

# **Digital Transformations of Illicit Drug Markets**

# EMERALD STUDIES IN DIGITAL CRIME, TECHNOLOGY AND SOCIAL HARMS

## Series Editors:

James Martin, Swinburne University of Technology, Australia

Asher Flynn, School of Social Sciences, Monash University, Australia

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.

*Emerald Studies in Digital Crime, Technology and Social Harms* is part of a new movement within criminology and related disciplines to broaden this narrow focus and engage critically with new trends in technology-facilitated offending and victimisation. The book series uses a combination of critical criminological, socio-legal and sociological perspectives to consider a wide range of technology-facilitated offences and harmful social practices, ranging from digital surveillance, cyberbullying and image-based sexual abuse through global darknet drug trading.

## Previous books in the series:

*Cryptomarkets: A Research Companion*; James Martin, Jack Cunliffe, and Rasmus Munksgaard

*The Emerald International Handbook of Technology-facilitated Violence and Abuse*; Jane Bailey, Asher Flynn, and Nicola Henry

*Information Pollution as Social Harm: Investigating the Digital Drift of Medical Misinformation in a Time of Crisis*; Anita Lavorgna

*The Incel Rebellion: The Rise of the Manosphere and the Virtual War Against Women*; Lisa Sugiura

Emerald Studies in Digital Crime, Technology  
and Social Harms

# Digital Transformations of Illicit Drug Markets: Reconfiguration and Continuity

EDITED BY

**MEROPI TZANETAKIS**

*University of Manchester, UK*

AND

**NIGEL SOUTH**

*University of Essex, UK*



United Kingdom – North America – Japan – India – Malaysia – China

Emerald Publishing Limited  
Howard House, Wagon Lane, Bingley BD16 1WA, UK

First edition 2023

Editorial matter and selection © 2023 Meropi Tzanetakis and Nigel South.  
Individual chapters © 2023 The authors.  
Published by Emerald Publishing Limited.



This work is published under the Creative Commons Attribution (CC BY 4.0) licence.

Anyone may reproduce, distribute, translate and create derivative works of these works (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at <http://creativecommons.org/licenses/by/4.0/legalcode>



#### **Reprints and permissions service**

Contact: [www.copyright.com](http://www.copyright.com)

Published with the support of the Austrian Science Fund (FWF): PUB-978-G.  
Research results from: Austrian Science Fund (FWF): J4095-G27.



Any opinions expressed in the chapters are those of the authors. Whilst Emerald makes every effort to ensure the quality and accuracy of its content, Emerald makes no representation implied or otherwise, as to the chapters' suitability and application and disclaims any warranties, express or implied, to their use.

#### **British Library Cataloguing in Publication Data**

A catalogue record for this book is available from the British Library

ISBN: 978-1-80043-869-9 (Print)  
ISBN: 978-1-80043-866-8 (Online)  
ISBN: 978-1-80043-868-2 (Epub)



INVESTOR IN PEOPLE

# Contents

List of Tables and Figures	vii
About the Authors	ix
Acknowledgements	xiii
<b>Chapter 1 Introduction: The Digital Transformations of Illicit Drug Markets as a Process of Reconfiguration and Continuity</b> <i>Meropi Tzanetakis and Nigel South</i>	1
<b>Part I: Embeddedness of Digital Drug Markets</b>	
<b>Chapter 2 Social Media Applications and ‘Surface Web’ Mediated Supply of Illicit Drugs: Emergent and Established Market Risks and Contradictions</b> <i>Ross Coomber, Andrew Childs, Leah Moyle and Monica Barratt</i>	15
<b>Chapter 3 Trust in Cryptomarkets for Illicit Drugs</b> <i>Kim Moeller</i>	29
<b>Chapter 4 Drugs and the Dark Web: The Americanisation of Policing and Online Criminal Law From an Australian Perspective</b> <i>Ian J. Warren and Emma Ryan</i>	45
<b>Part II: Understanding Drug Demand Online</b>	
<b>Chapter 5 ‘Waiting for the Delivery Man’: Temporalities of Addiction, Withdrawal, and the Pleasures of Drug Time in a Darknet Cryptomarket</b> <i>Angus Bancroft</i>	61

<b>Chapter 6</b> When Home Delivery Trumps a Shady Warehouse Deal. An Exploratory Study of Belgian Cryptomarket Buyers' Profile and Their Motives to Buy Online <i>Charlotte Colman</i>	73
<b>Part III: Power Relations</b>	
<b>Chapter 7</b> Cultural Politics, Reciprocal Relations, and Operational Agility in Online Drug Markets <i>Nicolae Craciunescu and Nigel South</i>	95
<b>Chapter 8</b> Gender Representations in Online Modafinil Markets <i>Jennifer Fleetwood and Caroline Chatwin</i>	109
<b>Chapter 9</b> Cryptomarkets and Drug Market Gentrification <i>James Martin</i>	127
<b>Chapter 10</b> The Dark Side of Cryptomarkets: Towards a New Dialectic of Self-Exploitation Within Platform Capitalism <i>Meropi Tzanetakis and Stefan A. Marx</i>	141
References	155
Index	175

# List of Tables and Figures

## Tables

Table 3.1. Sample Description	35
Table 6.1. Self-assessment Changes in Drug Use	79
Table 6.2. New Drugs Used Since First Time Purchase From Cryptomarkets	80
Table 6.3. Reasons to Start Buying From Cryptomarkets	81
Table 6.4. Perceived Influence of Market Shock on Drug Use	82
Table 6.5. Perceived Influence of Market Shock on Drug Purchase	83
Table 6.6. Beneficiaries of Purchases	85

## Figures

Fig. 8.1. ModafinilCat Logo 1	121
Fig. 8.2. ModafinilCat Logo 2	121

*This page intentionally left blank*

## About the Authors

**Angus Bancroft** is a Professor of Sociology at the University of Edinburgh. He researches illicit markets, intoxicant cultures, the impact of COVID on drug users, and approaches to harm reduction using online methods. He is the Author of *The Darknet and Smarter Crime: Methods for Investigating Criminal Entrepreneurs and the Illicit Drug Economy*.

**Monica Barratt** is an Australian drugs-policy researcher at RMIT University. Her research interests include digitally facilitated drug trading, novel psychoactive substance trends and markets, drug checking or pill testing, and ways to increase the meaningful involvement of people who use drugs in research and policy processes.

**Caroline Chatwin** is a Professor of Criminology at the University of Kent. Her research interests include global drug policy, new psychoactive substances, internet drug markets and the experience of imprisonment. Her most recent book *Towards More Effective Global Drug Policies* was published with Palgrave Macmillan in 2018.

**Andrew Childs** is a Lecturer in the School of Criminology and Criminal Justice at Griffith University. His research focuses on the intersection of technology/crime and the nature of trust and risk in illicit markets online.

**Charlotte Colman** is a Professor of Drug Policy and Criminology at Ghent University. She has coordinated research projects on drug policy evaluation, drug supply markets, alternatives to punishment, and evolutions in criminal and drug-using careers. In 2022, she has been elected as the National Drug Coordinator responsible to coordinate the Belgian drug policy.

**Ross Coomber** is a Professor of Criminology and Sociology at the University of Liverpool. He has more than 30 years of research experience in the drug and alcohol field and has written extensively and broadly in this area, particularly on the nature and the machinations of illicit drug markets.

**Nicolae Craciunescu** has studied at the University of Essex as an undergraduate and postgraduate student. He has presented at international conferences and

published on the subject of digital drug markets. He currently works in publishing but maintains a research interest in this field.

**Jennifer Fleetwood** is a Senior Lecturer in Criminology in the Department of Sociology at Goldsmiths, University of London. Her book *Drug Mules: Women in the International Cocaine Trade* won the British Society of Criminology book prize in 2015.

**James Martin** is a Senior Lecturer in Criminology at the School of Humanities and Social Sciences at Deakin University. He is a leading authority on cryptomarkets and the dark web drugs trade and has published two books, as well as numerous quantitative and qualitative journal articles on this topic.

**Stefan A. Marx** is a Lecturer at the University of Vienna and a Social Worker. He currently publishes the political book series *Halbwertszeit* with the Viennese publisher Luftschacht Verlag. His most recent book is *Gespräche gegen die Wirklichkeit (Conversations Against the Reality)* with Luftschacht publisher.

**Kim Moeller** is an Associate Professor at the Department of Criminology at Malmö University in Sweden. His recent research has focused on the economic sociology of illicit drug distribution, fentanyl, cryptomarkets, and comparative drug control policy.

**Leah Moyle** is a Senior Lecturer in Criminology and Sociology at Royal Holloway, University of London. She is a Qualitative Researcher with an interest in drug markets, drug dealing, and cultures of drug use. Her research focuses primarily on understanding illicit drug markets and ‘non-commercial’ drug supply through sociological and criminological frameworks.

**Emma Ryan** is a Lecturer in Criminology at Deakin University. Her research examines challenges to police accountability with a focus on police use of conducted energy devices, and excessive force more broadly. She has worked in anti-corruption bodies, published chapters on criminological theory in textbooks designed for undergraduate students, and taught in the discipline of criminology for over 20 years.

**Nigel South** is Emeritus Professor of Sociology, University of Essex, and has published on drugs, crime, cultures, and controls. In 2022, he received the Outstanding Achievement Award from the British Society of Criminology, and in 2013 a Lifetime Achievement Award from the American Society of Criminology, Division on Critical Criminology.

**Meropi Tzanetakis** is Lecturer in Digital Criminology at the University of Manchester and Research Affiliate with the Governance of Digital Practices Research Platform at the University of Vienna. Meropi’s research focuses on illicit digital

markets, platformisation, and crime. Her most recent book *Drugs, Darknet and Organised Crime. Challenges for Politics, Judiciary and Drug Counseling* (with Heino Stöver) was published with Nomos in 2019.

**Ian J Warren** is a Senior Lecturer in Criminology at Deakin University. His research examines the legal and regulatory aspects of online evidence collection and distribution, with particular emphasis on transnational police investigations. He is the Co-author of *Global Criminology* (2015, Thomson Reuters) and has written widely in the areas of technology and crime, securitisation, law, and regulatory policy.

*This page intentionally left blank*

# Acknowledgements

The idea for this book can be traced to conversations between the editors in the Blues coffee bar on the campus of the University of Essex when Meropi was a Visiting Research Scholar in 2018–2019. It turned into a real project when Nigel saw a flyer for the Emerald series on ‘Studies in Digital Crime, Technology and Social Harms’. So thanks to Jules Willan for originally taking it on, to Katy Mathers for taking over, and to the rest of the Emerald team—including the Series Editors Asher Flynn and James Martin. The editors are grateful to the contributors for joining the project with such enthusiasm and for such high-quality chapters. This book would not have been realised without Meropi being awarded an Erwin Schrödinger Fellowship by the Austrian Science Fund (FWF) as this enabled the editors’ conversations at the University of Essex in the first place. We are also grateful for receiving a grant by the Austrian Science Fund (FWF), which facilitated Open Access publication of this book. Finally, thanks to the others who have lived with the project – Elke, Alison, and Saskia.

Nigel South and Meropi Tzanetakis  
Colchester and Manchester  
May 2023

*This page intentionally left blank*

## 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

---

Digital Transformations of Illicit Drug Markets: Reconfiguration and Continuity, 1–12



Copyright © 2023 by Meropi Tzanetakis and Nigel South. Published by Emerald Publishing Limited. This work is published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of these works (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at <http://creativecommons.org/licenses/by/4.0/legalcode>  
doi:10.1108/978-1-80043-866-820231001

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