surface the enormous amount of data collected can be skimmed off using algorithmic data analysis. As Munn (2018, p. 14) points out, algorithms are not merely functional but are ‘embedded with assumptions about the behaviours to be allowed, the users to be acknowledged, the communities to be supported, and the forms of capital to be facilitated’. Algorithms ‘actively shape our agency and activity and thereby become politically potent’ (Munn, 2018, p. 26).

It follows, then, that platform capitalism can be understood as the ‘concentration of power of the Internet’ (Staab, 2019, p. 173f.), which takes place across several levels of control, through which information exchange, access, price, and performance are strictly coordinated and controlled. This creates a new type of market that aims at private market ownership. Accordingly, platforms are structures within proprietary markets, that is, privately owned markets. More precisely, proprietary markets mean that markets are in the possession of the companies that are using them to facilitate the sale of their products. This results in expansive and contractive developments, while the extraction of data is used by platform operators to position themselves as gatekeepers in the controlled segments of the proprietary markets (Srnicek, 2017). Here, expansion refers to platform operators controlling the strategic orientation of a market segment, while contractive developments mean that that market segment is transformed into a closed ecosystem, which in turn transforms the economic system as a whole. For example, digital platforms (e.g. Amazon and AlphaBay) in proprietary markets can set prices and dictate whose products can be offered for sale.

In this context, commodification, understood as the transformation of things into a commodity, consists of not only the exploitation of user data but also the fact that the *public* sector acts as an ‘initial venture capitalist’ (Staab, 2019, p. 267) in almost all areas of platform capitalism (e.g. through subsidies, financing of development, infrastructure expansion). However, the profits remain in the private sector. In other words, digital infrastructure is made available to the *private* sector almost without a charge while the public sector waives almost all of the profits. This commodification is therefore part of the accumulation principle of digital capitalism and is the driving force behind the growth of the platforms. In doing so, it follows the simple formula of converting public wealth into private returns.

The accumulation processes occur cyclically and largely in a mode of perpetual crisis, as illustrated, for example, by the dominant narrative of ‘disruption’. Disruption is an ideological term that originated in the IT sector to present the effects of digital infrastructures as innovations rather than seeing them as extensions of known ways of functioning (Daub, 2020). Disruption means ‘creative destruction’ (Daub, 2020, p. 123) in the sense that markets are shaken up and all actors have to reposition themselves to start the cycle again. This type of crisis resolution is characterised by the concept of ‘exit capitalism’ (Staab, 2019, p. 118) in which private owners first set up companies whose business models are based on free or cheap use of public resources (e.g. infrastructure and basic research financed with state venture capital, collection and analysis of publicly available data, etc.). These companies are then sold at a profit after building up an expectation of future profits in the market ‘at the right moment’. Profit is not achieved

through solid corporate profits based on the creation of one's own services but rather through the appropriation of public advance services and subsequent exit (Staab, 2018).

### ***Cryptomarkets as Dialectical Platform Constellations***

In the following, we will analyse the ideological contradictions of platform capitalism in relation to the phenomenon of cryptomarkets by using the analytical method of dialectics. In doing so, we want to bring to the fore the political significance of the abstract structures of capitalism using the model analysis<sup>5</sup> to allow for a critique of their underlying mechanisms. Dialectics is the juxtaposition of thesis and antithesis in an attempt at critical mutual reflection and mediation of the fundamentally contradictory facts implied in the terms used. Dialectics thereby reflects the nature of capitalism in which 'change is constant, and new developments must be brought into the theoretical fold' (Matthews, 2011, p. 99).

This can be illustrated, for example, in the criminal sanctioning of the production, distribution, and consumption of illicit drugs (the abstract totality of social rules) in its effect on the criminalisation of people who use drugs (concrete empirically observable effects). The observable part of reality is characterised by its fractious nature, and these fractures can be represented in theoretical terms. For example, the fracture between legality and illegality and its consequences for political practice can be represented as contradictions within the conceptual objects. These contradictions in turn can be used to establish a connection between these objects. From this synopsis of several disparate elements (including conceptual contradictions) in the model, visible constellations emerge that can illustrate how the determination of an individual phenomenon goes beyond this specific relationship and thus points to the whole of a problem structure. The concept of the constellation is known from astronomy, whereby it describes the mutual position of the celestial bodies, which is constantly changing due to different orbits (Bonß, 2011, p. 236).

The problem structure can be presented most clearly by the contradictions created in the field. In the field of platform capitalism, these contradictions condense into tensions that lead to synergies with regard to the accumulation of surplus value. Platforms attempt to operationalise their way of working using big data and highly efficient analysis tools (algorithms) in such a way that the exchange relationships that are coordinated via their applications become calculable and predictable. In the analysis of this structure, we are dealing with a double phenomenon from which the field of tension to be explored is built. Firstly, platform operators attempt to completely control the market and its actors, and secondly,

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<sup>5</sup>Model analysis is a conscious abstraction based on theoretical social science experiments that reduces randomness and arranges the individual elements of the model in various configurations until they form a figure that can be further analysed. Model analysis aims for graphic and figurative representations.

they attempt to skim profit from this control. Both phenomena are linked to the dynamics of technical architectures (Helmond, 2015) that evolve in line with capitalism's tendencies towards accumulation and monopolisation. This field of tension can be represented as a constellation using three models, as will be shown in the following sections.

## **Contradiction between State Control and Self-Regulation**

The first model contradiction refers to the internal self-regulation (e.g. market organisation) and external control (e.g. state regulation, drug control regime) of digital platforms. Following this, internal self-regulation assumes an ideological function in relation to the outside world. While self-regulation strives to improve efficiency and increase customer loyalty through service orientation, control over the data accumulated during digital interaction (internal control) intensifies at the same time. In addition, platform operators strive to promote a regulatory paradigm that gives them the greatest possible freedom in conducting their business, restricts the provision of services the least, protects them from liability for claims of responsibility for which they do not want to be liable, and presents them in the best light in the interest of the public (Gillespie, 2010). However, the platform operators are largely evading external (state) control.

Cryptomarkets are regulated internally and externally. Externally, there are legal regulations in place criminalising the trade and consumption of psychoactive substances, and thereby leaving the internal market organisation on drug platforms largely to the actors involved. However, a free field is created here, so that the internal digital infrastructures can be designed as desired without state regulations. State control is primarily carried out through international police cooperation in which individual darknet platforms are closed and operators and traders are charged. However, new digital drug platforms open shortly thereafter, attracting dealers and customers from the closed platforms and, within a few weeks and months, reaching the previous sales levels (Décary-Héту and Giommoni, 2017; Ladegaard, 2019). The same pattern was observed for traditional drug markets where law enforcement interventions in cultivation, production, and trafficking come with a balloon effect – when the problem is squeezed into one area, it pops up in another (Buxton, 2006; Dorn et al., 1992; Sandberg and Pedersen, 2009). The disruption of market activity seems to be a less sustainable strategy, as vacant places in the field are occupied by new actors. As discussed in section 'Cryptomarkets Between Harm Reduction and Efficient Market Structures', although the risk of police investigations still exists, more efficient market structures have emerged. This can be seen as a result of the free field.

In addition to setting the terms of business, 'prosumption' (Ritzer, 2019; a mix of production and consumption) is another form of internal control used to skim off profits. This involves user-generated content (e.g. profiles, photos, and posts), with the web design being created in such a way that users are constantly encouraged to engage in new online activities (e.g. using a 'like' button, tweet, hashtag, upload function, content sharing feature) (Stanfill, 2015). Both this and so-called

metadata (who communicates with whom, where, when, for how long) are collected and processed by the platforms.

Applied to digital drug platforms, this means that customers write reviews and vendors create profiles, describe the drugs, and set the conditions of sale; both sets of actors interact with each other on forums. Most importantly of all, these activities generate data. On one hand, the trend towards user-generated content can be understood as a kind of unpaid work while people are consuming digitally; on the other hand, user-generated content can also be interpreted as a sign of the conversion of drug market infrastructures to platform capitalism. Customers are no longer the sole *raison d'être* of the market but become a means for other market purposes (Zuboff, 2019). According to the new logic of accumulation, consumers become suppliers of the raw material of 'behavioural data' (Zuboff, 2019, p. 97). Both a drug cryptomarket and a platform like Google use data about user behaviour to first improve the accuracy of the search results and then to place targeted offers from vendors or advertising for the respective search queries, from which profit is made.

In addition to the philosophical concept of reification, there is also the concept of behavioural surplus (Zuboff, 2019). Accordingly, the focus is no longer on the fact that all human relationships become commodities, but rather this relationship is a means of covert additional exploitation. While reification has made consumers in an exchange similar to the commodities they trade, behavioural surplus turns prosumers – who are themselves suppliers of raw data – into commodities. Prosumers are on one hand unpaid workers generating their own behavioural data and optimising tools for targeted advertising, for which they are the audience and consume in this process, and on other hand, through their movement data, prosumers themselves are the raw material from which a profit is made.

### ***Contradiction Between Visibility and Concealment***

The second model contradiction addresses the visibility and concealment of the form and organisation of the field of activity and the actors on digital platforms. Platforms operate in a contradictory field. They provide the necessary unavoidable infrastructure, which is also increasingly unavoidable with regard to the collection of data. The data collection itself takes place below the user interface and is largely concealed in algorithms. Algorithms are data-based and used to increase efficiency (Srnicek, 2017).

The obscurity of this data collection works in the form of an extremely shortened 'gold rush' effect. Uber, Airbnb, and Facebook, as well as cryptomarkets, are engaged in an ideologically cloaked and politically concealed transformation of work and trade into precarious free entrepreneurship (see Craciunescu and South, Chapter 7). This has been demonstrated empirically for the 'sharing economy' (Schor et al., 2020) and for cryptomarkets, where the majority of vendors were found to make moderate sales (Paquet-Clouston et al., 2018; Tzanetakis, 2018b). In this way, they achieve an extreme form of exit capitalism to generate as much profit as possible for a short period of time in a legal grey area by skimming off cumulative effects and then moving on. This development can be illustrated

using the example of the platform Uber, which has worsened the working conditions of taxi drivers through concepts of the ‘sharing economy’ and ‘pay per service’ and thereby turned their workspace into a low-wage sector (Fuchs, 2019). However, while Uber charges a fee for each transaction, they outsource costs as drivers take care of fuel, maintenance, and insurance themselves. The extent to which cryptomarkets are changing the working conditions of vendors still needs to be examined, but the literature has suggested that they primarily cater to the ‘last mile’ of the supply chain – retail drug markets (Demant et al., 2018; Tzanetakis, 2018b).

Exit capitalism comes into play on both legal and illegal digital platforms. For cryptomarkets, the term ‘exit scam’ has become established and describes an equivalent approach to exit capitalism (Tzanetakis, 2015). This describes platform operators who first block the vendor’s and customer’s funds on the platform accounts, making withdrawals impossible. The operator then closes the platform and enriches itself with the funds of the users; a procedure that is not pursued separately by the police, since the underlying trade (drug distribution) is already a criminal offence. The visible regulations help to cover up the concealed ones. An accumulation regime takes place in a legal grey area, within which platform operators can use the hierarchical structure of the platforms against prosumers to accumulate behavioural surplus. Here, the data collection and profitable exploitation of behavioural data can be followed by an exit scam, although this seems to be the exception rather than the rule in cryptomarkets.

The commodification of public goods is the starting point of a camouflage operation, which in due course leads to new areas of public resources being opened up via platforms for the accumulation of behavioural surplus. This also applies to darknet drug markets, albeit in an unintended way. The technical architecture and web design of the illicit drug platforms correspond to those of legally operating platforms. The Facebook platform in particular has been considered a blueprint for emerging platforms in Silicon Valley (Helmond, 2015; Srnicek, 2017). This means that cryptomarkets are oriented towards the infrastructure and web design choices of regular digital platforms, which in turn were initially funded by public funds or research grants.

The closed ecosystems that emerge via proprietary markets are characterised by the networking of immaterial (communicative, emotional, behavioural) economic processes to form a network of visible practices and concealed mechanisms that tend to become independent from the actors. The structures with which this network corresponds act like a cloak to privilege their operators, who tend to be concealed under the more visible actors (e.g. vendors, customers), and tend to allow the operators to exist as beneficiaries even through the symptoms of the crisis.

### ***Contradiction Between Legality and Illegality***

The third model contradiction refers to the dichotomy of legality and illegality which describes the state’s historic claim to define, shape, and guarantee legitimacy within the framework of its monopoly on the use of force (Eppler, 2002).

Legitimising one's own violence against that assumed by others is the 'permanent business of politics' (Luhmann, 2002, p. 193). This is where the contradictions of state control and self-regulation, as well as visibility and concealment, meet in the field of platform capitalism.

While the exchange relationships on drug platforms are visible but illegal, and subject to both external control and self-regulation, this is unclear when it comes to the accumulation of value from vast data collection. Although the legitimacy and desirability of cryptomarkets can be controversial (see harm reduction discussion in the section 'Cryptomarkets between Harm Reduction and Efficient Market Structures'), the legal status of trading drugs is clear (attracting criminal sanctions). The process of data extraction, however, remains concealed and recedes into the background of any ideological narrative (e.g. customer service, harm reduction, increased efficiency) and the determination of general terms and conditions (which are enforced internally in the sense of self-regulation but can also be changed at any time).

In addition, the accumulation of behavioural surplus necessarily remains concealed in two respects. Firstly, when researchers assume an overt role in observing a social setting, their presence may influence the behaviour of those being observed and invalidate the findings. Therefore, algorithms are concealed and are constantly changing. They bring different user groups together (matchmaking function) and are essential to fulfil the mediation function of platforms (Srnicek, 2017). The result of this is an algorithmic personalisation, that is, offers tailored to the respective user according to the products previously searched for and purchased.

Secondly, the non-transparent workings of algorithms indicate the transformation of illegality itself into a commodity. In other words, it is the illegal status of drugs that enables their commodification and profitability for cryptomarkets. This implies that with legalisation or decriminalisation of drugs, cryptomarkets would be deprived of their business basis. Here, the illegal status itself becomes a means of value creation. The accumulation effect which derives from the combination of visible practices and hidden methods in turn results in a double phenomenon of cryptomarkets. The illegal status of the drugs traded becomes a commodity, which in turn achieves behavioural added value in the form of control and self-regulation.

## Conclusion

In this chapter, we have shown, using a dialectical method, that analysing digital drug platforms in terms of the concept of platform capitalism reveals a field of tension made up of three interlinked model contradictions: (i) arising from the contradiction between state control and self-regulation, platform operators secure the greatest possible leeway in shaping the organisation of the market and turn platform users into suppliers of the raw material of behavioural data; (ii) from the contradiction between visibility and concealment, the practices of the users become visible, while the immense data collection process remains concealed; (iii) from the contradiction between the legal and illegal spheres, an obstacle (the illegal status of drugs) is turned into an asset. After all, digital drug platforms

make a profit not only from the commodity and the collection of data but also based on the status of the commodity, the associated ideology, and the closed ecology of the platform.

With our analysis of the threefold contradictions, we aimed to contribute to a better understanding of how digital drug platforms are part of the socio-economic structures in which they operate, capitalism in general, and platform capitalism in particular. Capitalism itself is based on fundamental contradictions, which constantly create dilemmas for the state and society at large and in turn must be resolved (Matthews, 2011). The resolutions, however, are inherently political as the role of the state is to maintain power and the system itself. In platform capitalism, then, the methods of social control and economic exploitation are multiplied in the form of ever more refined means of measuring and controlling behaviour, which one can no longer evade on the darknet. From this perspective, harm reduction is not only an approach to reducing health-related risks of drug use but – as a method for generating added behavioural value – also a part of the powerful techniques of digital economisation.

The apparent contradiction between the desired harm reduction potential of cryptomarkets and the undesirable suggestion that darknet drug platforms enable more efficient market structures allows for an analogy with the digital platform giants (Google, Amazon, Facebook, Apple, Microsoft, etc.). Both the big tech companies (Gillespie, 2010) and cryptomarkets use their emancipatory potential to drive the accumulation of behavioural surplus. Harm reduction aspects of the drug platforms correspond to the advertising promises of freedom of expression and absolute flexibility (e.g. being accessible everywhere and independent) of the platform giants; both can have an enabling effect, but both are also upstream to subsequently advance data collection.

Moreover, the role of the operators of cryptomarkets has been largely under-examined in previous research on digital drug markets, both in terms of their conceptual significance and the empirical assessment of their relevance. Our analysis points to the special position of platform operators as those who accumulate added value not only through their mediation between different user groups but also through the economic exploitation of behavioural data and the commodification of the illegal status of drugs. This indicates a need for further theoretical and empirical research on the role of platform operators.

Finally, the phenomenon of the cryptomarkets illustrates once again that the prohibitive drug policy regime has failed (Dorn et al., 1992; Buxton, 2006). It has already been demonstrated for traditional drug markets that the global drug problem could not be reduced by interventions either on the supply side or on the demand side (Reuter and Trautmann, 2009). The platformisation of drug markets, driven by technological innovations, indicates a new quality of this failure: profits are not only made from the drug trade itself but also from the online interactions of various user groups and from the illegality of the drugs traded. Both the platform infrastructures that appear insurmountable and the use of anonymising technologies, as well as the dissolution of space-time restrictions, pose significant challenges for policy-makers, drug services and prevention, law enforcers, and researchers alike and raise the question of how to create

sustainable drug policy to regulate digitally mediated deviant behaviour. However, all approaches must keep in mind that digital drug platforms are not separate from offline environments and traditional drug markets, both of which make up the world we live in.

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