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Digital Transformations in Drug-Related Crime: Figurations, Interdependencies, and Balances of Power

Julia Katherina Mahnken *

Abstract: »Digitale Transformationen in der Drogenkriminalität: Figurationen, Interdependenzen und Machtbalancen«. The effects of digital transformations are already being researched in many ways in the context of the police. What this body of work has in common is that it refers to current developments. My research also focuses on current processes of change within a classic criminal phenomenon but places it in the context of long-term processes in order to derive both the resistances to innovation and possible specific opportunities for organisational change that result. The online drug platform “Chemical Revolution” serves as an exemplary case study. Norbert Elias’s figuration and process sociological approach (expansion by Rammert’s concept of distributed action) enables an analysis at micro, meso, and macro levels. It shows that long-term social processes continue under digital conditions and reproduce diverse modes of action. At the same time, power chances for crime investigation are shifting under digital conditions from consumers (micro-crime) to markets (macro-phenomena). Although Elias himself did not deal with digital technologies, this illustrative study nevertheless makes clear the value of his process-oriented perspectives and tools (valencies, interdependencies, power balances, figurations).

Keywords: Digital transformation, police organisation, micro-macro-analysis, sociology of figuration and process, concept of distributed agency, drug trafficking, platforms and infrastructures.

1. Introduction

“The world in which we live is an emergent world, it is humankind on the move.”
(Elias 1995, 40)

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As this case demonstrates, new digital possibilities are drivers of profound changes. This case study will illustrate, the historically developed patterns of interpretation that guide police action (official thinking in silos, responsibilities, from case-to-case or person-to-person) no longer seem to suffice under digital conditions (cf. Mahnken 2020, 18, following Kergel 2018, 45). The presumed novelty creates pressure for the police to act in terms of criminal policy (promotes techno-deterministic views¹). In the German-speaking world, there is already a variety of studies from different disciplines that investigate how digital conditions affect the organisation police, including digitalization (Ritter, Porschen-Hueck, and Neumer 2020), datafication (Egbert 2020; Brayne 2021), technical innovations (Zurawski 2015; Reichertz and Wilz 2019), (digital) production conditions of inner security (Stegmaier and Feltes 2008; Heinrich 2009; Singelstein and Stolle 2012; Ostermeier 2018; Puschke and Singelstein 2018; Berthel 2019), digital legal framework and obstacles (Boehme-Neßler 2009, 2017; Brunhöber 2018; Singelstein 2018; Schlegel 2019; Hoffmann-Riem 2021), agility in administrations (Bartonitz et al. 2018; Lévesque and Vonhof 2018), digital leadership in a digital society (Lorenz 2018; Barthel 2019a), and digital and proactive policing (Rüdiger and Bayerl 2018; Barthel 2019b; Egbert and Leese 2021). For the most part, they refer to current processes.

The epistemological focus in this HSR Special Issue is to choose a different approach. The contributions aim to explore digital transformation processes in a process-oriented manner; consider novelty as “axiom of what is assumed to be new” (cf. Baur et al. 2020; Hergesell and Büchner 2022, in this special issue). My conceptual framework and illustrative case study echoes this assumption and applies it to the field of police science and criminology. Using case information on the drug platform called “Chemical Revolution,” I explore the question of how police practices concerning drug-related crime is changing under digital conditions. Are current changes disruptive, or do existing practices continue? Which changes are specific to digitalization? Where do established processes mutually strengthen one another, and where are they weakened? How are the processes of change interwoven?

In the following, I will first introduce a process-oriented research perspective and Rammert’s understanding of digitalization to foster a deeper understanding of digital crime (chapter 1). Building on this, chapter 2 explains Norbert Elias’s concepts and tools, as well as their extension to Rammert’s STS² perspective. In the case study, the reconstruction of current processes is carried out in comparison with a case from 1955 in order to pave the way for a process perspective (chapter 3). It is followed by the identification of novelties, ruptures, or continuations (chapter 4). The analysis reveals disparities and tensions at different levels. The added value of the figuration and process

¹ Assumption that social changes are driven by technology.

² Science and Technology Studies.

sociological analysis perspective in the digitalization context of (police) organisations is summarised in the conclusion (chapter 5).

2. Digital Crime and the Potential of a Figurational and Process Sociological Perspective

With an illegal drug platform, the Chemical Revolution case suggests a focus on drug and platform research with an empirical focus on current processes. I choose a figurational and process sociological perspective to understand the organisation, its structures, knowledge, and practices in its respective contexts (cf. Doppler 2018, 1). The prime focus is to understand how the organisation police is acting in a digital crime context. With Elias's analytical tools, the case study reveals that this digitalization process is not (short-term) novel causal connections, but an unplanned long-term social process. From a longitudinal perspective, surprisingly few of the "new" elements remain novel under the magnifying glass of socio-historical contexts.

To begin with, a brief overview of findings in drug and platform research will prove helpful. Digital drug trafficking is not a new phenomenon since it appeared with the beginnings of the Internet (cf. Tzanetakis 2019, 477) but marks a paradigm shift (cf. Aldridge and Décary Héту 2014). In the course of the so-called platformisation in the 2010s, digital drug trafficking has reached a new dimension as it combined digital communication and payment transactions, as well as a wide range of commodities. Among the first prominent example was the closed platform Silk Road (cf. Van Hout and Bingham 2013). Further research focuses on dimensions of internet-based drug trafficking (cf. Kruithof et al. 2016; Demant et al. 2019), economic motivations (cf. Anderson et al. 2021), and criminal structures (cf. Kasper and Bulanova-Hristova 2017) and trust (cf. Kamphausen and Werse 2019). In the domain of drug trafficking, digitalization can be understood as "a socio-economic transformation initiated by the spread of digital technologies and their use and the resulting networking" (Tzanetakis 2019, 482). From the current state of research on crypto markets, the key change processes of digitalization (also observed in the case of Chemical Revolution) highlighted are security versus visibility, reduced risk, high availability and easy accessibility, customer feedback as currency, free competition, and the postman as an unwitting drug mule (Tzanetakis 2019, 482-8).

Platform research currently distinguishes between five interpretations of platforms: (1) technical architecture, (2) economic markets, (3) form of organisation, (4) a new form of capitalism, and (5) as being of social, political, and cultural significance (cf. Dolata 2019, 186-7). Whereas Tzanetakis stated out crypto markets as a central term of drug research, Spagnoletti, Ceci, and

Bygstad explore the functioning of “online black markets” (OBM) from an economic and infrastructure perspective. They understand OBM as intermediary structures that enable transactions via online media by offering functions for bringing together suppliers and customers, strengthening trust, and exchanging market information (cf. Spagnoletti, Ceci, and Bygstad 2021). An online illicit drug trafficking interesting perspective for further research is offered by Ametowobla, as she identified platform architecture as structural pattern in different phenomena.³

However, in these research fields, the focus is on current processes as well. By contrast, the following case study will reveal the potential of an analytics that includes long-term processes. While the figurative and process sociological perspective has indeed been used in sociology of work, industry, and organisation and in political science, it is new to digitalization research as well as in police science and criminology. In the sociology of work and industry, figuration and process sociological studies provide valuable contributions to organisational development by focusing also on the advancement of the organisation of work, as well as on the transformation of the so-called working society (Frerichs 2014). The assumption is that it proves as productive in the field of police science.

In particular, I assume that Elias’s concepts of temporality allow a deeper understanding of the conditions under which digitalization processes are taking place (also in the case of Chemical Revolution). By focussing on asynchronies, interactions between current developments, and emerging asymmetries in existing social processes, it reveals long-term social processes responsible for current organisational reconfigurations (cf. Elias 2017, 10-4, 49, 82-3, 155f.; cf. Bidlo and Mahnken 2021, 132). Temporality is a central aspect (cf. Baur et al. 2020) of analysis, since, according to Elias, “dynamic, reproductive or cyclical processes” (Eichener and Baumgart 2013, 49) with a slower pace of change only become visible in longer observational periods of sociogenesis. At first glance, a slow speed of change seems to be opposed to current digitalization conditions. However, the process-oriented view will reveal that and how long-term processes of social change continue and intensify under digital conditions, while medium-term change processes weaken or break off under these conditions. In addition, temporality is significant because different speeds and periods of social, individual, and technical development processes lead to asynchronies in parallel, and always interdependent (cf. Elias 1995, 12, 18-20), processes of change on micro-, meso-, and macro-levels (cf. Elias 1977, 140-4; cf. Evers 2018, 13, 24, 27; cf. Bauer and Ernst and Hergesell and Norkus 2020).

³ She states out platform system (architecture) as a specific form of social order with sociotechnical structure of technology (platform), structure of relations (developing on platforms) and technical resources that stabilise these (cf. Ametowobla 2020, 18-21).

A focus on temporality, thus the idea, is particularly instructive for the processes of digitalization in the field of criminology, usually described as disruptive. Closer analysis reveals considerable differences in temporality and dynamics at the micro level (criminal and investigation activity, as well as the actions of petty thieves and consumers), the police organisation and criminal networks (meso level), and in the dimension of society and crime policy (macro level). The interdependence among these different layers has considerable consequences for current and specific developments at all levels. From a long-term perspective, advocated here, continuities, disparities, and tensions make it almost impossible to speak of *the* digitalization of crime and *the* “fight” against it.

Although Elias did not expand his concepts to include aspects of digitalization during his lifetime, he stressed that “(t)echnization is a process involving humankind” (Elias 1995, 8). In order to use his concepts of figuration, chains of interdependence, and balances of power also for the study of digital conditions, I therefore draw on Rammert’s concept of distributed action (see chapter 3.2).

My analysis rests on the assumption that although the number of digital innovations is growing exponentially, they mostly go unnoticed in everyday life (cf. Powell, Stratton, and Cameron 2018, 5), mobile phones, the Internet, and platforms being cases in point. Likewise, terms and concepts have emerged in the discourses of digitalization that are used unquestioningly in everyday life (e.g., digital or platform) and are partly associated with different expectations (cf. Gillespie 2010). *Digital transformation*, in other words, mostly sneaks in, thereby interacting with knowledge, as well as a multitude of viewpoints and practices that have been present before.

Whereas *digitization* can be technically understood as transformation from analogue to digital (translation into binary code), the term *digitalization* aims at a socio-technical understanding. With *datafication*,⁴ digital data become an “essential and specific type of resource” (Alaimo, Kallinikos, and Valderrama 2020, 26), both for knowledge and practices within the police (cf. Egbert 2020) and for structures of control, which, under conditions of digitalization, also develop into predictive structures (Filipović 2015, 10) in policing (cf. Egbert 2020; cf. Brayne 2021).

So, what is digital crime? The statistical administration in Switzerland defines it as such:

⁴ *Datafication* is used to describe the trend that many aspects of life are undergoing a transformation in socio-technical conditions (cf. Häußling et al. 2017, 16) including the capture, storage, and analysis of digital data (cf. van Dijck 2013 after Grenz 2020, 78) to optimize processes, for example, what is of our interest (e.g. filter bubbles, customer cards – cf. Prietl and Houben 2018) or in fitness apps (cf. Duttweiler 2016) or how to get from a to b as quickly as possible (e.g., googlemaps, Uber).

Digital crime (commonly known as cybercrime) comprises: “digital” offences committed on telecommunication networks, in particular the Internet. In the police crime statistics, digital offences are identified on the basis of the *modus operandi*. It is therefore not a new form of offences that has been recorded by the police in the CPS but the identification of offences with a digital component.⁵

This definition offers a close perspective on the *modus operandi* criteria for statistical reason, but neglects embedding it on broader contexts, like cultures and practices of the digital society (Lupton 2015; Marres 2017), data society (Houben, Prietl, and Deutsche Gesellschaft für Soziologie 2018), or the uneven accessibility of the Internet.

With this understanding of *digitalization*, I follow Rammert and Schulz-Schaeffer’s concept of distributed action, which assumes an interplay of mutual influence (cf. Rammert and Schulz-Schaeffer 2002: 59; cf. Schulz-Schaeffer and Rammert 2019, 43). Accordingly, situations, data, digital technology, contexts, methods, people, and practices cannot be thought of separately from each other (cf. Jarke 2018, 12). With the integration of technical artefacts into everyday acts of illegal drug trafficking, the acts are also distributed across platforms, websites, social media, and apps, resulting in multiple hybrid constellations (cf. Rammert 2008, 3)/distributed agency – (cf. Rammert 2012, 89). People act socially with and through technologies (cf. Jarke 2018, 7). Marres raises further awareness for the object of study under digital conditions:

Is sociality scripted into technology, or practised with it? Do digital media technologies facilitate and record social lives that extend beyond digital settings, or do they enroll users into the enactment of medium-specific forms of sociality? Rather than offering quick answers to these fundamental questions, it is crucial that digital sociologists retain an active interest in them, and cultivate an awareness of how the sociological concepts, methods and instruments that we take up in digital research orientate our inquiries towards one answer or another (Marres and Gerlitz 2016). (Marres 2017, 69)

While digital crime and digital investigations have so far been described coupled to the inclusion of digital technologies, the term digital transformation also accounts for the multiple ways in which existing structures of illegal networks and police organisation interact with and transform under digital conditions.

⁵ <https://www.bfs.admin.ch/bfs/de/home/statistiken/kriminalitaet-strafrecht/polizei/digitale-kriminalitaet.html> (Accessed 1 June 2022).

3. Elias's Relational Understanding

Before diving deeper into the illustrative case study, it is necessary to take a look at Elias's relational understanding. Norbert Elias (1897–1990) described himself as a myth hunter and human scientist (cf. Elias 2006, 62; Treibel 2009, 133; Eichener and Baumgart 2013, 7) who was continually driven by the basic question of what binds people together (cf. Elias 2006, 176-7). His analyses therefore focus on human relationships. His basic assumption is that everything human is interdependent and continuously changing. In particular, Elias rebelled against the dualistic image of the individual and society as two separate opposing entities (cf. Elias 2006, 15f., 171-2; cf. Elias 2017, 49). Instead, he is concerned with figurations, chains of interdependences, balances of power, and valencies (see below).

In order to reveal processual transitions between “individual” and “society,” Elias introduced the notion of “*figuration*” as a “model of a social process” in the sense of a continuously changing entity (cf. Korte 1997, 156; cf. Elias 2006, 170f.; cf. Elias 2017, 70f.). This explains why Elias thought of individuals in the plural (cf. Elias 2017, 49f.), as having many “*valencies*” that are directed towards others (like little moving antennae). Some valencies find a firm attachment and anchorage in other individuals, while others are free and unattached, searching for attachment and anchorage in other people (cf. Elias 2006, 179). Individuals, in this model, have a need for satisfaction of their own needs, for emotional stimulation (cf. Elias 2006, 179; cf. Frerichs 2014, 25). On these grounds, people are mutually interdependent (cf. Elias 2006, 176): “It is more appropriate to think of a human image as a picture of many interdependent people who form figurations with each other, that is, groups or societies of different kinds” (Elias 2017, 70). Their bonds in figurations can be affective, spatial, social, state-related, or economic (cf. Kuhlmann 2000, 634; cf. Frerichs 2014, 26-8), and, in our modern age, such figurational links also function over great geographical distances (globalization) and virtually (digitalization).

Furthermore, figurations are subject to multiple dynamics through which continuously change. As people come and go in figurations, their social structure is constantly changing as well. This applies to virtual social networks, too. Figurations spring up suddenly and then fall away just as rapidly: “The ‘essence’ of a figuration is the indissoluble intertwining of the participants in a dynamic process” (Treibel 2009, 139). Based on this notion and accentuated by the idea of distributed action, my analysis will also focus on the website www.drogenkaufen.com and the logistical infrastructures used in the case of the figuration of Chemical Revolution, which connect people via dynamic networks of knowledge and power.

Another central aspect for the analysis of the criminal phenomenon of drug trafficking is the focus on interdependencies within and between figurations (cf. Elias 2006, 176; cf. Elias 2017, 51). “*Chains of interdependencies*” can form across multiple people. The longer these become (for example, in a figuration that is difficult to manage, such as state administration), the more complex the network is and the more unstable the interdependence chains are (cf. Elias 2006, 124). Elias’s basic assumption concerning the formation of such webs of interdependence is that power is *the* central link between people (cf. Elias 2006, 95). This interdependence, he argues, leads to people being functionally dependent on each other and thus having power over each other (cf. Frerichs 2014, 28-9). In this context, Elias criticizes the idea that people would speak of power as if it were a state or condition (cf. Elias 2006, 94-9); “People are never powerful per se, according to Elias. Their power is only revealed in relation to others [...]” (Frerichs 2014, 25). With the conceptual tool of “*balance of power*,” Elias transforms this notion of state into a notion of relationship, emphasizing the dynamic and processual nature that comes with power (cf. Elias 2006, 99-100). He sketches the image of the balance of power as a “fluctuating, tensile equilibrium” (Elias 2006, 94, 174), which in figurations sometimes accrues more to one side, sometimes more to the other, and must constantly be rebalanced (cf. Elias 2006, 174). At the same time, this is linked to continually new sources of power and the resulting power chances, as well as to situations in which power differentials are dropped or have to be given up. Power chances and power differentials are thus constantly changing and shifting dynamically (cf. Frerichs 2014, 28), which results in the “multi-polar character of the sources of power” (Elias 2006, 118). In the analysis of the Chemical Revolution case, it is only by comparing it with a case from 1955 that it becomes apparent that the development towards a digital black market also presents itself as such a dynamic process of change with changing balances of power.

3.1 Process Sociological Perspective

Figurational thinking places intersubjectivity (read constitutive interdependence) centre stage and takes the interrelation of socio- and psychogenesis seriously. This leads to a constructivist perspective that not only emphasizes power relations of figurations, but continually highlights the historical embeddedness of practice and social knowledge. (Bucher 2017, 427)

Werse and Kamphausen (2019) analysed factors of trust, logistics, and conflicts in online trade of illicit drugs with a figurational perspective. Their understanding of drug trading was as one social figuration, consisting of the roles operator (admin), vendor, and buyer (Kamphausen and Werse 2019, 282), with a focus on current processes. In order to explore the novelty and the changes in the phenomenon of drug trafficking in a digitalising society, it

is advisable, following Elias's methods, to descriptively compare findings of different generations. In the following, I will analyse the structures, market, and mobility of drug trafficking in 1955 through the lens of Elias and compare it with the digital case, Chemical Revolution. Only such a comparison with a focus on processes can reveal the specific repercussions of digitalization on the organisation of criminal investigation departments, their investigative approaches, investigative actions, forms of cooperation, figurative composition, and their chains of interdependence.

In the context of unstable power relations, social change proceeds unplanned and disorderly (cf. Treibel 2008, 17; Frerichs 2014, 23-5): "There are people who bring about the technization of certain aspects of their social life, use it, and, in turn, are themselves stamped by this process" (Elias 1995, 19). On this account, people cannot have control over long-term processes of change. Nor can people force the direction of social change processes, since such orientations result from the dynamic interplay of a multitude of actions:

The social force field lies not with individuals but in what is between them. It is what people do with and against each other that moves society forward, not what people supposedly or actually are. (Treibel 2008, 100; 2009, 156)

Hence, only a micro-macro analysis of these processes of change spanning several generations can identify structural properties, long-term directions of change (continuities), asynchronies, and tensions, i.e., orders in change (cf. Elias 2006, 200; cf. Elias 2017, 9-16, 81).

For analysis, this means both the criminal investigation department as an organisational unit (meso level) and as the criminal and criminal investigation activities in the Chemical Revolution case (micro level), as well as social currents (macro level), form fluid, overlapping figurations. In this interplay, long-term social transformation processes intertwine with parallel digital transformation processes (datafication, platformisation, scoring and ranking) shape them, and are shaped by them. Gradually, the associated structural characteristics manifest repercussions on evolved offender structures, the organisational structures of the police and their personnel composition: "Digitalization neither superimposes itself on organizations nor does it capture organizations qua their own dynamics as passive entities" (Büchner 2018, 332). This interactional dynamic results in a plurality of ordered transformations (recurring themes like legalization needs) as well as reproductive processes and ruptures, as will be shown.

3.2 Methodical Framework

As methodological framework for the analysis of online drug trafficking, I combine the concept of distributed agency (Rammert 2012) with the

figurational and process sociological tools of Elias.⁶ Both concepts rest on the notion that human autonomy is an illusion (cf. Elias 2017, 49 f.; cf. Rammert 2012, 91-4) and that determinism (whether technological or man-made) is to be rejected. While Elias's concepts focus on relations between people (figurations, interdependence chains, and power relations), Rammert's concept offers the possibility to bridge human and material agency with the concept of collective action:

The inter-agency between people and objects is the strategic bridge concept between the two sides of human and material agency. The cross-relations of interactivity constitute the hybrid world of interfaces, human-computer interaction or socio-technical systems. (Rammert 2012, 101)

Since research in figuration and process sociological studies always focuses on developmental processes, the relationships between people and figurations form the central object of analysis (cf. Evers 2018, 26; cf. Kuhlmann 2000, 634). Following Baur and Ernst (2011, 134), my analysis considers four levels of reconstruction, which I will refer to as altitudes when tracing the interdependencies in their flow:

- 1) *Macro level* (interdependencies between figurations with a view to power relations),
- 2) *Meso level* (social structures in figuration; tracing their interdependent web),
- 3) *Micro level* (individual action and individual power chances in figuration),
- 4) *Micro-macro analysis* (sociogenesis of figuration: individual processes and the continuously changing figuration in its interconnectedness with regard to simultaneities, dissimilarities, tensions, and ruptures).
In this way, long-term continuities become visible (synthesis).

In each dimension, different layers of figuration become visible, coexisting and intertwined, interdependent, and likewise inter-active with material entities (expanded concept). The transitions between these layers are fluid.

For the reconstruction of “novelty” in the criminal phenomenon of drug trafficking, the conditions under which digital social change takes place in this context are analysed with the inclusion of socio-historical contexts applying Elias's conceptual tools to the initial case.⁷

⁶ Willems recommended expanding Elias's concepts in the sense of a sociology of synthesis to include Actor-Network-Theory (Willems 2012, 528, footnote 6). In my opinion, autonomous entities (human and non-human actors) confronting each other contradict Elias's perspective of analysis, in which individuals, groups, and institutions and the state only act autonomously to a limited extent. The concept of distributed action (Rammert 2002, 2012) is therefore more appropriate.

⁷ The joint press conference of the Federal Criminal Investigation Office (executive branch) and the Federal Prosecutor General's Office (judicial branch), visual materials, press coverage in digital media, and the Chemical Revolution website shopping instructions, as well as a written

4. Reconstruction of Current Change Processes in Illicit Drug Trafficking

To show the added value of this concept for analysing digitalization in the police organisation in the case of Chemical Revolution, three particular figurations are of special interest: perpetrator figurations (drug trafficking), the retrospective view of an exemplary perpetrator figuration from 1955 (drug smuggling) for comparison, and the figuration of those involved in the criminal investigation with a focus on the organisation. Instead of looking at a continuous historical course (timeline), the methodology envisages taking random samples of concrete situations for comparison.

4.1 Socio-Historical Contexts of Illicit Drug Trade

Opium abuse was already a police issue in the middle of the 19th century (cf. Wagner 2006). The social framework conditions at this time were urbanization and increasing geographical mobility in particular, but also the increasing networking of economic areas (cf. Jäger 2006). As early as the 19th century, criminologists increasingly perceived cross-border crime as a “dramatic phenomenon” (Wagner 2006), which led to the networking of their own structures, the formation of centralised offices, the establishment of wanted persons registers, and the exchange of data (cf. Langlais 1956 144-7; Bundeskriminalamt 1956).

At the conference of the Federal Criminal Investigation Office in 1955, it was pointed out that (with regard to investigative approaches in Germany) international drug trafficking was shaped by certain cultural groups and was oriented on distribution (power chances). Findings from an international investigation demonstrate the structure of a concrete network: gang leader K.⁸ K organized and coordinated narcotics trafficking between Lebanon, Syria, and Western Europe (upper level). Therefore, he purchased the narcotics himself in Turkey, Syria, and Lebanon. His brothers (middle level) transferred the narcotics from Turkey and Syria to Lebanon. His brother, T., organised the journeys with converted vehicles, sent Syrian and Lebanese couriers from Lebanon to France, and carried out random checks. In France, the goods had been further distributed for trade by a French person (lower level). To prevent the entire network from being exposed in the event of an arrest, each person knew a maximum of two contacts (cf. Langlais 1956, 140-1).

interview on the website www.drogenkaufen.com, comprise the source material for the description of the Chemical Revolution case.

⁸ For data protection reasons, perpetrator names are anonymised for this article and referred to by initial letters.

The perpetrator figuration in the mid-1950s around K. shows a closely interwoven family and ethnic hierarchical interdependence network with short interdependence chains. To minimize the risk of betrayal, wholesale trade was organized separately from retail trade. In the wholesale trade, power chances arose through family and ethnic affiliation and a personal network of relationships.

This provides a point of reference, as to this day, the structural orientation of the police figuration in the drug squads is based on such drug trafficking structures. To reduce crime, the police aim to identify and dismantle the upper structure. For this purpose, chains of interdependency are retraced in lengthy investigations. For the starting point of investigations, the police are offered power chances at the lower level (in the observation, documentation, and monitoring of consumers and small-scale dealers). Investigations in this field require above all cognitive skills, e.g., in the interrogating consumers and small-scale dealers, and especially in dealing with informants and undercover agents.

4.2 New Case Constellation? Introduction to the Chemical Revolution Case

At first glance, the figuration and the perpetrator's actions in the Chemical Revolution case seem to be different. In search of the new, the following analysis examines the current processes of change in the illegal drug trade with the tools explained above. In order to trace the interdependencies in the movement, I will use Elias's toolbox at different levels to reconstruct interdependencies between these levels (see 3.2).

Interdependencies, Power Chances, and Risks of the Chemical Revolution Figuration

A virtual sales platform such as Chemical Revolution offers a different reach (global) and thus a broader and larger customer potential (at least Europe-wide) than the street deal or the sale of larger quantities of narcotics to small-scale dealers. Moreover, virtual drug trafficking is not bound to individual customer relationships, specific times of day, localities, or a subdivision into small and large-scale⁹ drug trafficking.

The case of Chemical Revolution illustrates that under digital conditions, new economic (power) chances arise in the criminal phenomenon of drug trafficking. In 1955, the case constellation involved a network that had grown over generations with hierarchical power balances and short chains of interdependence. By contrast, digital transformation(s) enable to organise Chemical Revolution with a central mastermind coordinating experts for the case

⁹ In the case of Chemical Revolution, virtual trade led to a blending of retail and wholesale trade, which used to be organized separately in the analogue age (cf. 4.1), as it is also described in the meta-analysis by Werse and Kamphausen (cf. Werse and Kamphausen 2019, 445-8).

constellation and platform administration virtually. Due to the flat hierarchical structure and against the background of the idea of distributed action, the interdependencies between experts and mastermind appear with long threads of interdependence that could break at any time by the dynamics of unplanned processes and be replaced by others.

The main perpetrator, “Yoko,” set up the online drug trade in September 2017, organised smuggling and trafficking, and later orchestrated the figuration via digital infrastructures from abroad (Mallorca) and deliberately maintained encrypted (virtual) contact with the other participants (cf. Bundeskriminalamt 2019a). In addition to site administration, marketing, and managing the money, other roles required for drug trafficking were:

- the organisation and procurement of narcotics,
- transport from abroad to Germany,
- the renting of conspiratorial apartments as “bunkers,” and
- the packaging for dispatch and delivery to the logistics service provider.

The illegal narcotics were obtained locally by a 43-year-old in the Netherlands. Two Polish couriers then transported the illegal goods to Germany and delivered them to different cities. There, they were regionally packed for shipment by younger local accomplices in apartments rented for this purpose. Subsequently, existing logistics service providers were used for delivery within Europe (mainly in Germany) (cf. Bundeskriminalamt 2019a).

Physically, there were great distances between the participants in this transnational perpetrator configuration; virtually, the communication paths were short and fast. Virtuality thus leads to very unstable balances of power among the participants in a criminal figuration. Personal acquaintance is not necessary. What unites these actors are the shared power chances to achieve maximum economic profit within a short period of illegal activity.

Despite the unstable ties that present an increased risk for the entire network when one participant is exposed, the participants mutually assume this increased risk (cf. here and below also Mahnken 2020, 76 ff.), but not without minimizing it. Even though human action was required to deliver the narcotics to consumers, the connecting element between drugs and consumers in this digital context is the platform (cf. Tzanetakis 2019, 483), not the dealer. This reduces the risk for the perpetrators involved in the logistics in the background to be named in investigations against consumers. Functional interdependence within drug trafficking changes under digital conditions by becoming less personal (macro level). In contrast to drug trafficking without digitality, those involved in Chemical Revolution can have the interdependence chains broken with their customers by using the existing logistics industry for supply so that no physical contact between sellers and buyers is necessary (micro level).

The interdependency chains also change on the side of the perpetrator’s figuration (meso level): the interdependencies appear less close, more

functional, and less on a personal level. Even though the distribution of tasks within the figuration is described by the Federal Attorney General's Office as based on a division of labour (cf. Bundeskriminalamt 2019a), the role of the mastermind combines central power differentials in one person: site administration, marketing, organisation of smuggling and trafficking, and management of the group's money – approximately 2 million euros in turnover from the beginning of 2018 to the end of May 2019. The balance of power is therefore also shifting under digital conditions towards the new competences required for such an operation.

Changed Relationships on the Part of Consumers (Micro Level)

To enter the digital deal, consumers could select goods on Chemical Revolution, buy them in the shopping cart via mouse-click, pay digitally, and receive the goods anonymized by mail. Physical contact with the criminal milieu was not required. The Chemical Revolution case demonstrates that new opportunities (cf. also Tzanetakis 2019, 482-3) for power arise for consumers under digital conditions:

- 1) They can bypass the street deal and thus minimize their risk of being observed committing a crime: Consumers can now abandon interdependencies with “personal [trusted] dealers.”
- 2) Their freed valencies for risk mitigation become interwoven in digital infrastructures and platforms where they can learn about new procedures and risks.
- 3) Another power chance arises from the many virtual ways in which consumers can resonate. They can express and share their satisfaction online and rate goods and the retailer. Thus, further power differentials fall to consumers, as marketing on the Chemical Revolution platform and its ranking as a top retailer depend on their feedback.

Consumers also give up power differentials in the digital deal, as it is essential to own cryptocurrency. Here, the balance of power shifts from cash to digital currency (infrastructures). In connection with this, interdependencies arise between the customers and the platform, and between the platform and the perpetrator figuration.

According to Werse and Kamphausen, another change that goes hand in hand with digitality is that, instead of risking violence (by competing groups of offenders or dealers) when buying on the Internet, there is a risk of becoming a victim of fraud, insult, or threat when buying illegal wares online. The specific need to minimize such risk when doing business on the Darknet has given rise to the marketplace (platform) operator for this new intermediary activity, which can suggest trust to potential customers through escrow accounts, rating systems, and open discussion forums (cf. Werse and Kamphausen 2019, 445-8; Tzanetakis et al. 2016). In this way, interdependencies of

buyers of illicit drugs and technological entities emerge as “interactivity” with personal and social systems (cf. Rammert 2002, 3).

Perpetrator Power Chances and Risks in the Digital Space (Micro Level)

As much as the perpetrator figuration can physically tear down the interdependencies in the digital deal with individuals, its business model is interdependent on the amount of positive customer reviews (cf. also Tzanetakis 2019, 484-6; cf. Spagnoletti, Ceci, and Bygsgstad 2021). In order to be able to achieve a high ranking and thus an even greater reach, many and good customer reviews are needed. Here, new interdependence chains emerge that include material agency (infrastructures and platforms). The perpetrator figuration Chemical Revolution promotes the formation of such interdependency chains via activities in multiple hybrid constellations¹⁰ (1) aggressive marketing in the Clearnet and (2) offering special purchase incentives when visiting the platform in the Darknet. On the platform, prices were staggered depending on the order quantity; in some cases, there had been discount campaigns for a limited amount of time, like in a regular online shop (cf. Bundeskriminalamt 2019b; cf. Bundeskriminalamt 2019c).

After the mastermind, “Yoko,” had virtually set up the online drug trade in September 2017, an initial interdependency with the Clearnet emerged. In order to establish the online drug platform as customary in the trade (cf. Vogt 2017, 2), it was necessary to draw attention to the website. Nine months later, therefore, a broad marketing offensive tailored to customer needs followed in Clearnet. Thus, from 15 June 2018, potential customers could find shop instructions on the freely accessible Internet page, <https://drogenkaufen.com>, where a TOR¹¹ link was published that enabled access to the Chemical Revolution platform on the Darknet. Potential customers could also read personal information about the “maker” in an interview (cf. Kamphausen and Wersé 2019, 282; Tzanetakis 2019, 483). The shop guide in the Clearnet addressed the free valencies (need for information, need for assistance, risk minimization, and trust) of possible buyers by explaining the structure and framework of the online shop with pictures and by thinking through various security aspects around the purchase.¹²

The shop instructions were followed by a written interview with the “Darknet dealer Chemical Revolution.” The storyline of the anonymous

¹⁰ “[...] the rising ‘agency’ of artefacts and the ‘distributedness’ of activities in hybrid constellations are the two main characteristics of advanced technologies” (Rammert 2002, 3).

¹¹ TOR was originally an acronym for “The Onion Routing.” Today, TOR is a network for anonymization and protects its users from the analysis of their browsing data generated by the use of the Internet. As of November 2021, more than 2 million users worldwide (150,000 users daily from Germany) are registered as using the TOR network every day (cf. <https://metrics.torproject.org/userstats-relay-country.html> [Accessed 1 June 2022]).

¹² Cf. screenshots Mahnken 2020, 141-3, with reference to <https://drogenkaufen.com/index.php/2018/06/15/chemical-revolution-shop-anleitung/> (Accessed 19 October 2019).

interviewee included many years of experience, shared values, and confidence-building through transparency on sales structures, and the origin of products. When asked about legalisation, the interviewee advocated the legalisation of all drugs, referring to a WHO study (*suggesting education*). The people involved in Chemical Revolution had started the drug trade on the street many years ago, switched to the Internet, and continued to expand the shop (*suggesting experience*). About 30% of the customers on the online platform Chemical Revolution were resellers, and about 70% were consumers (*creates transparency*). The largest single order was for cocaine worth €75,000 (*suggesting that wholesale transactions are also possible*). Asked about profits, the interviewee said he immediately exchanged 50% of bitcoin amounts into euros, keeping the other 50% as digital currency (*suggesting attention to security*): “I do everything imaginable to protect myself, and there is plan A, B and C. Ultimately, it’s always a cat-and-mouse game”¹³ (*suggesting foresight*). In the absence of face-to-face relationship to build trust, the digital deal required the proactive mitigation of potential doubts. Similar to the thematized security aspects surrounding the purchase, the interview thereby addressed a broad spectrum of free valencies of consumers and petty thieves. Here, too, the balance of power in the distributed sociotechnical configurations was shifting towards infrastructure and platform agency.

Traffickers of illicit drugs therefore require expertise in digital entrepreneurship in virtual space, instead of cognitive skills in communication (e.g., trust testing) and violent behaviour in physical interactions with consumers (cf. Werse and Kamphausen 2019, 445-9). At the same time, illicit digital trade requires competencies to safeguard oneself in virtual space, such as avoiding digital traces, strategies to protect voluminous crypto profits against hacker attacks, and maintaining anonymity when exchanging digital into physical currencies and communicating with others (crypto communication). On the one hand, power balances shift towards digital competencies, yet at the same time, participants in this system continue to need protection against identification and financial loss, and this need for security continues to be replicated under digital conditions.

Novelty in the Interdependencies of the Offender Configuration (Meso/Macro level)

Summarizing, the main insight thus far is that the “new” quality of this criminal phenomenon refers to the diversity of *digital competencies* needed to build up the trade and to safeguard against (digital) risks. This, in turn, results in new interdependencies and constellations for the offender figuration. Accordingly, the balance of power shifts equally to the newly required human

¹³ “Interview with Darknet trader ‘Chemical Revolution’”, <https://drogenkaufen.com/index.php/2019/03/09/interview-mit-darknet-haendler-chemical-revolution/> (Accessed 27 September 2020), Transcript in Mahnken 2020, 137-9.

competencies (meso level) and to material agency (macro level), which gives rise to a new figuration of interdependencies:

- 1) with the economically oriented *logistics industry* (as opposed to the state-owned logistics industry of 1955),
- 2) with *digital infrastructure offers (global)*, which are intuitively usable and suitable to suggest trust (in this case, this includes the Darknet, the TOR browser, password-protected access, cryptographic communication, cryptocurrency, currency exchange offers, crypto wallet, encryption tools),
- 3) with a *digital marketplace (global)*, and
- 4) with *websites and social media platforms (global)* that support marketing and through whose evaluations (scores, ratings, and rankings) virtual markets can rise and fall in equal measure.

Changes in Investigations – Changes in the Organisation? (Micro/Meso Level)

New dependencies and constellations among perpetrators also change the investigative approaches of the police, who have focused thus far on persons and structures (cf. Hutchings and Holt 2015). Due to the fact that project-related experts participating in Chemical Revolution temporarily cooperate transnationally, traditional police approaches, which take a long time to unfold, no longer appear effective. A unifying element seems to be economic interests, with the aim of generating maximum profits in a short period of time. The flexibility and agility of the participants (psychogenesis), as well as the fast-moving and dynamic nature of the digital infrastructures, platforms, and economic markets that adapt to users (sociogenesis), lead to the intertwining of the actors involved in a socio-technical case constellation (figuration) in which the police organisation is also an actor.

The success of such an investigation depended on a variety of factors, a flexible approach to the situation, and the search for innovative solution strategies (cf. Vogt 2017, 6). In the Chemical Revolution case, investment in a longer phase of virtual market analysis proved to be purposeful, so that Chemical Revolution could be identified as a “big player” in a data-driven manner (cf. Bundeskriminalamt 2019a). In order to remove the “big players” from the market, digital investigations focus on the virtual identification of criminal associates (behavioural traces in digital infrastructures, platforms, and digital communication) and locations that enable infrastructures (server locations, bunker dwellings, postal stations, exchange possibilities of cryptocurrency into cash). The investigatory strategy of observing activity and identifying illegal transactions is reproduced here in a way that incorporates digital possibilities. What is new is the starting point in the investigation, which is not micro-crime (people) but a macro-phenomenon (economic chances).

Historically, observation, as the central starting point for investigations, initially focused on the deal between consumers and small-time dealers. In a digital world, however, the deal does not take place on the street, but in a spatially decoupled way via mouse-click. There is no physical contact between couriers and consumers that can be observed by the police, no handover of money, no physical (witnesses), and no classic forensic traces such as fingerprints; instead, payments take place in an encrypted form via digital platforms.

The packaging of the illegal goods in apartments for shipping is also not observable. Those involved in the offender figuration and legal logistics infrastructures only come into contact with each other as customers and service providers during the shipping (opaque) of the (illegal) goods. Then the customers pick up their illegally acquired drugs at an anonymous mailbox.

A central starting point for criminal investigations of drug trafficking are observable physical interdependencies between perpetrators and consumers and between small and large drug trafficking, which are beginning to disappear under digital conditions. Along with this, the power differentials of responsibilities and organisational structures within the police forces that build on them (cf. case from 1955) are beginning to change. Previously, cognitive skills were required in the interrogation of consumers and small-time dealers, as well as in the conduct of undercover investigations in particular. The focus in the Chemical Revolution case is shifting under conditions of datafication to information gathering from virtual sources. For example, additional expertise was needed in this case for complex analyses of cryptocurrency flows (cf. Vogt 2017, 6-7). In digital investigations, therefore, clandestine operations reproduce and intensify. The balance of power within the police organisation shifts from the classical investigator to cyber specialists (open-source intelligence), criminological analysts (crime analysis), and data analysts (data science), which, according to Elias's theoretical models, also changes the chains of interdependence within the figuration. In the Chemical Revolution case, interdisciplinary tandem teams were successful (cf. Vogt 2017). Here, the balance of power within the organisation is beginning to shift toward case- and project-based collaboration, tandem teams, and increasing integration of external expertise (digital transformations). The platform-based illicit drug trafficking (new interdependencies) and the blending of retail and wholesale there create new, greater power chances for police in the area macro-crime (markets), making interdependencies with consumers (micro crime) negligible as an investigative approach. Approaches for new structures within the police organisation emerge exactly at this point (cf. Mahnken 2020, 103-9).

5. Chemical Revolution Case – Novelty, Fracture, or Continuation?

Instead of “novelties,” the analysis of the Chemical Revolution case reveals diverse continuities and reproductions (interconnections in and through digital processes) as well as optimizations based on these (imprints of and on the digitalization process[es]). Both differentiate the image of digital transformation(s) as a driver of current change processes. From a micro-macro perspective, the interconnections between these processes reveal different tempos (asynchronies, ruptures) and the associated social, legislative (criminal policy), organisational, and offender-specific tensions that are currently emerging.

5.1 Driver – Continuities

Three long-term directions of change continue under digital conditions, into which current transformation processes are intertwined: economic profit orientation, desire for legalization, and risk minimization.

From a socio-historical perspective, the figurations involved in drug trafficking (drug traffickers, investigators) were already acting at a global scale in the 19th century, striving for expansion of the trade, while consumers were found locally, especially in central locations (e.g., cities).

The interdependencies in the perpetrator figuration of 1955 around K. were closely related at the upper and middle levels (closely interwoven family and ethnic hierarchical interdependence network with short interdependence chains) and culturally intertwined (local trader) at the levels below. In the Chemical Revolution case, however, the required experts for a case constellation are temporarily coordinated by a site administrator of a sales platform. New markets and digital formats are emerging in a data-driven way. This is accompanied by new power chances in the participation in trade, as well as in the fight against drug trafficking. What at first appears to be a fracture is, on closer examination of the interconnections, at the same time social continuity, an expression of a society oriented towards maximum profit (entrepreneurship¹⁴). Digital infrastructures are accompanied by certain spatial decouplings. This enables the perpetrator figuration Chemical Revolution to seize power opportunities and implement them in a consumer-oriented way without having to take existing local structures (perpetrator figurations) into consideration.

Another long-term process of broader social change is evidenced by the desire to decriminalize drug use. The interdependencies under digital

¹⁴ Cf. with regard to cybercrime, Anderson et al. 2021.

conditions promote and reinforce this as follows: The purchase of illegal narcotics loses its otherwise illicit character on an Internet platform where customers can evaluate the goods, take advantage of limited-time-only sales promotions, and receive quantity discounts, just like in a legal online shop (cf. Tzanetakis 2019, 483). The platform's transactional structure, along with the functionalities familiar from "normal" goods trading platforms on the Clearnet, suggests to potential customers that the purchase is a "normal" process analogous to everyday online shopping. This obscures the illegal character of the purchase transaction.

In addition, the packaging, logistics, and delivery via mail to letterboxes also initially seem like a "normal virtual order." Only the accessibility via the Darknet instead of the Clearnet, the need for a crypto wallet, and the use of anonymity in metropolitan apartment buildings distinguish the purchase from legal sales platforms (cf. Tzanetakis 2019, 484). The apparent anonymity of purchase and delivery to anonymous mailboxes allows consumers to avoid street dealing, further minimizing their risk of prosecution.

The new "decriminalised" circumstances for acquiring illicit drugs may change thinking about use and the inhibitions associated with criminal liability. This suggests that consumption in society and attitudes towards the use of illicit drugs continue to change and are more widely promoted under digital conditions.

5.2 Driver – Reproduction and Improvement

In order to minimise their own risk, consumers inform themselves in advance about the reliability of the dealer and the quality of the drugs. Structurally, digital sales platforms, unlike social media platforms, do not offer direct exchange among customers. Potential buyers therefore use digital infrastructures and platforms, such as search engines, blogs, social media, educational websites, discussion forums, images, videos, and rating portals, to inform themselves and ask questions. Here, the existing behaviours around drug trafficking are reproduced under digital conditions.

The active, purposeful approach of customers is also reproduced under digital conditions. Since consumers and suppliers of illicit narcotics do not come into physical contact in a virtual deal, the perpetrator's proof of trust and the establishment of a customer base take place virtually via digital infrastructures and platforms (cf. Tzanetakis 2019; Kamphausen and Werse 2019).

Customer ratings on the platform supports marketing and in turn promotes the further development and ranking of the shop (cf. Plantin et al. 2018, 298) as well as a rating as a top vendor (cf. Tzanetakis 2019).

The worldwide "digital public space" involves the possibility of a broad-based trivialization of inherent risks and dangers, faster access to illegal drugs, and thus the accessibility of larger sales markets (power chances). The

speed-focused economic orientation of the offender figuration has a catalysing effect in this context (cf. Tzanetakis 2019).

Also, under digital conditions, observation is reproduced as the starting point for investigations (today: digital monitoring and market analysis). The analysis of digital data gives rise to power chances for the police, enabling them to directly generate greater effects on the illegal drug trafficking market (approach: top marketplaces/top vendors). These power chances have the potential to amplify the need for covert digital intervention powers and associated expertise in the digital space.

At the same time, the Chemical Revolution figuration reproduces in analogue space the roles of the actors involved since 1955. The illegal narcotics pass through several overlapping figurations acting in the background, from the moment they are ordered on the platform until the customer receives the goods. These figurations can simultaneously act independently of each other, unbound by location and in different places.

5.3 Driver – Temporal Tensions

The shop instructions for Chemical Revolution, published on the Clearnet, make it possible for almost any Internet user to anonymously and virtually explore drugs and their prices. This open communication about the drug trade, which is punishable by law, represents a break with the formerly clandestine activity of perpetrator figurations in 1955. The broad range of products on offer in the digital context exerts a decriminalising effect on the drug deal for consumers, even though criminal policy and legislation still impose punishments for such transactions. Thus, the new circumstances of acquisition hold the potential to catalyse consumption in society and to accelerate the transformation of societal attitudes towards the use of illicit drugs. Since the legitimacy for the exercise of state power derives from the limits set by society (cf. Boehme-Neßler 2009, 156), such developments could, in the long run, herald a shift in social attitudes towards policies (cf. Werse and Kamphausen 2019, 449) that decriminalise consumption.

Since the new possibilities of dealing in illicit drugs in virtual space require different capabilities than traditional drug dealing, the power differentials on the perpetrator side are undergoing a realignment (cf. Mahnken 2020, 78). Local groups coexist; they cannot directly physically influence top virtual dealers, and they cannot physically defend their regional market share. The site administrator, as an anonymous virtual person orchestrating trade, is spatially independent, intangible.

Furthermore, the constellation of the Chemical Revolution case dispenses with the competence of physical violence. This leads us to the observation that power differentials of traditionally developed perpetrator figurations may disappear under a digital regime. At the same time, new power chances

arise for these evolved structures through the integration of newly required digital competencies into their perpetrator figuration and in the participation in logistics infrastructures used for drug trafficking.

According to Elias, we can also anticipate that delays in the acquisition of individual competencies can lead to an insistence on the preservation of old structures (cf. Elias 1987, 281, 285), and thus to a short-term thrust toward de-civilisation.¹⁵ In such a case, power chances could arise in the form of violent influence on the centrally demanded, physically tangible expertise of the temporary case constellation, with the aim of restoring power balances in favour of traditional perpetrator figurations (cf. Elias 1987, 284).

The Chemical Revolution case demonstrates that in digital societies, it is possible to cooperate transnationally in short and unstable interdependencies. This interdependence no longer arises from what sets people apart, but rather from what brings them together (cf. Boehme-Neßler 2009, 161). This new form of cooperation – working together on a temporary and project-related basis on the basis of the same goals – emerges in a manner unique to digitalization. It represents a break from the closely interwoven family and cultural structures that have grown over generations. Taken together with the interdependence chains that break off to the customers, changes occur in the social structure around the trade, as well as the orientation and investigative approaches of the police. In order to continue to be successful, structural adjustments are required in the figuration of criminal investigators to the new forms of their tasks, which, like the perpetrators, are moving away from competencies and jurisdictions and towards case- and project-related cooperation (cf. Mahnken 2020, 79-80).

6. Conclusion

The analysis of the Chemical Revolution case illustrates how digital processes shape drug use needs that already exist in society. It also shows how social continuities (economic orientation and risk minimization) that accompany these new possibilities simultaneously shape new virtual markets. In addition, the digital infrastructures and platforms required for illicit virtual trafficking are gradually having an effect on the balance of power between dealers, traffickers, markets, and thus also on the approaches and the chances of success among investigative authorities. The Chemical Revolution case illustrates infrastructures, websites, and platforms like new forms of

¹⁵ “In the study of social development processes, one always encounters anew a constellation where the dynamics of unplanned social processes advance beyond a certain stage in the direction of another, whether a next higher or lower stage, while the people affected by this change persist in their personality structure, in their social habitus, at an earlier stage” (Elias 2001, 281).

organisations,¹⁶ as they regulate and curate “social conditions and social behaviour” (Dolata 2019, 195).

The division into different levels of reconstruction (cf. Baur and Ernst 2011, 134) was helpful for understanding the complex dimensions of the analysis, including the supplemental meso level of the police organisation. Methodologically, however, these levels proved to be too rigid. Due to the strong focus on figurations and figurative action, the perspectives were repeatedly changed from one to the other in the context of figuration when tracing interdependencies.

These concepts from figuration and process sociology – figuration, interdependence, and valency – are also applicable to the study of socio-technical interdependencies (hybrids). This analysis shows that virtuality does not stand in the way of the interrelatedness of people. The case study illustrated that individuals interlace, based on their needs, within digital conditions, creating *valency chains* to other (imagined) human entities via technology as social systems. Here, existing structures can continue under digital conditions.

Elias used the concept of a balance of power to describe power as *the* link between people. This analysis establishes that due to the interrelatedness of people, it is also possible for people to assign power differentials within socio-technical constellations with material agency (e.g., digital infrastructures and platforms) and to enter into a fluctuating balance of tension with them. Thus, this indicates that his concept of power relations is not limited to interpersonal interactions, as Elias originally conceived of it. Under digital conditions, Elias’s methods of inquiry could be extended to include science and technology studies approaches.

Methodologically, moreover, figuration and process sociological tools have the potential to reshape thinking about criminal phenomena via language, as they provide acceptable narratives in addition to profound diagnoses (cf. Bidlo and Mahnken 2021).

In the Chemical Revolution case, “best practice solutions” were developed from practice in adaptation to “new” perpetrator procedures. The reconstructive analysis illustrates that “novelty” cannot be presupposed under digital conditions and can only be differentiated in a process-oriented manner by including the socio-historical perspective. Focusing on different temporalities enables us to gain a differentiated understanding of current processes of change in the drug trade and the tensions associated with them. The emergence of these multi-layered interconnections is suitable for changing our view of existing narratives on perpetrator structures and investigative approaches, which then provides a foundation for developing new organisational structures and procedures. In addition, the need for scientific and

¹⁶ “These new forms of organising the coordination of markets and the curation of resources and labour can be described as further developments and perfections of neoliberal market and de-regulated forms of employment with new technical means” (Dolata 2019, 186-7).

technological research that explores the interaction of digitalization and criminology, for example in the field of cybercrime, down to the infrastructural detail, is becoming more concrete – thereby profitably applying the sociology of Norbert Elias:

The working tools of Elias's sociology contribute to a better understanding of social contexts and, in particular, the integration of historical, individual and social aspects. We do not then know whether something is good or bad - but we do know how it came to be, and we look with greater serenity and forbearance upon ourselves. (Treibel 2008, 101)

Only with the extension of Elias's analytical tools to include Rammert's concept of distributed action does it become visible that, in addition to chains of interdependence, chains of valence are also formed through diverse hybrid constellations. The fact that power balances in all analytical dimensions (consumers, perpetrator configuration, investigations, society) also shift towards material agency within the hybrid constellations would not have become visible without this expansion, which supports the necessity of including science and technology studies.

References

- Alaimo, Cristina, Jannis Kallinikos, and Erika Valderrama. 2020. Platforms as Service Ecosystems: Lessons from Social Media. *Journal of Information Technology* 35 (1): 25-48. doi: [10.1177/0268396219881462](https://doi.org/10.1177/0268396219881462).
- Aldridge, Judith, and David Décary-Héту. 2014. Not an "Ebay for Drugs": The Cryptomarket "Silk Road" as a Paradigm Shifting Criminal Innovation. *SSRN Electronic Journal*. doi: [10.2139/ssrn.2436643](https://doi.org/10.2139/ssrn.2436643).
- Ametowobla, Dzifa. 2020. Die Plattformarchitektur als Strukturmuster. Ein Plattformbegriff für die soziologische Debatte. Unpublished. doi: [10.13140/RG.2.2.26794.24002](https://doi.org/10.13140/RG.2.2.26794.24002).
- Anderson, Rose, Rainer Böhme, Richard Clayton, and Ben Collier. 2021. Silicon Den: Cybercrime Is Entrepreneurship. Workshop on the Economics of Information Security (WEIS). https://www.researchgate.net/publication/353072240_Silicon_Den_Cybercrime_is_Entrepreneurship/citations (Accessed 1 June 2022).
- Barthel, Christian. 2019a. Einleitung Interorganisationale Kooperation und Netzwerkgestaltung – eine Aufgabe polizeilicher Führungskräfte in und zwischen Organisationen. In *Polizeiliche Gefahrenabwehr und Sicherheitsproduktion durch Netzwerkgestaltung*, ed. Christian Barthel, 3-43. Wiesbaden: Springer Fachmedien Wiesbaden. doi: [10.1007/978-3-658-23574-1_1](https://doi.org/10.1007/978-3-658-23574-1_1).
- Barthel, Christian. 2019b. Proaktive Polizeiarbeit braucht Netzwerk- und Organisationsentwicklung- und Führungskräfte, die diese Prozesse initiieren. In *Polizeiliche Gefahrenabwehr und Sicherheitsproduktion durch Netzwerkgestaltung*, ed. Christian Barthel, 255-87. Wiesbaden: Springer Fachmedien Wiesbaden. doi: [10.1007/978-3-658-23574-1_11](https://doi.org/10.1007/978-3-658-23574-1_11).

- Bartonitz, Martin, Veronika Lévesque, Thomas Michl, Wolf Steinbrecher, Cornelia Vonhof, and Ludger Wagner, eds. 2018. *Agile Verwaltung: Wie der Öffentliche Dienst aus der Gegenwart die Zukunft entwickeln kann*. Berlin, Heidelberg: Springer Berlin Heidelberg. doi: 10.1007/978-3-662-57699-1.
- Baur, Nina, and Stefanie Ernst. 2011. Towards a Process-Oriented Methodology: Modern Social Science Research Methods and Norbert Elias's Figurational Sociology. *The Sociological Review* 59 (1_suppl): 117-39. doi: 10.1111/j.1467-954X.2011.01981.x.
- Baur, Nina, Stefanie Ernst, Jannis Hergesell, and Maria Norkus. 2020. Elias, Norbert. In *SAGE Research Methods Foundations*. 1 Oliver's Yard, 55 City Road, London EC1Y 1SP United Kingdom: SAGE Publications Ltd. doi: 10.4135/9781526421036809362.
- Berthel, Ralph. 2019. Sicherheit in Einer Offenen Und Digitalen Gesellschaft. Lage-Herausforderungen - Mit Einem Bericht Zur 64. Herbsttagung Des Bundeskriminalamtes, Die Kriminalpolizei, <https://www.kriminalpolizei.de/ausgaben/2019/maerz/detailansicht-maerz/artikel/sicherheit-in-einer-offenen-und-digitalen-gesellschaft.html> (Accessed 28 September 2022).
- Bidlo, Oliver, and Julia Katherina Mahnken. 2021. Digitale und gesellschaftliche Transformation. Polizeiwissenschaft mit Norbert Elias. In *Polizeiwissenschaft-Fiktion, Option oder Notwendigkeit?*, 105-29. Schriftenreihe Polizei & Wissenschaft. Frankfurt: Verlag für Polizeiwissenschaft, Prof. Dr. Clemens Lorei.
- Boehme-Neßler, Volker. 2009. Das Ende des Staates? Zu den Auswirkungen der Digitalisierung auf den Staat. *Zeitschrift für öffentliches Recht* 64 (2): 145-99. doi: 10.1007/s00708-009-0024-8.
- Boehme-Neßler, Volker. 2017. Die Macht der Algorithmen und die Ohnmacht des Rechts. Wie die Digitalisierung das Recht relativiert., *Neue Juristische Wochenzeitschrift*, Nr. 42: 3031-37.
- Brayne, Sarah. 2021. Überwachung durch Big Data – Das Beispiel der Polizei. *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie* 73 (S1): 359-95. doi: 10.1007/s11577-021-00751-1.
- Brunhöber, Beatrice. 2018. Funktionswandel des Strafrechts in der Sicherheitsgesellschaft. In *Der Staat und die Sicherheitsgesellschaft*, ed. Jens Puschke and Tobias Singelstein, 193-215. Wiesbaden: Springer Fachmedien Wiesbaden. doi: 10.1007/978-3-658-19301-0_9.
- Bucher, Bernd. 2017. Moving beyond the Substantialist Foundations of the Agency-Structure Dichotomy: Figurational Thinking in International Relations. *Journal of International Relations and Development* 20 (2): 408-33. doi: 10.1057/jird.2015.12.
- Büchner, Stefanie, Jannis Hergesell, and Jannis Kallinikos. 2022. Digital Transformation(s): On the Entanglement of Long-Term Processes and Digital Social Change. *Historical Social Research* 47 (3): 7-39. doi: 10.12759/hsr.47.2022.25.
- Büchner, Stefanie. 2018. Zum Verhältnis von Digitalisierung Und Organisation: On the Relationship of Digitization and Organization. *Zeitschrift Für Soziologie* 47 (5): 332-48. doi: 10.1515/zfsoz-2018-0121.
- Bundeskriminalamt. 1956. *Rauschgift. Arbeitstagung im Bundeskriminalamt Wiesbaden vom 21. November bis 26. November 1955 über die Bekämpfung von Rauschgiftdelikten*. Tagungsband BKA Herbsttagung. Wiesbaden.

- Bundeskriminalamt. 2019a. 28.06.2019 - PK GenSTA FFM & BKA - Zerschlagung Online Drogen-Shop 'Chemical Revolution'. Nachrichten & Politik. Ihr Programm-YouTube. <https://www.youtube.com/watch?v=bB5L-7EazZ0> (Accessed 19 October 2019).
- Bundeskriminalamt. 2019b. Mitteilung Über Dpa: Elf Festnahmen. Polizei Schaltet Größten Deutschen Drogen-Onlineshop Aus. *Zeit Online*, June 28. <https://www.zeit.de/news/2019-06/28/polizei-schaltet-groessten-deutschen-drogen-onlineshop-aus-190628-99-836083> (Accessed 19 October 2019).
- Bundeskriminalamt. 2019c. Chemical Revolution – Fotostrecke 'Die Website'. https://www.bka.de/SharedDocs/Pressemitteilungen/DE/Presse_2019/pm190628_ChemicalRevolutionFotostreckeShop.html (Accessed 19 October 2019).
- Demant, Jakob, Silje Anderdal Bakken, Atte Oksanen, and Helgi Gunnlaugsson. 2019. Drug Dealing on Facebook, Snapchat and Instagram: A Qualitative Analysis of Novel Drug Markets in the Nordic Countries. *Drug and Alcohol Review* 38 (4): 377-85. doi: 10.1111/dar.12932.
- Dolata, Ulrich. 2019. Plattform-Regulierung. Koordination von Märkten und Kuratierung von Sozialität im Internet. *Berliner Journal für Soziologie* 29 (3-4): 179-206. doi:10.1007/s11609-020-00403-9.
- Doppler, Klaus. 2018. Digitale Transformation. Wie Gelingen Veränderungsprozesse. Kurzfassung. In: Sicherheit in Einer Offenen Und Digitalen Gesellschaft. In Wiesbaden. <https://www.bka.de/SharedDocs/Downloads/DE/Publikationen/Herbsttagungen/2018/herbsttagung2018DopplerKurzfassung.html> (Accessed 1 February 2020).
- Drogenkaufen.com. 2018. CHEMICAL REVOLUTION - Shop-Anleitung, June 15, 2018, Admin. *Drogenkaufen.com*. June 5. <https://drogenkaufen.com/index.php/2019/03/09/interview-mit-darknet-haendler-chemical-revolution> (Accessed 15 June 2018).
- Drogenkaufen.com. 2019. Interview Mit DarkNet Händler 'Chemical Revolution'. March 9, 2019, Admin. *Drogenkaufen.Com*. (Accessed 19 October 2019). <https://drogenkaufen.com/index.php/2019/03/09/interview-mit-darknet-haendler-chemical-revolution> (Accessed 19 October 2019).
- Duttweiler, Stefanie. 2016. Körperbilder und Zahlenkörper: Zur Verschränkung von Medien- und Selbsttechnologien in Fitness-Apps. In *Digitale Gesellschaft*, ed. Stefanie Duttweiler, Robert Gugutzer, Jan-Hendrik Passoth, and Jörg Strübing, 1st ed., 10:221-52. Bielefeld, Germany: transcript Verlag. doi: 10.14361/9783839431368-011.
- Egbert, Simon. 2020. Datafizierte Polizeiarbeit – (Wissens-)Praktische Implikationen und rechtliche Herausforderungen. In *Polizeiarbeit zwischen Praxishandeln und Rechtsordnung*, ed. Daniela Hunold and Andreas Ruch, 77-100. Edition Forschung und Entwicklung in der Strafrechtspflege. Wiesbaden: Springer Fachmedien Wiesbaden. doi: 10.1007/978-3-658-30727-1_4.
- Egbert, Simon, and Matthias Leese. 2021. *Criminal Futures: Predictive Policing and Everyday Police Work*. Routledge Studies in Policing and Society. London New York: Routledge, Taylor & Francis Group.
- Eichener, Volker, and Ralf Baumgart, eds. 2013. *Norbert Elias zur Einführung*. 3., vollst. überarb. Aufl. [Zur Einführung, 150]. Hamburg: Junius-Verl.
- Elias, Norbert. 1977. Zur Grundlegung Einer Theorie Sozialer Prozesse. *Zeitschrift Für Soziologie* 6 (2): 127-49.
- Elias, Norbert. 1995. Technization and Civilization. *Theory, Culture & Society* 12 (3): 7-42. doi: 10.1177/026327695012003002.

- Elias, Norbert. 2001. III Wandlungen der Wir-Ich-Balancen. In *Elias. Die Gesellschaft der Individuen*, ed. Michael Schröter. Gesammelte Schriften / Norbert Elias, Band 10. Frankfurt am Main: Suhrkamp.
- Elias, Norbert. 2006. *Was Ist Soziologie?* Erste Auflage. Gesammelte Schriften / Norbert Elias, Band 5. Frankfurt am Main: Suhrkamp.
- Elias, Norbert. 2017. *Über den Prozeß der Zivilisation. Erster Band. Wandlungen des Verhaltens in den weltlichen Oberschichten*. Suhrkamp-Taschenbuch Wissenschaft 159. Frankfurt am Main: Suhrkamp.
- Evers, Janina. 2018. Figuration und Organisation. In *Vertrauen und Wandel sozialer Dienstleistungsorganisationen*, ed. Janina Evers, 9-35. Wiesbaden: Springer Fachmedien Wiesbaden. doi: [10.1007/978-3-658-19618-9_1](https://doi.org/10.1007/978-3-658-19618-9_1).
- Filipović, Alexander. 2015. Die Datafizierung Der Welt. Eine Ethische Vermessung Des Digitalen Wandels. *Communicatio Socialis* 48 (1): 6-15. doi: [10.5771/0010-3497-2015-1-6](https://doi.org/10.5771/0010-3497-2015-1-6).
- Frerichs, Melanie. 2014. Norbert Elias' Figurations- und Prozesssoziologie. In *Innovationsprozesse und organisationaler Wandel in der Automobilindustrie*, ed. Melanie Frerichs, 23-50. Wiesbaden: Springer Fachmedien Wiesbaden. doi: [10.1007/978-3-658-05146-4_2](https://doi.org/10.1007/978-3-658-05146-4_2).
- Gillespie, Tarleton. 2010. The Politics of 'Platforms'. *New Media & Society* 12 (3): 347-64. doi: [10.1177/1461444809342738](https://doi.org/10.1177/1461444809342738).
- Grenz, Thilo. 2020. Digitalisierung. In *Forschungs- Und Anwendungsfelder Der Soziologie*. Wien.
- Häußling, Roger, Michael Eggert, Daniel Kerpen, Jacqueline Lemm, Niklas Strüver, and Nenja Katharina Ziesen. 2017. *Schlaglichter der Digitalisierung: Virtuale(r) Körper – Arbeit – Alltag: Ein Vorstoß zum Kern der Digitalisierung aus einer techniksoziologisch-relationalen Perspektive*. 35 pp. (2017). RWTH Aachen University. doi: [10.18154/RWTH-2017-06217](https://doi.org/10.18154/RWTH-2017-06217).
- Heinrich, Stephan. 2009. Technik und Systeme der Inneren Sicherheit. In *Auf der Suche nach neuer Sicherheit*, ed. Hans-Jürgen Lange, H. Peter Ohly, and Jo Reichertz, 203-19. Wiesbaden: VS Verlag für Sozialwissenschaften. doi: [10.1007/978-3-531-91837-2_12](https://doi.org/10.1007/978-3-531-91837-2_12).
- Hoffmann-Riem, Wolfgang. 2021. Innovationen im Recht. In *Handbuch Innovationsforschung*, ed. Birgit Blättel-Mink, Ingo Schulz-Schaeffer, and Arnold Windeler, 597-613. Wiesbaden: Springer Fachmedien Wiesbaden. doi: [10.1007/978-3-658-17668-6_45](https://doi.org/10.1007/978-3-658-17668-6_45).
- Houben, Daniel, Bianca Prietl, and Deutsche Gesellschaft für Soziologie, eds. 2018. *Datengesellschaft: Einsichten in Die Datafizierung Des Sozialen*. Digitale Gesellschaft, Band 17. Bielefeld: Transcript.
- Hutchings, Alice, and Thomas J. Holt. 2015. A Crime Script Analysis of the Online Stolen Data Market: Table 1. *British Journal of Criminology* 55 (3): 596-614. doi: [10.1093/bjc/azu106](https://doi.org/10.1093/bjc/azu106).
- Jäger, Jens. 2006. *Verfolgung Durch Verwaltung: Internationales Verbrechen Und Internationale Polizeikooperation 1880-1933*. Konstanz: UVK, Universitätsverlag Konstanz.
- Kasper, Karsten, and Gergana Bulanova-Hristova. 2017. Literature Review Report Criminal Structures on Illegal Online Platforms. OA 8.1 Cybercrime and organised crime / Organised cybercrime. EMPACT – OAP Cyber-Attacks. <https://www.bka.de/SharedDocs/Downloads/EN/Publications/Other/FinalReportEMPACT.html> (Accessed 1 June 2022).

- Kamphausen, Gerrit, and Bernd Werse. 2019. Digital figurations in the online trade of illicit drugs: A qualitative content analysis of darknet forums. *International Journal of Drug Policy* 73: 281-87. doi: [10.1016/j.drugpo.2019.04.011](https://doi.org/10.1016/j.drugpo.2019.04.011).
- Kergel, David. 2018. Postmoderner Cyberspace. In *Kulturen des Digitalen*, ed. David Kergel, 43-125. Wiesbaden: Springer Fachmedien Wiesbaden. doi: [10.1007/978-3-658-20327-6_2](https://doi.org/10.1007/978-3-658-20327-6_2).
- Korte, Hermann. 1997. *Über Norbert Elias*. Wiesbaden: VS Verlag für Sozialwissenschaften. doi: [10.1007/978-3-322-83407-2](https://doi.org/10.1007/978-3-322-83407-2).
- Kruithof, Kristy, Judith Aldridge, David Décary Héту, Megan Sim, Elma Dujso, and Stijn Hoorens. 2016. *Internet-Facilitated Drugs Trade: An Analysis of the Size, Scope and the Role of the Netherlands*. RAND Corporation. doi: [10.7249/RR1607](https://doi.org/10.7249/RR1607).
- Kuhlmann, Stefan. 2000. Evolution von Staatlichkeit – mit einem Exkurs zu N. Elias' „Soziogenese des Staates“. *Politische Vierteljahresschrift* 41 (4): 623-46. doi: [10.1007/s11615-000-0109-z](https://doi.org/10.1007/s11615-000-0109-z).
- Langlais, S. 1956. Internationale Rauschgiftschmuggler (Aktuelle Fälle). In *Rauschgift. Arbeitstagung im Bundeskriminalamt Wiesbaden vom 21. November bis 26. November 1955 über die Bekämpfung von Rauschgiftdelikten*. Tagungsband BKA Herbsttagung. Wiesbaden.
- Lévesque, Veronika, and Cornelia Vonhof. 2018. Komplexität, VUKA und andere Schlagworte – was verbirgt sich dahinter? In *Agile Verwaltung*, ed. Martin Bartonitz, Veronika Lévesque, Thomas Michl, Wolf Steinbrecher, Cornelia Vonhof, and Ludger Wagner, 15-22. Berlin, Heidelberg: Springer Berlin Heidelberg. doi: [10.1007/978-3-662-57699-1_2](https://doi.org/10.1007/978-3-662-57699-1_2).
- Lorenz, Michael. 2018. Die digitale Führungsreise beginnt. In *Digitale Führungskompetenz*, ed. Michael Lorenz, 1-38. Wiesbaden: Springer Fachmedien Wiesbaden. doi: [10.1007/978-3-658-22673-2_1](https://doi.org/10.1007/978-3-658-22673-2_1).
- Lupton, Deborah. 2015. *Digital Sociology*. Abingdon, Oxon: Routledge, Taylor & Francis Group.
- Mahnken, Julia Katherina. 2020. *Auswirkungen der digitalen Transformation für die Aufgaben und Ausrichtung der Kriminalpolizei: wie die Technikbetreffenheit die Kriminalpolizei verändert: figurations- und prozesssoziologische Analyse in den Polizeiwissenschaften*. Schriftenreihe Polizei & Wissenschaft. Frankfurt am Main: Verlag für Polizeiwissenschaft Prof. Dr. Clemens Lorei.
- Marres, Noortje. 2017. *Digital Sociology: The Reinvention of Social Research*. Malden, MA: Polity.
- Marres, Noortje, and Carolin Gerlitz. 2016. Interface Methods: Renegotiating Relations between Digital Social Research, STS and Sociology. *The Sociological Review* 64 (1): 21-46. doi: [10.1111/1467-954X.12314](https://doi.org/10.1111/1467-954X.12314).
- Ostermeier, Lars. 2018. Der Staat in der prognostischen Sicherheitsgesellschaft. In *Der Staat und die Sicherheitsgesellschaft*, ed. Jens Puschke and Tobias Singelstein, 101-21. Wiesbaden: Springer Fachmedien Wiesbaden. doi: [10.1007/978-3-658-19301-0_5](https://doi.org/10.1007/978-3-658-19301-0_5).
- Plantin, Jean-Christophe, Carl Lagoze, Paul N. Edwards, and Christian Sandvig. 2018. Infrastructure Studies Meet Platform Studies in the Age of Google and Facebook. *New Media & Society* 20 (1): 293-310. doi: [10.1177/1461444816661553](https://doi.org/10.1177/1461444816661553).
- Powell, Anastasia, Gregory Stratton, and Robin Cameron. 2018. *Digital Criminology: Crime and Justice in Digital Society*. New York; London: Routledge, Taylor & Francis Group.

- Prietzl, Bianca, and Daniel Houben. 2018. Einführung. Soziologische Perspektiven auf die Datafizierung der Gesellschaft. In *Digitale Gesellschaft*, ed. Daniel Houben and Bianca Prietzl, 17:7-32. Bielefeld, Germany: transcript Verlag. doi: [10.14361/9783839439579-001](https://doi.org/10.14361/9783839439579-001).
- Puschke, Jens, and Tobias Singelnstein, eds. 2018. *Der Staat und die Sicherheitsgesellschaft*. Wiesbaden: Springer Fachmedien Wiesbaden. doi: [10.1007/978-3-658-19301-0](https://doi.org/10.1007/978-3-658-19301-0).
- Rammert, Werner. 2002. *Technik als verteilte Aktion: wie technisches Wirken als Agentur in hybriden Aktionszusammenhängen gedeutet werden kann*. <https://nbn-resolving.org/urn:nbn:de:0168-ssoar-11057> (Accessed 1 June 2022).
- Rammert, Werner. 2008. *Technik und Innovation*. (TUTS - Working Papers, 1-2008). Berlin; Technische Uni Berlin, Fak. VI Planen, Bauen, Umwelt, Institut für Soziologie Fachgebiet Techniksoziologie. <https://nbn-resolving.org/urn:nbn:de:0168-ssoar-12355>.
- Rammert, Werner. 2012. Distributed Agency and Advanced Technology Or: How to Analyze Constellations of Collective Inter-Agency. In *Agency without Actors?* ed. Jan-Hendrik Passoth, Birgit Peuker, and Michael Schillmeier, 1st ed., 89-112, Oxon: Routledge. doi: [10.4324/9780203834695](https://doi.org/10.4324/9780203834695).
- Rammert, Werner, and Ingo Schulz-Schaeffer. 2002. Technik Und Handeln: Wenn Soziales Handeln Sich Auf Menschliches Verhalten Und Technische Artefakte Verteilt. In *Können Maschinen handeln? Soziologische Beiträge Zum Verhältnis von Mensch und Technik*, 11-64, Frankfurt/Main; New York: Campus.
- Reichertz, Jo, and Sylvia Marlene Wilz. 2019. Informations- und Kommunikationsmedien als neue Mittel für die polizeiliche Ermittlungsarbeit? In *Torn between two targets: Polizeiforschung zwischen Theorie und Praxis: zum Gedenken an Thomas Ohlemacher*, ed. Astrid Klukkert, Thomas Feltes, Jo Reichertz, and Thomas Ohlemacher. Polizieren. Polizei, Wissenschaft und Gesellschaft, Band 10, 385-410, Frankfurt am Main: Verlag für Polizeiwissenschaft.
- Ritter, Tobias, Stephanie Porschen-Hueck, and Judith Neumer. 2020. Digitalisierung in der Verwaltung am Beispiel der Polizei. In *Managementmoden in der Verwaltung*, ed. Christian Barthel, 247-66. Wiesbaden: Springer Fachmedien Wiesbaden. doi: [10.1007/978-3-658-26530-4_11](https://doi.org/10.1007/978-3-658-26530-4_11).
- Rüdiger, Thomas-Gabriel, and Petra Saskia Bayerl, eds. 2018. *Digitale Polizeiarbeit*. Wiesbaden: Springer Fachmedien Wiesbaden. doi: [10.1007/978-3-658-19756-8](https://doi.org/10.1007/978-3-658-19756-8).
- Schlegel, Arndt. 2019. *Normative Grenzen für internetbasierte Ermittlungsmethoden: Zugleich ein Beitrag zur Technikoffenheit strafprozessualer Ermächtigungsgrundlagen*. Wiesbaden: Springer Fachmedien Wiesbaden. doi: [10.1007/978-3-658-25184-0](https://doi.org/10.1007/978-3-658-25184-0).
- Schulz-Schaeffer, Ingo, and Werner Rammert. 2019. Technik, Handeln und Praxis. Das Konzept gradualisierten Handelns revisited. In *Berliner Schlüssel zur Techniksoziologie*, ed. Cornelius Schubert and Ingo Schulz-Schaeffer, 41-76. Wiesbaden: Springer Fachmedien Wiesbaden. doi: [10.1007/978-3-658-22257-4_3](https://doi.org/10.1007/978-3-658-22257-4_3).
- Singelnstein, Tobias. 2018. Digitalisierung, Big Data und das Strafverfahren. In *Systematik in Strafrechtswissenschaft und Gesetzgebung. Festschrift für Klaus Rogall zum 70. Geburtstag am 10. August 2018*, 725-38. Berlin.
- Singelnstein, Tobias, and Peer Stolle. 2012. Wandel der gesellschaftlichen Bedingungen sozialer Kontrolle. In *Die Sicherheitsgesellschaft*, ed. Tobias

- Singelstein and Peer Stolle, 25-60. Wiesbaden: VS Verlag für Sozialwissenschaften. doi: [10.1007/978-3-531-93262-0_3](https://doi.org/10.1007/978-3-531-93262-0_3).
- Spagnoletti, Paolo, Federica Ceci, and Bendik Bygstad. 2021. Online Black Markets: An Investigation of a Digital Infrastructure in the Dark. *Information Systems Frontiers*, September. doi: [10.1007/s10796-021-10187-9](https://doi.org/10.1007/s10796-021-10187-9).
- Stegmaier, Peter, and Thomas Feltes. 2008. Die Ganze Vernetzung Der Inneren Sicherheit: Wissenskrise Und Effektivitätsmythos. In *Jahrbuch Öffentliche Sicherheit 2008/2009*, 305-16. Frankfurt am Main: Verlag für Polizeiwissenschaft.
- Treibel, Annette. 2008. Aktualität und Weiterentwicklung der Soziologie von Norbert Elias. In *Die Soziologie von Norbert Elias*, 95-101. Wiesbaden: VS Verlag für Sozialwissenschaften. doi: [10.1007/978-3-531-91171-7_7](https://doi.org/10.1007/978-3-531-91171-7_7).
- Treibel, Annette. 2009. Figurations- und Prozesstheorie. In *Handbuch Soziologische Theorien*, ed. Georg Kneer and Markus Schroer, 133-60. Wiesbaden: VS Verlag für Sozialwissenschaften. doi: [10.1007/978-3-531-91600-2_7](https://doi.org/10.1007/978-3-531-91600-2_7).
- Tzanetakis, Meropi. 2019. Erratum zu: Digitalisierung von illegalen Märkten. In *Handbuch Drogen in sozial- und kulturwissenschaftlicher Perspektive*, ed. Robert Feustel, Henning Schmidt-Semisch, and Ulrich Bröckling, E1-E1. Wiesbaden: Springer Fachmedien Wiesbaden. doi: [10.1007/978-3-658-22138-6_47](https://doi.org/10.1007/978-3-658-22138-6_47).
- Tzanetakis, Meropi, Gerrit Kamphausen, Bernd Werse, and Roger von Laufenberg. 2016. The Transparency Paradox. Building Trust, Resolving Disputes and Optimising Logistics on Conventional and Online Drugs Markets. *International Journal of Drug Policy* 35 (September): 58-68. doi: [10.1016/j.drugpo.2015.12.010](https://doi.org/10.1016/j.drugpo.2015.12.010).
- Van Hout, Marie Claire, and Tim Bingham. 2013. Responsible Vendors, Intelligent Consumers: Silk Road, the Online Revolution in Drug Trading. *International Journal of Drug Policy* 25 (2): 183-89. doi: [10.1016/j.drugpo.2013.10.009](https://doi.org/10.1016/j.drugpo.2013.10.009).
- Vogt, Sabine. 2017. Das Darknet - Rauschgift, Waffen, Falschgeld, Ausweise - Das Digitale 'Kaufhaus' Der Kriminellen? *Die Kriminalpolizei*, no. 2: 4-7.
- Wagner, Patrick. 2006. Patrick Wagner über Jäger, Jens: Verfolgung durch Verwaltung. Internationales Verbrechen und internationale Polizeikooperation 1880-1933, August. <http://hsozkult.geschichte.hu-berlin.de/rezensionen/2006-3-136.pdf> (Accessed 1 June 2022).
- Werse, Bernd, and Gerrit Kamphausen. 2019. Kleinhandel, Kleinhandel und Social Supply auf dem Schwarzmarkt für illegale Drogen: Aktuelle Forschungsergebnisse und ihre kriminalsoziologischen und drogenpolitischen Implikationen. In *Handbuch Drogen in sozial- und kulturwissenschaftlicher Perspektive*, ed. Robert Feustel, Henning Schmidt-Semisch, and Ulrich Bröckling, 433-53. Wiesbaden: Springer Fachmedien Wiesbaden. doi: [10.1007/978-3-658-22138-6_31](https://doi.org/10.1007/978-3-658-22138-6_31).
- Willems, Herbert. 2012. Schlussbemerkungen im Rück- und Ausblick. In *Synthetische Soziologie*, by Herbert Willems, 525-40. Wiesbaden: VS Verlag für Sozialwissenschaften. doi: [10.1007/978-3-531-93170-8_16](https://doi.org/10.1007/978-3-531-93170-8_16).
- Zurawski, Nils. 2015. Technische Innovationen Und Deren Gesellschaftliche Auswirkungen Im Kontext von Überwachung. Freie Universität Berlin, 132 S. doi: [10.17169/REFUBIUM-22817](https://doi.org/10.17169/REFUBIUM-22817).

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