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**Evolving and Diversifying Selling Practices on Drug Cryptomarkets: An Exploration of  
Off-Platform “Direct Dealing”**

Submission to Journal of Drug Issues

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## **Evolving and Diversifying Selling Practices on Drug Cryptomarkets: An Exploration of Off-Platform ‘Direct Dealing’**

### **Abstract**

This is the first study to explore how cryptomarket actors are increasingly adopting encrypted messaging applications in order to “*direct deal*” beyond the provided platforms, to obviate the protocols of cryptomarkets, and to diversify the communication experience of drug buying via the dark net. Drawing on 965 forum posts discussing encrypted messaging applications, results showed that direct dealing may be more likely to occur in the context of pre-established trust between vendors and buyers, during instances of law enforcement crackdowns, and when buyers are enticed by discounts or promotions. Our findings also suggested a general hesitancy towards direct dealing, as it was often associated with greater exposure to scams, and perceptions that direct dealing increases the risks concerning personal security and detection from law enforcement. These findings provide insight into the interconnection of online drug markets, and how actors make decisions to drift between multi-channel supply points mediated by perceptions of trust and risk.

Key words: multi-channel supply; drug markets; cryptomarkets; dark net; differentiation; drugs; apps

## **Introduction**

The emergence and expansion of the Internet and other technologies has facilitated the digitalisation of illicit drug markets. These online illicit drug markets now operate in various forms across the surface net (i.e., websites directly accessible through search engines such as Google and Bing), in cryptomarkets hosted in the ‘dark’ net, and through social media apps installed on smartphones (Barratt & Aldridge, 2016; Martin, 2014; Moyle, Childs, Coomber, & Barratt, 2019; Walsh, 2011). Online drug markets consistently evolve in their capacity to supply illicit drugs, and the general trend exhibited by these markets has been the gradual implementation of features that reduce many of the anxieties and risks traditionally associated with illicit drug buying. This is perhaps best exemplified by the specific conditions of exchange found within cryptomarkets, where features intended to protect buyer and seller are embedded within the market structures (e.g. marketplace forums, rating systems and protective escrow payment systems) that provide buyers with assurances of the seller, the product distributed by illicit drug vendors, as well as the platform (Aldridge & Askew, 2017; Bakken, Moeller, & Sandberg, 2018).

The relatively recent uptake of drug supply through social media and encrypted messaging applications (Moyle et al., 2019; Bakken & Demant, in press), however, evidences a partial divergence from this trend. The popularity of this new form of drug supply has grown despite the lack of security features, and the increased levels of risk, in relative terms, when compared to cryptomarkets. Although criminological attention on the use of encrypted messaging applications to facilitate crime is growing (Marcum, Higgins, & Nicholson, 2017; Sarre, 2017), research on the use of smartphone applications to supply and access illicit drugs is still in its infancy. End-to-end encrypted messaging applications installed on smartphones (e.g., Wickr, Signal, Telegram, etc.) allow only senders and receivers to view the messages. The companies responsible for the development of these applications encrypt network traffic,

data storage and server storage, effectively making it impossible to access any data or user-related information (Walnycky, Baggali, Marrington, Moore, & Breiting, 2015). There is growing evidence, in the form of vendor advertisements in cryptomarkets and media articles (ABC News, 2019; VICE, 2018), that encrypted messaging applications are playing a role in cryptomarket activity because of their ability to facilitate “direct deals” and retain a level of protection through encrypted communication. In relation to cryptomarkets, and coined by actors involved in these spaces, a “direct deal” is the process of moving away from a particular cryptomarket to deal privately, usually via an encrypted messaging app, with a vendor. For those that progress to direct dealing, the cryptomarket is, effectively, used as an introduction platform (Mantesso, 2019; Nolan, 2018) rather than as the platform through which drug exchanges are co-ordinated. This move towards encrypted messaging applications in cryptomarket activity is an interesting development as the security features often valued by drug buyers in cryptomarkets (Barratt, Ferris, & Winstock, 2014; Barratt, Lenton, Maddox, & Allen, 2016; Martin, 2014; Van Buskirk et al., 2016) are not available, as the sale is conducted on an alternate platform. This is also surprising because of the general trajectory in offline supply towards less risky practices (Coomber & Moyle, 2018).

The primary focus of this paper is to track the presence of, and examine the reasons behind, the emergence and willingness to engage in direct dealing. Particular attention is therefore placed on understanding the motivations, anxieties, and perceptions of risk in understanding this changing practice of multichannel retailing occurring within cryptomarkets. Several media articles have discussed this practice (Mantesso, 2019; Nolan, 2018), but academic research that mentions drug exchanges outside of cryptomarkets (Barratt et al., 2016; Kamphausen & Werse, in press) consider it only tangentially rather than specifically focusing on this form of drug dealing. This paper begins by describing the development of online illicit drug markets to-date. Following this history, direct dealing is investigated through the lens of

multichannel retailing whereby sellers of products increasingly try to increase the number of customer contact points.

## The Development of Online Platforms for Buying and Selling Drugs

Over the past two decades conventional (i.e., offline) drug markets have transitioned from open, street-based drug markets to closed markets characterised by comparatively high levels of trust, which was partly facilitated by the emergence of early electronic digital communication devices such as pagers and mobile telephones (Hough & Natarajan, 2000; May & Hough, 2004). This initial adoption of technology by drug market participants arose from the perceived need to minimise exposure to law enforcement by reducing the visibility of drug sales, and the amount of time a buyer and seller spend face-to-face (Maher & Dixon, 1999; May & Hough, 2004). This initial digitalisation of illicit drug markets further progressed with the arrival of the Internet, which was predicted to influence drug markets considerably, and predicted by researchers to foreseeably create a “*game of cyber-leapfrog between distributors and enforcement agencies, as the former adapt to the preventative measures of the latter*” (May & Hough, 2004, p. 554). Early instances of online drug supply relied on email lists and small online forums to organise drug exchanges that eventuated in offline settings (Hough & Natarajan, 2000; May & M. Hough, 2004; Natarajan, Clarke, & Johnson, 1995; Power, 2014).

The delivery of drugs through postal and other means of courier is not a new phenomenon and has been recognised by drug market researchers prior to the widespread adoption of the Internet in society (Beckett, Nyrop, & Pflingst, 2006; Curtis & Wendel, 2000; May & Hough, 2004). Indeed, in some locations “*ring and bring*” drug delivery services are still in operation (Sogaard, Kolind, Haller, & Hunt, 2019). However, the Internet has assisted the creation of drug markets that replicate large-scale commercial marketplaces facilitating the international distribution of illicit substances. The exact nature and shape that these online

markets take are dependent on numerous factors. For example, drug markets on the surface net are accessible to potential buyers by using Google search terms for the substance they are requiring. These online stores are often branded as online pharmacies, and predominately revolve around the sale of lifestyle drugs (e.g., performance and image enhancing drugs such as anabolic steroids or peptides), prescription-required pharmaceuticals (e.g., benzodiazepines), and other substances that fall into legal “grey” areas (e.g., new psychoactive substances and research chemicals) (Koenraadt & Van de Ven, 2017; Kraska, Bussard, & Brent, 2010; Maxwell & Webb, 2008; Orsolini, Francesconi, Papanti, Giorgetti, & Schifano, 2015; Walsh, 2011).

The arrival of dark net drug cryptomarkets in 2011, however, provided buyers and sellers with a more secure, anonymous, and encrypted platform in comparison to surface net drug markets (Barratt & Aldridge, 2016; Martin, 2014). Cryptomarkets offer buyers user-friendly interfaces (akin to eBay or Amazon), and structural features of these markets enable buyers to freely browse associated marketplace forums to obtain relevant information, search through categorisations of drugs, and review vendor feedback prior to making a purchase (Bakken et al., 2018; Martin, 2014). Many drug exchanges performed in cryptomarkets are also conducted through escrow payment systems whereby a third-party administrator ensures the deal is conducted and the drugs are delivered to the buyer. Cryptomarket buyers cite these features, in conjunction with the importance of anonymity in this space (Bancroft & Reid, 2017), as promoting a perceived sense of security, a reduction of risk and as a way of having more control over drug buying (Aldridge & Askew, 2017; Bancroft & Reid, 2016; Van Hout & Bingham, 2013; Van Hout & Bingham, 2014).

An even more recent development in the online space for buying and selling illicit drugs is the adoption of social media and encrypted messaging applications on smartphones (Moyle et al., 2019; Bakken & Demant, in press). Drug supply on social media differs depending on

the public or private characteristics of the application itself (Bakken & Demant, in press).

Further, it is considered an intermediary drug sourcing option between cryptomarkets and street-based drug markets, as it provides drug buyers with a quick and convenient method of purchasing illicit drugs that negates the need for specific technological expertise required for cryptomarket drug buying (Moyle et al., 2019). However, in comparison to cryptomarket drug purchasing there are fewer mechanisms available to buyers and sellers to reduce feelings of anxiety that may arise in drug exchanges such as the requirement to meet physically, concerns about the trustworthiness of the seller, as well as less reliable or absent product quality control mechanisms. Because of the lack of marketplace risk reduction features, the reliability of claims of product quality and seller trustworthiness made in advertisements may be dubious as there is no mechanism to cross-reference these claims with previous buyers’ experiences with the seller (Moyle et al., 2019; Bakken & Demant, in press). In structural terms, this form of supply potentially exposes buyers and sellers to more risks than cryptomarket drug buying, and as a result, it is situated as a form of online drug buying less secure than cryptomarkets (Moyle et al., 2019).

### “Direct Dealing”

Direct dealing in cryptomarkets appears to be the latest example of unexplored novel technological adoption. Early uses of online drug fora may have been utilised by potential buyers to obtain contact details of a seller to organise a drug exchange elsewhere or on another platform, but direct dealing as it occurs in cryptomarkets specifically refers to the removal of third-parties (i.e. the “market” or administrators) in the drug exchange in order to deal *direct* with a cryptomarket vendor. Direct dealing occurs when a cryptomarket vendor contacts buyers directly, or advertises through forum posts and vendor pages that they are able to deal directly. Buyers then willingly move away from the confines of a cryptomarket and deal through an encrypted messaging application. Currently, a study by Barratt, Lenton, Maddox, and Allen

(2016) provides the only mention of direct dealing in drug cryptomarkets, and it is described as an emergent practice following the closure of the Silk Road marketplace but has since evolved to form a complementary function to cryptomarket supply. According to one journalist, this practice is gaining in popularity to the point where cryptomarket activity may be diminishing, and is no longer serving as the location where the exchange takes place, but simply, “the markets are more of an introduction service” (Mantesso, 2019). Importantly, however, this is also an example of differentiated practice (Coomber, 2010) within cryptomarkets and provides more insight into the way that encrypted messaging applications serve as an important communication tool between commercial sellers and their buyers (Moyle et al., 2019). As mentioned previously, the co-ordination of drug exchanges through cryptomarkets usually provides drug buyers with unique advantages over traditional or app-based drug buying. Direct dealing through encrypted messaging apps with a cryptomarket vendor does not offer these same securities and assurances provided by the marketplace as buyers instead send their cryptocurrencies and other relevant information (e.g., postal address) through the encrypted messaging service.

### *Interconnecting Online Illicit Drug Markets*

The practice of direct dealing is initial evidence that there is a growing interconnection and intersection between online spaces for co-ordinating illicit drug exchanges. While Barratt & Aldridge (2016, p1) acknowledge that “...*drugs flow into and out of cryptomarkets into broader social and commercial drug supply chains*”, most research on online illicit drug markets compartmentalizes online spaces for buying and selling illicit drugs, and neglects how such online spaces may demonstrate a level of interconnectedness as shown through direct dealing. Generally, the focus of research has been inclined towards offline factors shaping online practices and considerations of the intersections between *offline* and *online* illicit drug markets (Cunliffe, Martin, Decary-Hetu, & Aldridge, 2017; Decary-Hetu, Paquet-Clouston, &

Aldridge, 2016; Norbutas, 2018). This focus often fails to consider the interconnections between different forms of technology and situates cryptomarket supply in isolation to other forms of online supply. In researching offline drug exchange contexts this similar misperception of markets as discrete arenas of exchange has been applied partly due to the mapping of drug market activity through crime “hot-spots” (Weisburd & Green, 1994; Weisburd & Mazerolle, 2000). This narrow view of illicit drug markets, however, has more recently been challenged. It is now generally accepted that ‘the’ drug market is a highly fragmented arena of exchange, and as Coomber (2015, p. 11) explains, particularly with reference to Western and many other urban drug markets, “*any one ‘drug market’ is in fact a nest of intersecting and sometimes interconnecting drug markets with differing dynamics dependent on a range of variables*”.

## Multichannel Retailing

Direct dealing involving cryptomarket drug vendors requires the operation of two simultaneous channels to coordinate drug sales across different online spaces. In legal markets for goods and services, the adoption of multiple platforms to sell products and communicate with customers is defined as multichannel retailing, whereby the *channel* refers to the various mediums through which a seller and a buyer can interact (Lewis, Whysall, & Foster, 2014; Neslin et al., 2006). Multichannel retailing developed due to the rapid uptake of online sales via the Internet, and the requirement for businesses to be innovative in highly competitive markets (Schoenbachler & Gordon, 2002; Verhoef, Kannan, & Inman, 2015). The most obvious examples of multichannel retailing occurs through the use of a physical store and an online store, but the recent popularity of “apps” has created another platform through which business are offering their services to customers (Biyalogorsky & Naik, 2003; Souiden, Ladhari, & Chiadmi, 2018).

From a customers’ perspective, the adoption of one channel over another in the context of multichannel retailing is explained through their preference to maximise utility in conjunction with any combination of personal preferences, personality traits and lifestyle characteristics (Nakano & Kondo, 2018). Although buyers may prefer certain channels, there are instances where different channels are utilised throughout various stages of the shopping process. As an example, searching for product information may be performed at a physical store whereas the purchase itself is performed through the online channel (Chiou, Chou, & Shen, 2017) or vice-versa. Understanding the operation of illicit drug markets through frameworks proposed in legal markets has been common for drug market researchers (Ritter, 2006) and these frameworks have similarly been adopted in cryptomarket research (Barratt, 2014). In this instance, the framework of multichannel retailing can be drawn on to develop a clearer understanding of the emergence of direct dealing, and the way in which buyers and sellers drift between different online drug markets on cryptomarkets and on encrypted messaging apps.

## Aim

The aim of this paper is to explore the practice of direct dealing by actors involved in cryptomarkets. Due to the shift away from the securities offered by drug cryptomarkets, particular attention will be placed on examining the unique motivations, anxieties, and perceptions of risk associated with engaging in direct dealing for both vendors and buyers, and how decisions are made to participate in multichannel supply.

## Method

Cryptomarkets (and online spaces more generally) have facilitated new methods of data collection for studying illicit drug markets (Enghoff & Aldridge, 2019). A particularly useful unobtrusive data collection method for studying hidden populations involves ‘scraping’

methodologies that extract data from a variety of sources including marketplace forums, user profiles, the products sold on markets, and any information pertaining to those products (e.g., reviews). These methods have been helpful in providing descriptive overviews and quantifications of cryptomarkets (Broseus et al., 2016; Decary-Hetu & Giommoni, 2017; Decary-Hetu & Quessy-Dore, 2017; Demant, Munksgaard, Decary-Hetu, & Aldridge, 2018; Dolliver & Kenney, 2016; Paquet-Clouston, Decary-Hetu, & Morselli, 2018; Tzanetakis, 2018; Van Buskirk et al., 2017). However, in comparison, relatively fewer studies utilise scraped cryptomarket data for qualitative analyses (Bakken et al., 2018; Bancroft, 2017; Kamphausen & Werse, in press; Ladegaard, 2017, 2018a; Rolando & Beccaria, 2018). This paper adds to this group by using scraped forum posts from cryptomarkets as the primary source of data in a qualitative analysis of perceptions of, and experiences of, direct dealing.

The dataset for this study was collected through the DATACRYPTO tool (Decary-Hetu & Aldridge, 2013), and contained scraped forum posts from eight discussion forums hosted in the dark net. From this initial dataset generated through the tool (containing over 1 million forum posts), the process of identifying posts relevant to the current study’s aims began by conducting searches for the names of encrypted messaging applications. This relied on app names identified in previous research on app-based drug buying (Bakken & Demant, in press; Moyle et al., 2019) including names such as Wickr, Signal, Telegram, Whatsapp, and Kik. A visual inspection of the search results proceeded, and forum posts were included in subsequent analyses if they were written in English and relevant to the current context (i.e., the subject matter of conversations were centred on illicit drugs, direct dealing more explicitly, and/or encrypted messaging applications to facilitate drug supply). The original threads the posts originated from were also visually scanned and any extra posts that helped contextualise forum posts were included. Excluded posts referenced other products sold on cryptomarkets such as counterfeit money, and fraud or hacking services. Relevant posts were then copied to a separate

document for follow-up analyses. A total of 965 forum posts were identified for subsequent analysis. Collected posts varied considerably in length, and contained discussions between buyers, vendors, and occasionally the administrators of the market. Posts were de-identified by removing any associated usernames, or the market where the post originated from in an effort to preserve the anonymity of the forum posters (Martin, 2016).

Thematic analysis (Braun & Clarke, 2006) was chosen to analyse the forum posts due to its ability to identify and understand patterns and themes in the data. A process of familiarisation (Ritchie, Spencer, & O'Connor, 2003) began with the dataset. This involved reading through all posts line-by-line whilst making notes, summarising the content of larger posts, and developing initial codes. A combination of inductive and deductive approaches for understanding the data was chosen to allow for an acknowledgement of the literature in this space and previously considered ideas whilst also remaining open to emergent codes (Fereday & Muir-Cochrane, 2006). A reflection on organised codes facilitated the development of themes through an identification of repetitions, similarities, differences, or major shifts and transitions in discussions (Braun & Clarke, 2006; Ryan & Bernard, 2003). As is the nature with forum discussions, there were many non-generative forum posts, and themes emerged that were unrelated to the central questions guiding this particular research.

Relying on forum posts as the primary source of data presented certain methodological limitations for this study. Firstly, forum posts may generally contain untrue or misleading information. Secondly, it is important to recognise that posts are extracted from their original context. Specifically for this study, the abstraction of posts from their original meaning can result in the inclusion of seemingly relevant or irrelevant posts, which are unable to be verified by the researchers due to the nature of the data. Thirdly, participation in online communities is not equally shared amongst all actors involved in cryptomarkets, and the generated and subsequently analysed posts may not contain the representative experiences of all actors who

engage in cryptomarket activity (Enghoff & Aldridge, 2019). Additionally, the search strategy utilised for this study may not have included an exhaustive list of *all* the encrypted messaging services where direct dealing occurs, nor would it have captured instances where variations of spelling and incorrect spelling was posted. These methodological challenges are not unique to our study and have been mentioned by other researchers (see Bancroft, 2019; Kamphausen & Werse, in press). Despite these limitations, the purposes of this research was to provide an indicative and exploratory account of the nature, experiences, and professed rationales of direct dealing by those offering views and wishing to discuss such points with other actors in related fora.

## **Findings**

There are three categories presented below that centre on themes including the emergence of direct dealing, perceptions of direct dealing, and as a communication device between cryptomarket vendors and buyers. They are outlined in more detail below.

### **The Emergence of Direct Dealing**

#### *Law Enforcement Pressure*

Law enforcement have struggled to contain illicit drug sales on drug cryptomarkets, and closures of marketplaces largely result in buyers and sellers redirecting their activity to other functioning cryptomarkets (Decary-Hetu & Giommoni, 2017; Ladegaard, 2019). As previously suggested by Barratt et al. (2016), and also reflected in the analysis of collected forum posts, direct dealing with vendors appeared to be more likely during instances of increased law enforcement pressure, and when preferred cryptomarkets are not operating. This tactical shift of behaviour whereby different methods are employed to reach an offending goal (Johnson, Guerette, & Bowers, 2014) was reflected in the analysis of forum posts:

“[vendor] *do you have wickr or another safe channel? Don’t let them hold you down!! Stay strong!!*”. **Buyer**

“*Do not order from my [market] account. [market] is under LE control, it is obvious [...] Add me on wickr, I have all the products from [market] available*”.

**Vendor**

“*Hi everyone, I am a reputable vendor from [market] with 78 successful sales. Since the collapse of all major markets, both vendors and buyers are left on a dry land [...] for inquiries: wickr*”. **Vendor**

Encrypted messaging services differ in important respects in comparison to conventional mobile phones due to their inability to be “tapped” which has historically provided some benefits for law enforcement (Natarajan et al., 1995). This may provide some evidence as to their appeal by users involved in cryptomarkets when a marketplace is being subject to intensified law enforcement pressure. The availability of an alternative platform to engage with a cryptomarket vendor appears to provide some benefit to drug buyers, as they are able to continue to arrange the delivery of drugs from their preferred vendor when the marketplace is not operating, or when closure of the marketplace is imminent (or perceived to be forthcoming). Moreover, vendors may be motivated to establish this alternate channel, and be willing to direct deal with buyers who want to do so as it minimises the impact of law enforcement efforts on their selling ability. New cryptomarkets emerge rapidly in response to law enforcement practices (Decary-Hetu & Giommoni, 2017; Van Buskirk et al., 2017), and the analysis of the discussion forums presented here suggests that encrypted messaging applications and dealing directly can provide buyers and sellers a temporary medium to conduct drug exchanges before the next marketplace is established.

*Discounts*

In instances when cryptomarkets were operating under “normal” conditions in the wake of law enforcement activity (i.e., no real threat from law enforcement and running as per usual), attempts to facilitate direct deals were mostly seen in the forum posts as a vendor-driven behaviour to move prospective buyers away from the marketplace. Successful multichannel retailers may understand that preferences to keep costs down may be the defining feature of customer movements away from traditional channels (Schoenbachler & Gordon, 2002), and an acknowledgement of this sense was reflected by vendors frequently offering discounts to buyers who were willing to move away from the cryptomarket:

*“Please contact me on Wickr at [username] if you’re comfortable. I can do 5% less prices.” Vendor*

*“All DD’s carry a 5% discount [...]” Vendor*

*“[...] we have some deals on at our store starting from today [...] Deal 1) any new customer that adds us on wickr will receive a free .1g of any product of their choice (quote “new custom” at checkout). Deal 2) and for our existing customers order 1g and more and receive a free .15g (quote “existing custom” at checkout) [...] these deals are only available on Wickr” – Vendor*

Discounts have been mentioned previously in the context of dealing away from the market (Kamphausen & Wersé, in press), and the quotes above reveal a tendency for cryptomarket vendors to acknowledge illicit drug buyers in this domain as utility-maximisers, and as actors who want to minimise the financial costs of the illicit drug exchange. Prices on cryptomarkets, although influenced by numerous factors, are already perceived by buyers to be cheaper than offline methods (Barratt et al., 2014; Van Buskirk et al., 2016), but direct dealing with a vendor may demonstrate a way that illicit drug buyers can further minimise the financial costs associated with illicit drug exchanges. Moreover, as there is a transition towards

a potentially less secure platform, buyers may be expecting some sort of inducement for being willing to take on the additional risks. Comparatively, vendors are able to offer these lower prices to buyers as the market does not take a commission on each direct deal, as a deal through the channel of the cryptomarket would entail.

## Perceptions of Direct Dealing

### *Increasing Likelihood of Scams*

Although reducing the financial costs of the drug exchange may be an important consideration in adopting an alternative platform there are many other considerations at play in the drug exchange. For example, in cryptomarkets, there is emphasis on the need to demonstrate digital expertise and good operational security (OPSEC) to ensure avoidance of detection from law enforcement and minimising the chances of being involved in a scam (Aldridge & Askew, 2017; Bancroft & Reid, 2017; Ladegaard, 2018b). For these reasons, there appeared a strong consensus among buyers that engaging in direct dealing with a vendor will expose themselves to greater risks due to the requirement to move across to an alternative platform.

Downloading an application on a personal mobile phone for drug-related activities was generally not perceived as demonstrative of good operational security practices in the forum posts analysed. However, this did depend largely on the type of encrypted messaging application being discussed, as certain applications were understood as *more* secure than others, and references to interviews and privacy statements from companies were made in order to establish security credentials around certain applications. For example, one particular explanation for the popularity of Wickr is the lack of requirement for the application to link to other information stored in the phone (e.g., contact lists, mobile phone number). Beyond this, as aforementioned, the overwhelming consensus was the perception using apps to direct deal

does not reflect good personal security practices, and that the practice of direct dealing exposes users to more risks than necessary:

*“I have been using this guy a couple of times. Been on DNM for a few years and this guy adds me to Telegram. He started asking to send direct. I basically told him to fuck off and he sent another one fine using escrow. Now I place an order and he doesn’t process. He says he sorting people who DD first [...] I told him the people, if there are any who DD with him are fucking idiots and he needs to ship my order. Is this guy a scam waiting to happen?”* **Buyer**

*“[...] direct deals using wickr is not the way forward, you have to send your address unencrypted, your coins are sent to him with no market tumbler. Need I say more?”* **Buyer**

*“[...] they are now asking me to send my address through wickr??? Clearly I’m not happy doing so [...]”* **Buyer**

*“This douche bag scammer/ LE?? has no sales [...] gives directions to contact via Kik messenger and rejects orders and then tells you he only sells direct no escrow [...] Please ban this guy he is so shady!!”* **Buyer**

As reflected in the quotes above, there was a general reluctance towards transitioning across to a potentially less secure platform to conduct the drug exchange when a vendor initiated the direct deal, with many references also made to the security features offered by cryptomarkets (e.g., escrow payment system). Because many of these safety mechanisms are not available to buyers it was believed to be unsafe and risky. Buyers believed that they were able to predict which vendors were using direct deals to scam buyers through the offering of deals that appeared “*too good to be true*” and when vendors were too persistent that the deal

be conducted outside of the market (e.g., rejecting deals on the market and informing buyers that they are only conducting direct deals).

A particularly interesting finding was that the negative perceptions surrounding direct dealing stemmed from the widely held belief that this was a strategy purposively employed by vendors for nefarious reasons. By scamming individuals outside of the market structures, the opportunity is created for a vendor to take buyers’ money and not ship the drugs to the destination. As this scam occurs in a setting away from the cryptomarket any disputes raised to administrators are likely to be ignored. Depending on the forum, this occasionally resulted in administrators taking on a guardianship role against the scammers of the markets by actively removing posted usernames that buyers could use to direct deal, and warning potential buyers about the dangers of dealing outside of the market. In conventional illicit drug markets, drug sellers may decide to rationally ‘rip-off’ customers depending on certain attributes of the buyer such as their status of being a first-time customer (Jacques, Allen, & Wright, 2014). This notion was also reflected in the analysis of the forum posts in the current context as many posters who were describing their experiences of being scammed as a result of dealing directly with a vendor referencing their position as a new buyer to cryptomarkets and not knowing better. These forum posts help build a picture towards further understanding the operation of scams in dark net drug cryptomarkets (Moeller, Munksgaard, & Demant, 2017).

### *Trust Minimises Anxiety for Direct Deals*

Although there were noteworthy concerns around the potential for scams to arise as a result of dealing directly with a vendor, it did appear that this practice was more common in instances where there was trust already established between a vendor and a buyer. More broadly, the notion of trust generally refers to the expectation of others to act with regards to shared assumptions (Lewis & Weigert, 1985). In offline drug markets the establishment of trust

and familiarity between a seller and buyer can be critical in minimising some of the anxieties around the drug exchange such as the likelihood of violence used, being in receivership of a poor quality product, and avoiding interactions with law enforcement (Eck, 1995; Jacobs, 1998; Jacobs, Topalli, & Wright, 2000; Moeller, 2018). Many of these anxieties are overcome in cryptomarket drug purchasing (Bakken et al., 2018) because of the in-built market structures such as the feedback systems. Just as trust is perceived as critical in market exchanges where risk is present, and indeed in many types of drug exchanges, it was seen as an important element in buyers’ willingness to take on some of the extra risks associated with adopting a new channel:

*“Has anyone used wickr? Wondering if it’s worth using that for direct deals with [vendor]. Kicker is no feedback/rating style but [vendor] has such a high rep and has offered a reship of my missing weed [...].”* **Buyer**

*“Just recently had two customers through Reddit/Wickr. It works, but obviously you need to trust/know the vendor [...] less time for customers to finalise, I much prefer [market], as it keeps everything in order, feedback, disputes etc.”* **Vendor**

*“We do DD [direct deal] through Wickr after a new customer purchases a QP [quarter pound] or above through escrow. This way both parties have some trust to start with.”* **Vendor**

The selected quotes highlight the importance of trust in feeling comfortable enough to move across to a less secure channel to deal directly with a cryptomarket drug vendor. Despite the fact that the deal would eventuate on an alternate platform, the features offered by cryptomarkets such as the feedback scores still provided an important metric for how much buyers are willing to trust a vendor (Tzanetakis, Kamphausen, Werse, & von Laufenberg, 2016). The perceived level of trust that a vendor had established in one domain was taken into

account in an entirely new domain thus reflecting a process of “trust transfer” (Stewart, 2003), where demonstrated behaviour is expected to be maintained across multiple platforms. Moreover, consistent with the literature on multichannel retailing and understanding the process of buyers moving across to different platforms in circumstances of anxiety, forum posts from buyers suggested that they were willing to engage in this practice with sellers who have a high feedback score and reputation perhaps due to the familiarity with a “brand name” (Schoenbachler & Gordon, 2002).

### Increasing the Customer Contact Points

Analysis of the forum posts in relation to encrypted messaging applications also revealed how such apps are used as part of a wider multichannel retailing strategy to increase the number of communication points between a vendor and a buyer. Drug vendors in cryptomarkets are provided opportunities to act in accordance with customer service roles that may subsequently increase future sales on the platform they operate within (Ladegaard, 2018a; Van Hout & Bingham, 2014), to the point where vendors may be “*at the mercy of users’ evaluations of them*” (Bancroft, 2017, p. 45). Analysis of the forum posts revealed the reliance on encrypted messaging applications as part of a customer service package that vendors offer to prospective buyers. At times, the promotion of this unique customer service ability was not central to the advertisement and followed the offerings of products and special deals (i.e., “dealer spam” see Moyle et al., 2019), but there were also occasions where the advertising of a username through an encrypted messaging application was part of a deliberate strategy to demonstrate an enhanced customer service ability and the offer of an alternative communication tool:

*“We can offer customers high quality services like fast communication with jabber chat, wickr or telegram”* **Vendor**

*“Bulk and return customers will be placed on a VIP list, VIPs will receive alternate contact methods i.e. email, wickr, signal etc to receive faster order processing times and faster updates with periods of live chat to ensure their buying experience is top notch” Vendor*

This customer service ability was appreciated by buyers, as demonstrated in reviews of vendors:

*“Communication: 10/10 The communication is always top notch, replying within under 24 hours, sometimes within 30 minutes. They have a wickr account if you want instant encrypted messaging.” Buyer*

Depending on the cryptomarket, there may have already been ways to privately send and receive private messages between vendors and buyers. However, communication through encrypted messaging apps could be seen as a more personal way of communicating with the vendor and creates a sense of exclusivity for buyers who are able to have fast communication with a vendor. Additionally, vendors may be offering this alternate contact point as an acknowledgement of buyers’ needs to maintain an encrypted line of communication for drug-related activities. Further, cryptomarket vendors may want to use encrypted messaging apps in this fashion due to the relatively quick access to the platform as opposed to accessing the cryptomarket, and as one cryptomarket vendor stated, *“I don’t have access to my personal computer that I use to get on the dark web all day. Thus, Wickr messages can be handled much faster”*. Cryptomarket messaging systems may be inefficient as a quick communication tool between vendors and buyers.

## **Discussion**

Online illicit drug markets are persistently evolving, and individuals participating in these markets continue to diversify their practices and adopt new technologies to facilitate drug

exchanges. There is now a growing recognition for the various ways that encrypted messaging apps are used to supply and access illicit drugs (Moyle et al., 2019; Bakken & Demant, in press; Palmer, 2019). Specifically, however, this paper investigated the incorporation of encrypted messaging applications into cryptomarket drug supply patterns. Cryptomarkets provide security features to buyers and sellers that reduce many risks of the exchange and potentially alleviate uncertainties surrounding the quality of the product and the reliability of the seller (Aldridge & Askew, 2017; Bakken et al., 2018; Pzepiorka, Norbutas, & Corten, 2017; Tzanetakis et al., 2016). It is therefore somewhat surprising that direct dealing – the process of moving away from the cryptomarket and dealing privately with a cryptomarket vendor – has reportedly emerged as a popular method of dealing between cryptomarket actors (ABC News, 2019). This paper has explored the emergence of this practice as well as the associated motivations, anxieties and experiences of market participants, situating them within a framework of multichannel retailing.

The analysis of forum posts revealed an overwhelming perception that direct dealing creates an exposure to increased levels of risk in the process of drug exchange. This belief was founded on the assumption that vendors attempting to establish direct deals were doing so as a means to scam potential buyers through a process of moving away from the security features of the market. Furthermore, even if a vendor were perceived as legitimate, the utilisation of mobile phone for the purposes of drug supply would increase exposure to law enforcement. There were, however, certain contextual factors that shaped the acceptance of this practice and made buyers more willing to adopt the risks involved in direct dealing. Trust (in both the vendor and the encrypted messaging application) was an important mediating factor in conjunction with offers of discounts on the prices of drugs, and the perceived presence of law enforcement activity on drug cryptomarkets. While motivations of convenience are often cited as a primary reason for the adoption of tools of different forms of technology to gain access to illicit drugs

(Moyle et al., 2019), and could be posited as a reason for the emergence of direct deals, this was not something that was particularly present in the findings. In addition to this, and reflective of the way that multichannel retailing occurs in legal markets, we found that encrypted messaging applications were not used exclusively as a tool to co-ordinate direct deals, but also as a communication tool to increase the number of customer contact points with buyers on cryptomarkets. Discussed henceforth are implications of these findings on the conceptualisation and operation of online illicit drug market practices.

### Direct Dealing as a Form of Displacement

One factor that shaped the willingness to take on the risks of direct dealing was the presence (or perceived presence) of law enforcement activity or the belief that marketplace closure was imminent. Often noted in offline drug markets are displacement effects whereby the markets, and the actors operating within the market, adapt to policing operations and the drug trade remains resilient to pressure from law enforcement (Bouchard, 2007; Caulkins, 1992; Wood et al., 2004). Cryptomarkets also show these displacement effects as shown by research indicating the tendency for buyers and sellers to transition to alternate functioning markets following law enforcement activity (Decary-Hetu & Giommoni, 2017; Ladegaard, 2019). However, as suggested by Caulkins (1992) in relation to displacement in street-based drug markets, displacement effects vary and can take a different form beyond dealers simply moving markets. Our paper provides the first preliminary evidence of buyers and vendors in cryptomarkets going beyond transitioning to another cryptomarket, and in fact adopting a platform entirely separate to the dark net. This adoption of an alternate tool is therefore reflective of tactical displacement (Hesseling, 1994) as the utilisation of different tools is still occurring to achieve the same overarching goal of organising a drug exchange that provides security and safety benefits over offline exchanges.

## Drifting Between Online Drug Markets

The framework of multichannel retailing assists in explaining direct dealing and the emergence of transitions away from cryptomarkets to organise sales on alternate channels. In a similar vein to legal markets, cryptomarket drug vendors may establish multiple channels in order to increase the number of contact points with potential or existing buyers (Lewis et al., 2014). At times, as previously mentioned, motivations for establishing an alternate channel was also due to situational factors such as policing practices in cryptomarkets. On the other hand, for cryptomarket drug buyers, an important factor that determined engagement with various channels was the degree of trust present in the exchange. In legal markets (Bigus, 1972; Hawes, Mast, & Swan, 1989), and in illicit drug markets (Strub & Priest, 1976; Wedow, 1979), trust between parties is a necessity, particularly in instances when risks are present in the exchange. The perceived trustworthiness of a vendor was critical, and buyers looked towards cues that demonstrated seller reliability, such as feedback scores and other buyers vouching for particular sellers (Wedow, 1979).

Multichannel retailing appears to occur in online illicit drug markets just as it occurs in markets for legal goods as services. Although there has been a rapid growth in research investigating the nexus between technology and illicit drug markets, Sogaard et al. (2019) claims that this research is currently bound by “silo-thinking” as one primary technology is often the sole focus of analysis and investigation. This is exemplified through numerous explorations on transitions within the same technology, such as individuals shifting between different cryptomarkets (Ladegaard, 2019) or social media applications to facilitate drug supply (Moyle et al., 2019; Bakken & Demant, in press). However, the presence of direct dealing should serve as an impetus for a recognition that the various forms of online illicit drug markets (i.e., surface net, dark net, and app-based) demonstrate a degree of interconnectedness that is not currently considered in extant research. Our paper shows how buyers and sellers may drift

between different types of technology and have different interactions with online illicit drug markets. Because of the increasing embeddedness of technology in society, investigating the interactions between platforms will be crucial in future research that aims to effectively map out the digital spaces for buying and selling drugs. Online drug markets, and indeed all kinds of drug markets, should not be viewed as independently operating siloes, but rather, as platforms that are in continual interaction with one another and where buyers and sellers may drift between each of them.

## Limitations and Future Research

In addition to some of the methodological issues previously addressed, our findings presented in this paper should be interpreted with some caution due to the reliance exclusively on forum data. For example, buyers or sellers who post in forums attached to cryptomarkets may be more likely to favour cryptomarket structures over those who participate in direct dealing, and so in this regard, the views and perceptions presented in forum posts may be biased towards those who are the more vocal, security-conscious users of the platform (see Enghoff & Aldridge, 2019 for further limitations on the generalisability of forum discussions). This may have also been a reason that popular motivating factors of convenience in adopting novel technologies for drug supply were not largely found in our results. Future research exploring direct dealing can somewhat address this limitation in our sample through interviews that can further elucidate on the nature, experiences and perceptions of direct dealing. Barratt & Maddox (2016) make appropriate suggestions with respect to this on approaching research on hard-to-reach, dark net populations.

## **Conclusion**

The general trend exhibited by illicit drug markets has been the gradual introduction of practices that attempt to mediate some of the associated risks involved in drug exchanges. This exploratory study sought to address why it is that, when provided with the securities of cryptomarkets, actors choose to direct deal through encrypted messaging applications rather than co-ordinate the drug sale through the marketplace. Although many cryptomarket actors seem hesitant to engage in direct dealing due to the increased risks, this practice may be gaining in popularity, and acceptance of this practice is dependent on the factors explored throughout this paper. This study demonstrates the need for research to be alert to the dynamic and interconnected nature of online illicit drug markets and illicit drug markets outside of online channels, as well as the different and changing ways that actors operate within these digital spaces. This is important if we want to keep track of diversified drug selling practices and address the potential risks exposed by new drug markets.