The Digital Leviathan: Prediction, Politics and Police Power in POL-INTEL

PhD Thesis

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Summary

In this digital era, police forces across the globe are turning to cutting-edge data analytics for the purpose of enacting more efficient police power through predicting and pre-empting crime. In Denmark, allegedly one of the most digitalized countries in the world, the police have turned to the American firm Palantir Technologies to produce a platform named POL-INTEL to integrate, analyze and visualize mass amounts of data from different data bases. For the Danish national police, this platform was heralded as a "super weapon" with predictive policing capacities that would represent a "quantum leap" into the future of law enforcement. For critics, POL-INTEL has been branded a tool of mass surveillance. With this background in mind, this thesis asks two questions: How is police power imagined and enacted in the digital era? And how is governance over the police materialized in relation to data-driven policing?

To answer these questions, this thesis develops a methodological framework that combines ethnographic, historiographic and interventionist approaches. Ethnographically, data is drawn from interviews with police officers as well as a variety of other actors, while following the data of those profiled by the police through the criminal justice system. Furthermore, a variety of documents, ranging from public accounts in the press serving to detail the public debate, to internal police handbooks, state reports, etc. are featured. In terms of theory, this thesis synthesizes concepts from critical theory and Science and Technology Studies in particular, alongside Critical Data Studies, police studies with a particular focus on predictive policing, as well as critical criminology. Together, these produce a useful framework for analyzing the complexities of police power, and the materialization of governance, on multiple different levels.

Specifically, the thesis investigates the history of police power, tracing how police power has been imagined from the 17th century to the modern notion of predictive policing. POL-INTEL constitutes a case of digital police technology that is expected and portrayed as if it brings immense efficiency in producing social order through the application of science and technology. Through this investigation, the thesis historically ties the notion of predictive policing to the state in a way that has generally been obscured in earlier literature. Concretely, the thesis argues that predictive techniques and technologies have been a major element in the enactment of police power throughout history and follows how the specific notion of predictive policing has been revised and demarcated in the modern era, which has created conceptual inflation. In contrast, the notion of "prediction in action" is launched as a way of capturing the variety of ways law enforcement attempts to predict across different sites and with different technologies.

Moreover, the thesis shows that police power has been imagined through predictive data analytics such as POL-INTEL in ways that conflict with how police power is enacted in practice, where the promised effects

and new working methods are rarely fully implemented or successful. Instead, the thesis shows that the ways police power is imagined are ideological and serve to black box the enactment of police power. In turn, this black boxing means that police are able to hide their own biases, practices and politics, as well as how they influence the state itself by strategically navigating those forms of governance materialized to control law enforcement. This discovery reverses classical philosophical schemas of police as subordinate to the state and underlines instead how police power may influence government institutions and elected politicians.

Details of the complexities, contradictions, and nuances of how police power is enacted in the digital era and how governance over the police is materialized in relation to data-driven policing are also explored. For instance, this thesis described in depth the internal conflicts and contradictions within the police regarding POL-INTEL as a managerial tool that attempts to curtail, limit or direct police discretion. At the same time, the thesis underlines how police discretionary power is still a significant factor in Danish law enforcement with racially biased police profiling practices feeding biased data into the platform. By utilizing and developing the concept of feedback loops, a multiplicity of feedback loops are also traced that quantitatively or qualitatively affect the lives of individuals profiled by the police, while mechanisms such as ghetto classifications and police predictions are fed into governance.

This thesis thereby concretely connects the relation between police and the state in the digital era while also accentuating the contradictions of how police power is imagined and enacted. It specifies and details police predictive practices in action, thereby revealing a process that spans the human, non-human and the imaginary.

Resumé

I den digitale æra retter politistyrker over hele verden sig mod avancerede dataanalyseteknologier for at opnå en mere effektiv udøvelse af politimagten igennem forudsigelse og forebyggelse af kriminalitet. I Danmark, der angiveligt er et af verdens mest digitale lande, har det danske politi henvendt sig til det amerikanske firma Palantir Technologies for at udvikle en platform med navnet POL-INTEL, til at integrere, analysere og visualisere store mængder data fra forskellige politi databaser. For Rigspolitiet blev denne platform annonceret som et "supervåben", hvis forudsigende politi egenskaber ville repræsentere et "kvantespring" ind i fremtidens retshåndhævelse. For kritikere er POL-INTEL blevet stemplet som et overvågningsværktøj. Med denne baggrund i tankerne stiller denne afhandling to spørgsmål: Hvordan forestilles og udøves politimagt i den digitale æra? Og hvordan materialiseres styringen af politiet i relation til datadrevet politiarbejde?

For at besvare disse spørgsmål udvikler denne afhandling en metodologisk ramme, der kombinerer etnografiske, historiografiske og interventionistiske tilgange. Etnografisk drager afhandlingen på data fra interviews med politibetjente, samt en række andre aktører, herunder etnografisk sporing af data om personer profileret af politiet gennem det strafferetslige system. Derudover bygger den på forskellige dokumenter, der indfatter alt fra offentlige beretninger i pressen, som belyser den offentlige debat, til interne politihåndbøger, statslige rapporter m.m. Teoretisk syntetiserer denne afhandling koncepter fra hovedsageligt kritisk teori og Science and Technology Studies, suppleret af Critical Data Studies, politistudier med fokus på forudsigende politiarbejde samt kritisk kriminologi. Tilsammen skaber disse en ramme for at analysere kompleksiteterne af politimagt og styringens materialiseringen på forskellige niveauer.

Specifikt foretager afhandlingen en historisk undersøgelse af politimagt ved at følge hvordan politimagt er blevet forestillet fra det 17. århundrede til nutidens koncept om forudsigende politiarbejde. POL-INTEL konstituerer et eksempel på digital polititeknologi, der forventes, og bliver portrætteret som, at den vil bringe en stor effektivitet i at opretholde social orden gennem anvendelse af videnskab og teknologi. Igennem denne undersøgelse forbinder afhandlingen historisk begrebet forudsigende politiarbejde med staten på en måde, som tidligere litteratur ofte har overset. Konkret argumenterer den for, at forudsigende teknikker og teknologier har været en væsentlig del af udøvelsen af politimagt gennem historien, og følger hvordan netop forestillingen om forudsigende politiarbejde er blevet revideret og afgrænset i den moderne æra, hvilket har skabt konceptuel inflation. Derimod er begrebet "forudsigelse i aktion" introduceret, for at opfange de mange forskellige måder hvorpå retshåndhævelse forsøger at forudsige igennem forskellige metoder og med forskellige teknologier.

Desuden viser afhandlingen, hvordan at politimagt forestillet gennem forudsigende dataanalyser, såsom POL-INTEL, er i modstrid med hvordan politimagt bliver udøvet i praksis, hvor de lovede effekter og nye arbejdsmetoder sjældent bliver implementeret fuldt ud eller er succesfulde. I stedet viser afhandlingen, at måderne, hvorpå politimagt forestilles, er ideologiske og tjener til at "blackboxe" udøvelsen af politimagten. Denne "Blackboxing" gør, at politiet kan skjule deres egne fordomme, praksisser og politikker samt hvordan de påvirker staten ved strategisk at navigere i de former for styringsmekanismer, som er skabt til at kontrollere politiet. Denne opdagelse vender de klassiske filosofiske opfattelser af politiet som underlagt staten på hoved, og fremhæver i stedet politiets magt til at påvirke statslige institutioner og folkevalgte politikere.

Afhandlingen detaljerer kompleksiteterne, modsætningerne og nuancerne i hvordan politimagt udøves i den digitale æra, og hvordan styring af politiet materialiseres i relation til datadrevet politiarbejde. For eksempel belyser afhandlingen de interne konflikter og modsætninger inden for politiet i forhold til POL-INTEL som et ledelsesværktøj, der forsøger at indskrænke, begrænse eller styre politiets skøn. Samtidigt understreger afhandlingen, hvordan politiets skønsbeføjelse stadig er en betydelig faktor i dansk retshåndhævelse, især med hensyn til hvordan racemæssige forudindtagede politiprofileringspraksisser fodrer platformen med forudindtaget data. Ved at bruge og udvikle konceptet "feedback loops" følger denne afhandling en række feedback loops, som kvantitativt eller kvalitativt påvirker de profilerede personerne liv samtidig med at indeholde mekanismer som ghetto-klassifikationer og politiforudsigelser som bliver fodret ind i styringen.

Afhandlingen forbinder således den konkrete relation mellem politi of stat i den digitale æra, mens den fremhæver de modsætninger, der eksisterer mellem hvordan politimagt forestilles og udøves. Den specificerer og detaljerer politiets forudsigende praksisser i aktion, og herved afslører en proces der spænder over det menneskelige, det ikke-menneskelige og det forestillede.

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Contents

1.0 Introduction

This thesis concerns a digital platform that the Danish police heralded as a "super weapon" (my translation, Holst and Kildegaard, 2017; Kulager, 2017) in their fight against crime and "a quantum leap into a modern police" (my translation, Voergard, 2017). The platform, called POL-INTEL, was first acquired by the Danish police from the American company Palantir Technologies, and is used today to integrate a total of 11 disparate police and civilian databases. Law enforcement in Denmark therefore has the technical capacity to rapidly retrieve and analyze mass amounts of data in one interface, which was originally aimed to "predict crime in the long term" (my translation, ibid). Critics, however, warn that the new platform constitutes a mass surveillance system whose implementation threatens fundamental civil liberties in Denmark (Gjerding, 2016).

While these differing accounts of POL-INTEL might seem to conflict at a fundamental level, they all imagine POL-INTEL as being able to enact a *police power* of almost fantastical efficiency, whether for surveillance or efficient crime fighting. That is, police power is a concept classically understood as the legal power delegated to police officers to conduct arrests, use force, or to surveil citizens for the purposes of producing security and safety (Dubber and Valverde, 2006). In relation to this way of understanding police power, POL-INTEL was thus imagined as accelerating the efficiency of law enforcement and thereby producing a safer, more secure and better society. However, more critically oriented perspectives instead identify police power as the power of law enforcement to classify events, groups, areas or individuals as criminal, to make authoritative claims to truth and to perform new states of affairs in society (c.f. Neocleous, 2021).

In this thesis, I contrast how police power is imagined and how it is enacted in the digital era. Therefore, by investigating how policing is practiced and what happens when the POL-INTEL "super weapon" is deployed, this thesis opens the black box of POL-INTEL to outside scrutiny. I also detail how POL-INTEL is related to materializing new forms of governance over the police. That is, its links to a range of institutional, legal and doctrinal changes designed to reshape the police organization, i.e. changes that are deeply intertwined with the implementation of data analytics and new policing platforms.

However, this thesis explores not just the police as an isolated institution but also the politics of the police. The very word police hails from the original Greek word *polis* (city), its etymology speaking to the closeness of terms such as police, politics, polity, policy and, by extension, the state (c.f. Bowling, Reiner and Sheptycki, 2010). Perhaps the most overt connection between POL-INTEL and the police/politics can be found in the platform's background. On February 14–15, 2015, a man named Omar Hussein attempted to kill Lars Vilks, a Swedish artist known for his caricatures of the prophet Mohammed, in Copenhagen.

Hussein failed to kill Vilks but shot dead a civilian and wounded three police officers. Later that day, he attacked a synagogue, killed a security guard, and wounded two officers of the Danish Security and Intelligence Service (PET). He fled the scene, only to be tracked down and shot dead by police officers a few hours later. Afterwards, the Danish government issued a report stating that:

> We live in a world where violent forces want to attack our democracy and our freedom. We saw this in the terrorist attacks in Paris in January 2015 and with the attack in Copenhagen last weekend. The government will always protect Denmark and secure the safety of its citizens. We will protect our society and our values. Therefore the agencies that protect our security shall have the tools and resources that are necessary. – my translation, Regeringen (p. 1, 2015)

The tools and resources referred to in the quote included a new policing platform that "will mean a substantial strengthening of the possibilities for identifying or localizing potential perpetrators, before a terrorist attack or other very serious crimes are committed" (my translation, ibid, p. 5). This platform is what would finally become POL-INTEL, whose objective was thus to predict future risks to pre-emptively produce security. As time passed, the platform's objective widened from its narrower focus on antiterrorism to a broad range of crimes. Perhaps the clearest example of this is articulated by the former Minister of Justice, Søren Pape Poulsen, who explained in a speech to parliament that the platform would accelerate police capacities to combat the "sexual abuse of children, drug crime, radicalization and economic crime" (my translation, Folketinget, 2017). The Minister's evocation of sexual abuse of minors as a universally loathed phenomena is to some extent a rhetorical device, but it also attests more broadly to how POL-INTEL was imagined as a tool for upholding social order. That is, political radicalization, sexual abuse of children and narcotics and financial crimes are linked together to describe general threats to the very social fabric of society. Subsequently, the police are imagined as the thin blue line that stands between these threats – a line between good and evil – who require better tools (i.e. POL-INTEL) to do their job more efficiently. This link between social order, policing, technology and the state has deep roots in Western thought. Thomas Hobbes in his 17th century book "Leviathan" claims that:

> For by Art is created that great LEVIATHAN called a COMMON-WEALTH, or STATE, (in latine CIVITAS) which is but an Artificiall Man; though of greater stature and strength than the Naturall, for whose protection and defence it was intended; and in which, the Soveraignty is an Artificiall Soul, as giving life and motion to the whole body; The Magistrates, and other Officers of Judicature and Execution, artificiall Joynts [...] – emphasis in original, Hobbes ([1651], p. 45)

Hobbes' Leviathan machine was deployed to pre-empt a "Warre of Everyone Against Everyone" (ibid, p. 206) which, in his philosophy, demanded the total transferal of individual freedoms to the sovereign (i.e. the king) to ensure social order and security. While Hobbes wrote before there was a police force as we know it today, the same ways of thinking animate much scholarly reflection on policing today, whether by those who embrace his ideas (e.g. Ratcliffe, 2016) or by those who highlight the authoritarian character of the Leviathan to raise critiques of police and state (e.g. Sadowski and Pasquale, 2015; Hall *et al.*,1978; Linnemann, 2022). In both ways of thinking of Leviathan, the model is updated from Hobbes' pre-police theorization through inserting law enforcement as the specific agency designed to ensure domestic security and social order. Inspired by the idea of law enforcement as a part of a state-machine, I conceptualize the police as those "artificall Joynts" (Hobbes, 2002, p. 48) of Hobbes' Leviathan. Consequently, I will argue in depth that this link between state and data-driven policing has been neglected. Here, I want to simply underline that I am interested in questioning what happens when those "Joynts" are digitalized, turned into lines of code, and subsequently how that relates to a shift from an analog to the digital Leviathan. Hence, the title of the thesis. I therefore focus on what is new in the digital era regarding how police, state, technology and prediction are deployed and reassembled (Latour, 2007) and the research questions defined and explained below reveal in more detail what this entails.

1.1 Research Questions

For Hobbes, each mechanical piece of the Leviathan must stay within its assigned place to ensure the continued functioning of the state (Shapin and Schaffer, 2011). Similarly, the police themselves are governed to ensure that both the institution as a whole and individual officers are aligned with these tasks. The police are both part of governing and being governed. To capture this and go about analyzing what is new here in the digital era – this thesis poses two, interconnected research questions:

1) How is police power imagined and enacted in the digital era?
2) How is governance of the police materialized in relation to data-driven policing?

These two research questions are deeply intertwined. Police power itself relates directly to governance as it is a power that is classically understood as emanating from the legal frameworks set down in the laws of different nation states. As explained earlier, police power in this legal sense is a power delegated to the specific function of police when inhibiting individual freedoms and liberties through actions such as arrests, surveillance or the legally sanctioned use of force. This is one way in which this thesis applies the term police power. Another way in which the term is utilized in this thesis is as the power to classify individuals,

acts and groups as criminal (Bittner, 1967; Manning, 1977). That is, the law delegates to individual officers very broad *discretionary* police power to make their own choices when deciding between courses of action. Police power is thus not only legal, but entails the power to define *what* is legal, and thereby unlocks legal police powers such as using force, to inhibit civil or individual liberties and/or surveil individuals.

This capacity to define and classify through discretionary police power also extends to another way in which I use the term police power: as a way to lay claim to truth and knowledge. The police are typically understood throughout society as neutral, a-political and expert professionals. This speaks to what Ericson & Shearing (1986) characterize as how "the police are able to shift from 'things look this way' to 'look at things this way'" (p. 129) Accordingly, I investigate how this police power to lay claim to truth changes, accelerates or is undermined in the digital era.

Lastly, following thinkers such as Foucault (2009), Althusser (2008) and Neocleous (2021), I understand police power as actively enacting new states of affairs and performing – bringing into being – a range of social phenomena. For instance, when police officers classify events or individuals in the social world, they do not merely describe an event out there ("crime") but actively also produce crime and criminality (Egbert and Leese, 2020).

I am specifically interested in police power in the digital era and how these different forms of police power are imagined and enacted when a platform like POL-INTEL is introduced into the police. As such, I investigate the distinction between how POL-INTEL was imagined and its actual effects during its enactment. One dramatic example investigated in this thesis explores the complexities of how data produced via POL-INTEL is translated (Callon, 1984) into classifying so-called "ghetto areas"[1]. The Danish state then targets these areas for sociodemographic change while also intensifying police attention to these areas through a feedback loop.

In relation to such powers, liberal societies have attempted to materialize governance over the police in specific ways. This refers to various ways of controlling, auditing and inhibiting police powers. These take the form of legal or regulatory written frameworks, organizational structures, strategies and doctrine, and the insertion and imposition of different technologies.

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[1] In 2018, the Danish government enacted into law the controversial "ghetto package" [ghettopakken]. The object of the law is to identify "parallel societies" (Regeringen, 2018, p. 3) which are classified through statistical quantifications related to the ethnic mix of an area, crime levels, education, income, etc. Subsequently, policies such as privatization of public housing designed explicitly to force demographic change can be employed to remove or mitigate these social issues in an area. See Chapter 8 for more details.

Here, materialization of governance is used to mean both how police leaders manage the police force, but also how the state organizes itself to direct the police force (and its power) as it sees fit. In the digital era, policing platforms are central parts of how governance is materialized as they function as management systems, typically by expanding surveillance over rank-and-file officers (Benbouzid, 2019; Wilson, 2019). Such platforms also accelerate police data production, which is necessary for the state to audit, surveil, and control its police force.

These two research questions thus highlight multiple analytical levels and the changing of scales (Latour, 1983) between them. For instance, this thesis investigates how the discretionary police power of rank-and-file police officers is shaped by POL-INTEL as discriminatory police stops are fed into, classified by, and then algorithmically structured by the platform. From there, I follow how individual data points are turned into statistics, which function as "the state's knowledge of the state" (Foucault, 2009, p. 411) and which are thus used by politicians and civil servants as a basis for imposing new goals for the police force. Said goals then trickle down to individual police officers, who are supposed to enact police power in pursuance of these goals but may in turn resist, set aside, manipulate or comply with the goals.

These two research questions are thus posed in a dialectical relationship with one another. They are used in this thesis to analyze the internal contradictions between police power and governance, which I understand as a process that occurs on multiple levels and spans different sites. With these remarks on the research questions complete, I will now move to situating the thesis in relation to studies on predictive policing.

1.2 Situating the Thesis: Studying Predictive and Data-Driven Policing

This thesis is part of the project *Critical Understanding of Predictive Policing* (CUPP). CUPP has focused on six different northern European countries: Denmark, Sweden, Norway, Latvia, Estonia and the United Kingdom. The concept of predictive policing has been perhaps *the* most popular term for describing what is new about the police use of modern data analytics. While an in-depth genealogy of the concept of predictive policing is situated in the next chapter, it is worth making a few general notes about predictive policing and its relation to similar concepts.

For its proponents, predictive policing has been understood to produce a more efficient police force. The father of the term, William Bratton, who was the head of Los Angeles Police Department from 2002 to 2009, argued in an article where the concept was launched that: "We will move from near real-time analysis to true real-time analysis and then to a 'predictive policing' posture wherein more accurate and reliable probability modeling will be utilized to forecast potential crime trends over an increasing time span."

(Bratton and Malinowski, 2008, p. 264). The objective with predictive policing has been to predict crime before it occurs as well as preventing criminality and/or threats to social order through pre-emptive police action. In the words of two American police chiefs, the development of predictive policing raised the rhetorical question: "Why just count crime when you can anticipate, prevent, and respond more effectively?" (Beck & McCue, 2009, p. 1)

For critics, predictive policing has been conceptualized as part of the development of a mass surveillance society where data analytics are utilized to significantly impose and intrude on the lives of citizens. In its most intensely dystopian versions of these critiques, predictive policing has been suggested as having a science fiction-like ability (typically by reference to the science fiction classic *Minority Report*) for the police to foresee crime and thereby surveil and criminalize at an unprecedented rate (Andrejevic, 2017; Scannell, 2019; Linnemann, 2022).

Critics have also been concerned with the sort of data fed into these platforms. As the police have typically targeted specific groups, particularly racialized, working-class people, predictive policing platforms have been found to be fed with biased police data (Brayne, 2021). Consequently, such platforms have produced forecasts suggesting that these specific social groups will commit further crimes, which in turn have instigated more police attention on them and thereby produced even more data on these groups in a continuous feedback loop (Lum and Isaac, 2016; Ferguson, 2017; Grill, 2022). This critique is connected to the issue of black boxing, where the social background of how crime data is produced is obscured by the technoscientific veneer of policing platforms (Egbert and Leese, 2020).

Partly in response to such critiques, a variety of different policing concepts have proliferated in the last decade or so, including Precision Policing (Bratton and Anderson, 2018) and Risk-Terrain Modelling (Calhoun, 2023). In Denmark, the police at present disavow the use of the term predictive policing, preferring instead the use of the term *Intelligence-Led Policing* (ILP) to describe their official data-driven policing doctrine (Rigspolitiet, 2018a). These different concepts share the desire to predict and pre-empt crime and threats to social order through the application of data analytics, even if some of the specific techniques and approaches differ. ILP itself, for instance, is characterized by integrating and developing data analytics for the purposes of pre-empting crime (Ratcliffe, 2016), which shifts policing to a predictive, "future-oriented" (Gundhus, Skjevrak and Wathne, 2023, p. 1) stance. Throughout the thesis, I use the case of POL-INTEL to follow the international evolution of these different concepts and develop a conceptualization for understanding how they are related. For now, it is worth noting that I use the term *data-driven policing* throughout the thesis to refer to this family of different concepts and the practices associated with them.

I would also point out that parts of the empirical material gathered for this thesis feature in a number of articles. These articles differ from this thesis in their scope, research questions, comprehensiveness, theory, and, to some extent, methodological approaches. These articles are titled "*What Constitutes Predictive Policing? – The Case of POL-INTEL in Denmark*" (Galis and Karlsson, forthcoming), "*A World of Palantir – Ontological Politics in the Danish Police's POL-INTEL*" (Galis and Karlsson, 2024), and "*Digitalizing Police Science: Theory, Practice and Contradiction in Palantir's POL-INTEL*" (Karlsson and Galis, forthcoming). With these remarks concluded, I will now provide an overview of the Danish police, which is vital as the context for the case of POL-ONTEL.

1.3 A Brief Overview of the Danish Police

The Danish police consist at the time of writing of circa 17,000 employees. Of these, 11,000 are uniformed police officers with the right to carry arms and conduct arrests (Rigspolitiet, 2024b). These officers have been educated at the Danish Police Academy (*Politiskolen*), which, at the time of writing, is an almost three-year non-academic education with a curriculum focused on practical skills and some elements of Problem-Oriented Policing (see Diderichsen, 2017; 2022 for a more in-depth discussion of changes in Danish police education). The remaining cohort of employees consists of 6,000 civilian police employees who do not possess legal police powers such as that of arrest. This group of police employees includes many (but not all) intelligence workers as well as lawyers, receptionists and other office workers (Stevnsborg, 2016).

Organizationally, the police force is divided into 15 different police districts, each led by a police director (Rigspolitiet, 2024a). Ten of these districts are of comparable size with circa 1,000 police employees in each. In contrast, two districts in Denmark stand out. Bornholm, which is a small island in the Baltic Sea, has a smaller portion of officers, while the city of Copenhagen has the country's largest police force (Stevnsborg, 2016). In addition, each of the Danish territories in the Faeroe Islands and Greenland has a corresponding police district. One final non-geographical district comprises the Special Crimes Unit (*National enhed for Særlig Kriminalitet*), which is a specialized in intelligence work (Rigspolitiet, 2024c).

Above the police districts, the Danish National Police (*Rigspolitiet*), presided over by the chief of the Danish police, the National Police Commissioner, has IT functions (covering e.g. the running of POL-INTEL), Human Resources, legal resources and management of the police as a whole. The Danish police is an organization closely tied to the state and is governed by the Minister of Justice through the Ministry of Justice. Specifically, the police are funded by multi-year agreements whereby parliamentary majorities come

together to detail goals, both quantitative and qualitative, which the police should fulfil as part of their mandate (Degnegaard, 2010; Stevnsborg, 2016; Diderichsen, 2020).

Incidentally, various titles exist in the Danish police. However, focusing on work functions, rather than precise titles, has been more important both during my fieldwork and while making the thesis intelligible for readers. Thus, I avoid a longer presentation of the titles and hierarchy within the police.

To summarize, I have now supplied context for the case of POL-INTEL in relation to the institution of the police. But since POL-INTEL was not produced by the police, we must also consider the makers of the platform, a company called Palantir Technologies.

1.4 Palantir Technologies: Hobbits, Philosophy and the CIA

Palantir Technologies developed and maintains POL-INTEL and has a colorful history. The company was founded in the United States in 2004 by a group that included Peter Thiel, a billionaire famed for his libertarian and anti-democratic politics (Volquartzen, 2018). Thiel is said to have named the company, with the name Palantir deriving from J.R.R Tolkien's fantasy epos Lord of the Rings in which the palantíri are magical seeing stones capable of seeing the future as well as faraway lands (Munn, 2017). Accordingly, Palantirians refer to themselves as "Hobbits" , the diminutive heroes of Tolkien's saga, whose mission is to "save the Shire" (the Hobbit realm) from the forces of darkness (Sankar, 2012).

Palantir's mission is not only animated by reference to fantasy but also to philosophy. The clearest example of this is in the background of another important founding member of Palantir, Alex Karp, who serves as the CEO of the company. Karp is allegedly the PhD student of German philosopher Jürgen Habermas (Brown, 2015). Karp's influence on the company is articulated in a series of official "Letters from the CEO" that lays out the technopolitical philosophical vision of the company as adherents to a combative form of liberalism. For instance, in the boldly titled *In Defense of Europe* (Karp, 2022), published after Russia's invasion of Ukraine, Karp argued that "The successful construction and defense of a monopoly on the legitimate use of violence [...] is not only what defines the state, as Max Weber made clear, but makes the state's continued survival possible." Building on this statement, Karp articulated that the role of Palantir is to produce software to aid in the construction/defense of the liberal state against its enemies, both external (as in Russia) and internally (as in the anti-war movement).

Aligned with such politics, Palantir's early investments came from the CIA funding body In-Q-Tel, and Palantir subsequently also produced its first software for American intelligence agencies (Johnson, 2016).

From these beginnings, Palantir has also branched into several different sectors, including healthcare, logistics, and humanitarian aid (Johnson, 2016; Wright, 2021; Martin, 2023). In financial terms, Palantir has recently been valued at 133.4 billion dollars (Iliadis and Acker, 2024), making it a significant company in the marketplace of what Zuboff (2019) calls surveillance capitalism.

Palantir's policing platform is called Gotham. The name refers to the fictional city where Batman lives and fights crime. The company has been involved in several scandals concerning Palantir Gotham, including Palantir refusing to transfer data produced within the Gotham platform back to the New York Police Department after the contract had been cancelled (Alden, 2017). Palantir Gotham has also been accused of being used to identify and locating migrants to be deported by the United States Immigration and Customs Enforcement agency (Ebeling, 2022), although the company denies involvement in this (Iliadis and Acker, 2024).

Together, this background depicts Palantir Technologies as a shadowy, potentially illiberal, and powerful company. Previous research has questioned the effects of the insertion of such an enterprise into the Danish context (Volquartzen, 2018; Flyverbom and Hansen, 2019; Stevnsborg, 2021). These studies constitute valuable reflections on the *potential* for change afforded by the entry of Palantir into the Nordic context. However, these articles are generally not empirically oriented. Throughout this thesis, I will thus contribute to previous scholarship by producing an empirically informed analysis of the police power which its Gotham platform is imagined to be capable of enacting. To underpin this purpose, I will continue by presenting a technical readout of POL-INTEL.

1.5 A Technical Readout of POL-INTEL

As explained, POL-INTEL is a local customization of Palantir Technologies' Gotham platform. Gotham can be used to integrate disparate databases with different sorts of data, including handling both structured and unstructured data (Munn, 2018; Iliadis and Acker, 2024). The following databases constitute, at the time of writing, the latest available list of source systems for POL-INTEL (c.f. Rigspolitiet, 2021b):

- The POLSAS case handling system.
- The Criminal Registry, which includes criminal sentences.
- The PED, the police investigation database.
- The National Photo Registry.
- Index 2, which includes the registry of all foreigners and Danes, and companies, that reside in Denmark.
- The weapons registry, which lists weapons permits.

- CRM3, central registry of motor vehicles.

- GoAML, database for reports on money laundering.

- The Interpol system, which contains data on individuals wanted by Interpol.

- The Schengen Information System (SIS), which registers data on migrants entering and exiting the Schengen zone.

- POLPAX, database for air passenger information.

- Additionally, POL-INTEL is populated by unstructured "ad hoc" data (see below).

The databases listed above have different regulatory and technical characteristics. Those operated by the Danish police are the POLSAS case handling system, the weapons registry, the PED intelligence database and the Criminal Registry. Others are international police or border control systems to which the Danish police also have access, i.e. the Interpol system and the Schengen Information System. Others still have a complex regulatory regime that includes private actors such as banks, e.g. the GoAML money laundering database and POLPAX, which lists data on air passengers.

The remaining databases are those that the Danish state has set up for general governance purposes, but which the police can access. These include Index2, containing data on where all citizens and residents in Denmark live, and the National Photo Registry, which contains images of all citizens and residents. It also includes CRM3, where ownership of vehicles past and present is registered. Each of these databases can be said to be a Big Data system (Kitchin and McArdle, 2016).

Lastly, ad hoc data refers to any form of data that can be manually ingested into POL-INTEL but which is not automatically mirrored into it from a source database. To exemplify, ad hoc data might be Facebook metadata, a newspaper article or photographs of a suspect. It is also worth noting that the Danish police could access these systems before POL-INTEL was implemented and still utilize these directly without necessarily accessing them through POL-INTEL. See Chapter 7 for more details on the technical setup of POL-INTEL and the data that populates it.

The POLSAS case handling system is of particular importance for this thesis. Within POLSAS, police officers fill out forms that detail information about arrests, including names of suspects, bystanders and witnesses, the time of an arrest, the codes used by the Danish police to classify arrests. There is also space for free text in these forms, where officers can enter qualitative data. POLSAS is an old legacy source system, built in the 1980s (Stevnsborg, 2016), and (as I detail later in the thesis), its interface is still that of a DOS system where officers have to maneuver through a variety of menus and command consols.

In this thesis, I occasionally draw on examples from source systems other than POL-INTEL if these are the foremost digital tool used by officers. Later, I show specifically why this is relevant due to how the use of these systems is deeply entangled with POL-INTEL. Here, a brief example will hopefully convince the reader that this is appropriate in a thesis on a specific platform. For instance, an officer might be directed to patrol a given area through maps of crime hot spots produced in POL-INTEL and then utilize the POLSAS case handling system during a control of a person in the street to draw on previous data on said individual and then enter data on this person. In such a case, POL-INTEL is actualized both as what guides the officer to a specific place, but also in that POLSAS data is later mirrored into POL-INTEL, which in turn updates crime maps that guide later patrols.

Concretely, POL-INTEL produces the capacity to search across the different source systems through one interface. More specifically, there are two versions of POL-INTEL that give different capacities for the user, POL-INTEL Finder and POL-INTEL Analyse. POL-INTEL Finder has circa 10,000 users and operates mainly through search functions, often compared by Palantir and the Danish police as being like a Google search.

In comparison, POL-INTEL Analyse has around 650 users, most of whom are intelligence workers and management. Analyse offers more in-depth analytical tools and the ability to produce graphs, charts, maps and similar (Rigspolitiet, 2021). The simplest way to encapsulate the functions of Analyse is to visualize it as having similar capacities to those available to a webpage moderator, or social media user, who can move through different dashboards to produce statistics, make visualizations or click through profiles. For instance, a search in Analyse on an individual can visualize data connected to them as a social network link tree where an individual's icon is situated in the middle surrounded by lines drawn to cars they have owned in the past or present, their registered residency, photo IDs of them, cases when they have been witnesses or suspects registered in police systems, and family relation. Each of these icons can be clicked on, opening up, for instance, a police report that might link an individual to a suspected accomplice, or to visualize the police reports on a map.[2]

1.6 Thesis Structure

This **Introduction** is followed by a chapter on the **Historical Genealogy of Data-Driven Policing**. Starting with the 17th century inception of the modern state to the data-driven policing of the modern era, the chapter traces the evolution of data-driven policing with an emphasis on predictive policing as a concept. I

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[2] For a more visual example of how Palantir Gotham functions, see the Danish police museum's digital exhibition of POL-INTEL at https://politimuseet-learning.dk/overvaagning-efterforskning-i-en-digital-tidsalder/pol-intel/saadan-virker-politiets-supervaaben

trace the development and interrelation between policing, state, science, prediction and technology both globally and in relation to the Danish case. This process highlights how police power has been imagined and enacted in relation to how different forms of materialization of governance over the police have been theorized and implemented.

Chapter 3, on **Theorizing Data-Driven Policing**, builds a theoretical framework through synthesizing critical theory with concepts from Science and Technology Studies. I accomplish this through critiquing what I, following Söderberg (2017), refer to as the empirical post-structuralist camp within STS. After rejecting the ontology of this camp, I produce an alternate ontological basis for how to connect STS and critical theory by drawing on Spinoza's version of materialism. From this ontology, the chapter flows into detailing concepts that emphasize and detail how policing is shaped and formed by the interaction of human and non-human actors across different sites and levels of analysis. Moving forward from ontology, I then critique the empiricism of the post-structural camp in STS and instead argue it is necessary to engage with ideology (Althusser, 2008) in order to understand data-driven policing. I then develop and relate this way of understanding ideology to code, imagination, prediction, state and performativity. In the last part of the chapter, I explicate a set of theoretical tools related to how classification (Bowker and Star, 2000), data and statistics (Foucault, 2009) play a role in performing data-driven policing

Chapter 4, titled **Methodology**, presents the three different methodological legs on which this thesis is built. The first is ethnography. Building on the work of Kaufmann (2023), I argue that it is possible to methodologically follow the data of people profiled by the police and that, alongside triangulation with data from the police, this allows researchers to change situated perspectives (Haraway, 1988) to produce a more comprehensive understanding of police power in the digital era. Next, I analyze historiography, discussing my methodological strategy for reassembling the history of POL-INTEL (Durepos and Mills, 2012). Specifically, I discuss how I draw on Foucault's (1978) notion of genealogy to identify historical milestones and the discrepancies that exist between official histories and those practices and beliefs that have been obscured in the process. The third part of the chapter relates to an interventionist methodology used in this thesis to turn POL-INTEL from a matter of fact to a matter of concern (Latour, 2004) by producing public debate. Lastly, this chapter also includes descriptions of interviewees, interview procedures, documents gathered etc.

Chapter 5, titled From **Super Weapon to Mundane Tool: The Historiography of POL-INTEL,** is the first of four empirical chapters. It explores how POL-INTEL was conceived, conceptualized, implemented and moved from being a "super weapon" to a mundane tool. I thus connect the global rise and fall of the concept of predictive policing to how the enactment of police power in the digital era is imagined through

ideology. I trace how a small group inside the police leadership were instrumental in assembling a network of allies to promote how they imagined effective police power through the purchase, legalization and implementation of POL-INTEL. As such, I show how police act as conscious political actors who materialize the governance that should supposedly control themselves. The chapter ends by considering how the ways of imagining the police power of POL-INTEL were disrupted by new political initiatives. Instead of through data analytics, these new initiatives imagined police power as best enacted through community policing, and reflected material issues related to data integration and the lack of demonstrable efficiency after the implementation of the platform.

Chapter 6 is the first of three interconnected ethnographic chapters: **Input**, **Into the Black Box** and finally **Output.** These three chapters are understood as three moments of translation (Callon, 1984) through which I follow the data. Figure 1 presents a model for how data moves through these different moments as part of its data life cycle (Kaufmann, 2023) as well as offering a guide to how these chapters relate to one another.
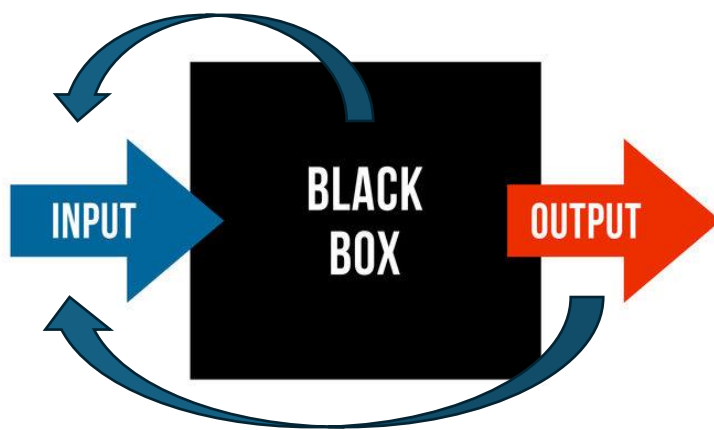
Figure 1: The Data Life Cycle of Data-Driven Policing

In the **Input** chapter, I follow the discrepancy between how the police power produced in relation to POL-INTEL was imagined, the means of governance materialized to impose this data-driven policing, and finally the actual enactment of discretionary police power during patrol work. I conclude that discretionary police power continues to be mainly reactive, analog and driven by racial bias. Moreover, I analyze how POL-INTEL is used during police controls in the street and conclude that multiple different kinds of feedback loops appear in this process that significantly impact data-driven policing. Lastly, the chapter highlights data entry as a form of police power for classifying individuals, which lays the foundation for following data from the input stage into POL-INTEL proper, as detailed in the subsequent chapter.

Into the Black Box traces how data from source systems enter POL-INTEL and consequently how the politics and biases of police source systems are translated into the platform. I thus link how the specific character of the state is mirrored into POL-INTEL and thus argue that policing platforms must be understood through

reference to state-making (Deleuze and Guattari, 1987) and ideology (Althusser, 2008). From here, the chapter follows how data that enters POL-INTEL is organized by the algorithmic structure of the platform, which Palantir refers to as the "ontology." This ontology is analyzed here as ideology materialized in code (Chun, 2011), which both black boxes social relations and makes the world legible, scalable and actionable for the police, thereby allowing for enacting increased police surveillance powers. The third part of this chapter relates to POL-INTEL as materializing governance in how it algorithmically regulates (Yeung, 2019) rank-and-file police officers and employs predictive automated analytics used to identify potential risks within the police organization. Lastly, this chapter also investigates potential blind spots in the platforms' algorithmic regulation and internal surveillance of police officers to underline how the governance materialized in the platform is far from all-encompassing.

In the **Output** chapter I follow (Kaufmann, 2023) how black boxed police data moves into three different sites: state governance, police intelligence work and finally to the Independent Police Complaints Authority (*Den uafhængige politiklagemyndigheden*). Specifically, I detail the complexities and contradictions of how black-boxed police data is used to materialize governance over the police. I then note how this black boxing means that police can translate (Callon, 1984) police power into state power. This chapter also investigates the epistemic and organizational efforts of police intelligence analysts as they draw on police data to predict the future and then translate their predictions into the enactment of police power.

In the final chapter, **Conclusions**, I specify three main lessons to be drawn from this thesis in relation to previous research. I begin by noting that the case of POL-INTEL shows the importance of turning to issues of epistemology when studying data-driven policing. In turn, epistemology is closely linked to ideology, which in turn is intertwined with state and social order, all of which are important phenomena that I argue have been overlooked as perspectives in previous research. Next, I develop the concept of feedback loops further, by drawing together cybernetic theory and studies on predictive policing in a critical dialogue with the case of POL-INTEL. Through this discussion, I suggest that a variety of different kinds of feedback loops exist in data-driven policing that must be studied and specified, and that these are set in a contradictory relation to each other, which also threatens to undermine the enactment of police power. Lastly, the chapter turns to predictive policing as a concept and practice and argues that POL-INTEL represents a global revision of the notion driven by political interest and suggests that scholars should fix their analytical attention on prediction in action, i.e. how it is practiced.

2.0 A Genealogy of Predictive Police Power

2.1. The Science of Governing Men

Many of the previous genealogies and other historical accounts of data-driven policing have traced the notion back to the professionalization of Anglo-Saxon police forces during the 1800s (e.g. Benbouzid, 2019; Wilson, 2019; Egbert and Leese, 2020; Brayne, 2021). While building on these accounts, this chapter takes a slightly longer view. This is because a focus on police professionalism tends to emphasize developments within the police institution itself. Thereby, the relation between how the state has materialized governance over the police, and how police power has been imagined and enacted in relation to social order, has been unclear. Similarly, an overly narrow focus on the United Kingdom and the United States of America is unhelpful when considering a Nordic case.

Following these premises, I trace the birth of data-driven, predictive policing to the development of the modern state and the origins of the police itself. In the 17th century, a new science arose alongside, and as part of, the formation of the modern nation state and its aim to govern society through the scientific analysis of populations and territories (Foucault, 2009). This science is classically referred to by its German name of *polizeiwissenschaft* (police science).

The police that polizeiwissenschaft referred to meant something much broader than what the term encompasses in the modern era: "In the words of Duchesne's 1757 Code of Police, 'The objects which [police] embraces are in some sense indefinite'" (Ericson, 1994, p. 166). Accordingly, the police in this era were involved in measuring, controlling, auditing and policing almost every aspect of social life, from taxation, public health to imports and exports. In Denmark, this corresponded with how "The very first police powers, giving them competence to arrest and to search private property, were signed by the king with specific address to the highly productive guilds whose efficiency was threatening the competitiveness of royal production units." (Christensen, 2017, p 852) The technological means to enact such police power were at this time related to maps of urban areas such as Copenhagen, torches to illuminate the night and melee weapons to physically enforce order (Stevnsborg, 2010).

From its inception in this era, policing was imagined as a scientific endeavor. As the 18th century commissioner of the Paris police, Jean-Charles Lemaire, said, police and policing is: "the *science* of governing men" (emphasis in original, quoted in Neocleous, 2021, p. 58). This science was developed in relation to new methodological innovations such as statistics. The objective of statistics and other scientific means of measuring the world related specifically to locating threats to the rise of the new social order of the early modern state. As such, "Statistics is the state's knowledge of the state, understood as the state's

knowledge both of itself and also of other states" (Foucault, 2009, p. 315). In relation to the role of police as an agency directed at domestic threats to the state, particular emphasis lay in using such tools to police subaltern social groups: the destitute, vagrants, revolutionaries, national minorities, sex workers, the working class in general, etc. and to control idleness from work, threats to private property and to maintain the monopoly of violence of the state (Neocleous, 2021). As part of these controls, police thus drew on statistics and data to locate and pre-empt threats to social order to the extent that "Police make statistics possible, but statistics also make police possible." (Foucault, 2009, p. 315)

A significant tool in this development of the scientific measurement of society is the population census, which was an imperative tool for the rise of the modern state (Scott, 2020). The census is an example of how statistics not only relay a phenomena, such as by counting which individuals live in a territory, but also take part in producing the category of citizenship and national belonging of a country (c.f. Balibar *et al.*, 1991; Bowker and Star, 2000; Anderson, 2006). As mentioned earlier, national minorities and foreigners outside the national community became, in this process, visible for the state and the police to "see" (c.f. Scott, 2020) to be surveilled and policed. In the sense that the police were intimately linked to statistics, population and state, they were thus also entangled with the process of producing and performing these entities through their role in classifying and policing citizenship, territories and populations (Foucault, 2009).

The role that science played in early thinking on police is particularly illuminated by the example of the creator of the London River Police, Patrick Colquhoun. In his 1796 magnus opus, a *Treatise on the Police of the Metropolis* he wrote: "Police in this country may be considered as a *new Science*; the properties of which consist not in the Judicial Powers which lead to Punishment and which belong to Magistrate alone; but in the PREVENTION AND DETECTION OF CRIMES […]" (emphasis in original, cited in Neocleous, 2021, p. 125) The prevention and detection, which Colquhoun remarks is the essence of policing, is linked in his work to predictive analyses. For instance, he predicts that due to low control and regulation of contraband among sailors, crime will naturally arise in this group and thus regulation should be put in place to pre-empt this development. It is remarkable that these are precisely the same sort of predictive analyses that are actualized in the digital era in relation to platforms like POL-INTEL and policing concepts such as Intelligence-Led Policing, which attempts to scientifically identify causes of crime to be pre-emptively policed (e.g. James, 2013; Ratcliffe, 2016). For instance, Braga and Weisburd (2010) exemplify this with how police can find the root causes of local crime in derelict properties that are then used by homeless individuals and which, they argue, naturally produce crime and thus must be rectified. This historical genealogy underlines how, from its early days, policing was a predictive endeavor that aimed to identify and

pre-empt threats to social order, such as crime, and that this background informs present-day developments. With that said, it is important to note that these are general developments that occurred in Europe. The next section explores how prediction, science and policing were institutionalized and conceptualized in Denmark, and how this in turn informed the later development of POL-INTEL.

2.2. Now the Police Have but One Soul – Materializing Governance over the Police

The influence of polizeiwissenschaft in Denmark can be traced to the first university textbook on police law, *Grundrids af den danske Lovhistorie*, which was published in 1825 by Danish law professor Kolderup-Rosenvinge. As Stevnsborg (2016) explains, it would remain the main textbook on police law until the publication of *Politiret* by Henricson ([1996]). Kolderup-Rosenvinge argued that "to achieve their aim, police in charge of security must establish a comprehensive and close system of surveillance" (cited in Stevnsborg, 2013, p. 125). In parallel to this academic argument, the Danish police imported and institutionalized a "high policing" system from continental Europe that refers to an intense use of secret informants, surveillance and other covert policing operations first and foremost for the purposes of combating oppositional political movements (ibid).

In contrast to high policing, a system closely associated with the oppression of absolutist monarchies (Bowling, Reiner and Sheptycki, 2010), an alternate, "low policing" system was developed in England. Low policing is intimately tied to the name and work of Robert Peel (1788-1850), who founded the London Metropolitan Police in 1829. Peel's police marks one of the clearest points where police become identifiable as an institution akin to what it is today (Neocleous, 2021). Peel's "nine principles of policing" emphasize policing by consent and prevention of crime (Ignatieff and Newburn, 2006). Through these means, Peel professionalized the police, conceptualizing officers as technical, apolitical and expert crime fighters, which influences how policing is imagined to this day (Garriott, 2013).

In Denmark, Peel and his London Metropolitan Police were "associated with a certain civic ethos in the Danish liberal press where this form of police had been lauded as an example of the police that was not the servants of the king." (Christensen, 2017, p. 856). That is to say, the low policing model was imagined by liberal reformers as enacting a form of police power that served a general public good in contrast to the high policing of the absolutist monarchy. This opposition to high policing led to a victory from the liberal-democratic viewpoint, and the enactment of the 1849 Danish constitution actualized the debate of police powers, though few means of governance were materialized to control the police at that time (Diderichsen, 2018). This development underlines how the conflict between police power and governance over the police is a core part of political conflicts over not just what the police as an institution should be or do, but as one

directly concerned with political struggles over state and society. As Christensen (2017) writes: "[…] the import and mutation of the English role model [of policing] was closely related to a transformation of the national field of power as absolutism was formally disbanded but practically folded into a new constitutional monarchy in which conservative and liberal elites coexisted" (p. 1). The question in this situation is thus not *if* there should be a police power that would potentially intrude upon the civil liberties that liberals were fighting for, but *how* such a power should be governed, and the concrete ways to materialize how to govern this power. Later, I will underline how these conflicts over police power are constitutive for subsequent ways of conceptualizing law enforcement, including how data-driven policing has been imagined. For now, it is worth noting how this struggle over how to materialize governance over the police in Denmark continued after 1849 with the liberal camp again being successful in 1863 when the Danish police finally reformed and adopted a low policing model. A clear, albeit symbolic, example of what this entailed related to the adoption of new uniforms for the police that exchanged the colors of the House of Oldenburg, which ruled Denmark, for a "discreet blue" (Christensen, 2017, p. 855). This change in color re-imagined police power, switching the public image of the police as servants of the King to police as an institution tasked with serving all of society. The reform also involved the materialization of new management structures to govern the police, such as the police being divided into specialized branches, patrolling distinct beats and strengthening bureaucratic, top-down control of the institution (Christensen, 2017).

Alongside these organizational changes came the implementation of new technologies such as telephones and telegraphs (Christensen, 2021). Historically, such technologies were not just understood as mundane tools but were often imagined as being able to catalyze a truly immense police power. For instance, in 1855, the Mayor of Philadelphia wrote in relation to police response time to riots that:

> […] with a police of a thousand men employed, it will often happen that hours are lost before a sufficient number can be gathered to make head against the mob. Meanwhile, many lives and much property may be sacrificed, and the majesty and authority of the law are exposed to contempt by a betrayal of the inefficiency of the authorities. *Now the police have but one soul, and that soul is the telegraph*. – emphasis in original, cited in Tarr (1992, p. 10–11)

The question asked in this quote is simple. How to uphold social order? The answer is articulated through how the telegraph is imagined to enact immensely efficient police power. Specifically, the telegraph is aimed at materializing a new set of governance through uniting the police into one, coherent form ("the

soul") that will be able to act in perfect unison. While for the modern reader the telegraph's ability to do so might be seen as a historical curiosity, it is striking that precisely the same problematizations and ways of imagining police power are articulated in relation to data-driven policing platforms such as POL-INTEL. As I will show, it is the same dream, the same way of imagining police power through technology that appears and reappears at different historical junctures and in relation to different technologies.

Alongside this technological and organizational restructuring of the police in the mid 1800's, the science of criminology emerged. Criminology both continued the scientific analysis and prediction of crime that had begun in *polizeiwissenschaft* but demarcated itself from this earlier police science through focusing more narrowly on crime rather than engaging with generalized questions of governance (Neocleous, 2021). A landmark in this development is the Italian "father of criminology" (e.g. DeLisi, 2013) Lombroso's ([1877]) *Criminal* Man. Lombroso is significant for his role in developing new methods and theories with the goal of not just explaining the causes of crime but also aiming to predict future crime (Kaufmann and Vestad, 2023). Aligned to this notion, criminology became a science for assisting the state in governing through the creation of an efficient, scientific policing (Cohen, 2009). In this sense, the classical objective of *polizeiwissenschaft* was passed on to criminology. The task of scientifically predicting crime in order to ensure social order has in turn been channeled into data-driven policing and POL-INTEL, as I reveal later. In this sense, criminology functions as a transmission belt between past and future, between *polizeiwissenschaft* and predictive policing.

The closeness between scientific thinking, police and social order was (and is) not just an academic exercise but also influenced and related to concrete developments in law enforcement institutions in the late 19th century and onwards. Throughout the global north, democracy and the labor movements (which were often one and the same movement), grew during the last decades of the 19th century. As Stevnsborg (2010) explains, during this era the Danish police opposed these movements with force, which is clear as police assaulted protestors and strikers and even killed civilian protestors at the end of the 1800s.

Similar deadly interventions occurred throughout Europe and the United States, which badly damaged police legitimacy. Police forces thereby attempted to transform themselves from appearing as partisan tools who used police power to impose the social order of the ruling classes (Silver, 2017). Consequently, in the late 1800s and early 1900s: "[...] the police, partly in order to demonstrate their concern with scientific data gathering on crime and partly to indicate their capacity to 'control' crime itself, began to stress crime statistics as a major component of professional police work" (Manning, 1978, p.202). Thus, police take up

innovations produced earlier and attempt to actualize and modernize them for purposes of increasing legitimacy and police power. This approach also aligns with what Ericson and Shearing (1986) refer to as the scientification of the police, i.e. how "The police wear the 'uniform' of science and law so that they can appear to be making only technical decisions in fulfillment of their instrumental roles; [...] the police are a key agency for the ideological uses of science and law in the reproduction of dominant order" (p. 134). The development of crime statistics was therefore part of a broader scientification effort to produce police legitimacy and thus re-imagine police power as the enactment of professional, general, apolitical and enlightened work on behalf of a general good. In the empirical parts of this thesis, I link, specify and actualize how POL-INTEL and its associated forms of materializing governance, such as Intelligence-Led Policing, are the latest re-articulation of historical scientific policing innovations and police scientification efforts.

Such scientification efforts are not ideological in the sense of being just about a history of ideas but also related to very specific innovations. In the 1800s the London police produced the first maps that visualized crime. These early mapping efforts were further developed by the Chicago Police Department in the 1920s, with officers marking crimes through placing colored pins on maps of urban areas to predict and pre-empt future crimes (Manning, 2008). Similarly, the Czarist secret police invented social network analyses by visualizing relations between suspects and stretching lines of colored string between their files (Arendt, 1968). These analog predictive techniques are examples of police innovations. They improve and advance more fine-tuned police surveillance efforts through data analysis in that they build upon previous technologies such as the map of the urban territory used as early as in the 17th century. They are also significant as they will both spread globally, eventually landing in Denmark, but also as, almost a century later, they will be digitalized and automated in predictive policing platforms such as POL-INTEL.

In Denmark, the implementation and innovation of science and technology in the service of policing is closely associated with the development of the science of anthropometry, which was essentially a classification system for measuring and then filing the physical characteristics of suspects. Anthropometry was institutionalized in a special anthropometric bureau of the Copenhagen police in the year 1900 (Stevnsborg, 2013). The aim was to produce records so that the police could identify suspects based on circulating photographs alongside names and measurements to different shifts, units or different parts of the country (Duedahl, 2016). As I show later, these specific capabilities have been automated, extended and modernized into POL-INTEL. Before exploring that, however, we must look at the step between police

scientific and technological practices in the early 1900s, and those in the modern era by moving to the first digitalization efforts in the 1960s.

2.3 Machine Justice and Discretionary Police Power

With the 1960s came the adoption of the first computer systems by police forces in the United States. The spread of these systems saw the birth of imagining police power through digitalization as if they were tied to "an imaginary of automated patrol facilitated by computerized command and control systems" (Wilson, 2019, p. 2). Alongside this early digitalization came renewed attempts by academics to improve police efficiency through scientific analysis (Nägel and Vera, 2020). These attempts depended upon imagining police officers as being (or at least as potentially being) efficient crime fighters. In contrast to these assumptions, the first ethnographies on police published moved from imagining police power to studying how policing was enacted in practice. From its inception with Banton's (1964) work, these studies unearthed how police officers engaged mainly with non-criminal matters related to upholding social order. Specifically, police officers were found to be guided not by the general or universal application of law, but by police discretionary power as a power for deciding when, where, how, and whom to police.

Another central figure in ethnographic inquiries on police, Skolnick ([1966]), contrasted discretionary police power with one of the earliest examples of digitalization with the use of an IBM computer to process traffic citations. While hardly imagined as unproblematic in Skolnick's account, he distinguishes the evenly distributed "'mechanical' justice" (ibid, p. 80) of the computer, which he likens to the a-personal and general ideal of the rule of law, to the arbitrary (and often racially-biased) enactment of discretionary police power which he found police detectives engaged with.

In relation to how governance of the police was materialized, Skolnick found that early digitalization and its accompanying emphasis on data production "output" (ibid, p. 211) to measure the efficiency of law enforcement produced a range of unexpected consequences. Such consequences relate to outright "statistical manipulation" (ibid, p. 155) by both management and rank-and-file officers to appear more productive as "data serve as a point of reference, the equivalent of a 'set of books' permitting outsiders to rate the department" (ibid, p. 149). It also related to how differing data classification practices in different police departments make police data incommensurable. On a micro level, Skolnick found how the police power of individual officers to refuse or misclassify citizens police reports, which particularly affected racialized groups, shaped how data was produced.

Skolnick's argument fundamentally stated that the means of materializing governance over the police and their discretionary police power was both ineffective and insufficient. In response to Skolnick's attack on discretionary police power, Bittner (1967) argued that inhibiting police discretion would risk the human, qualitative element of discretionary police power. That is, the police were dealing with myriads of complex events that threaten social order, which Bittner famously characterized as "something-that-ought-not-to-be-happening-and-about-which-someone-had-better-do-something-now" (Bittner, 1967, p. 249). In the face of such complexity, Bittner argued that the police required flexibility and discretion to solve these issues, which they were singularly mandated by society to address. In this sense, Bittner opposes materializing governance along the ideal of a transparent, universalist machine justice.

These ways of conceptualizing police power in relation to how governance is materialized in and through digitalization have been actualized in debates on modern, data-driven policing. As I analyze in detail later, in academia, this relates to how some scholars argue that digitalization efforts disrupt the human part of policing, while others suggest that more fine-tuned data can efficiently surveil and curtail abuses of police power. On an empirical note, this thesis illuminates how the conflict between machine justice to discretion is a central element in how different ways of imagining police power have been articulated in an ongoing struggle that has significantly shaped the enactment of police power in the Danish police. For instance, in Chapter 5 on Historiography, I analyze how the incoming government of 2019 (re)-imagined what was morally/politically and efficient police power by promoting the ideal of police discretion versus data-driven policing, a process that also meant the materialization of forms of governance through re-directing funding from analysis work to police patrols. This link between how police power is imagined and how governance is materialized in the effort to turn imagination into enactment is specified further in the next section that takes the chapter to the 1970s.

2.4 Whose Order? What Efficiency? – The Kansas City Patrol Experiment and Crises of Policing in the 1970s

In the early 1970s, in Denmark the attempt to produce an efficient police power was related to materializing new forms of governance through centralization. In 1973, the former 72 police districts were merged to become 54. Simultaneously, an organizational reorientation aimed at turning the police from enacting a reactive form of police power to being proactive. Instead of waiting for calls for service, law enforcement was tasked with identifying and acting upon issues before they developed (Stevnsborg, 2016). Such ways of imagining efficient police power are closely linked to the practice of patrol work which, in turn, is imagined

to deter crime through criminals spotting the presence of police officers and abandoning their planned criminal activities (Bowling, Reiner and Sheptycki, 2010).

Yet, by the early 1970s, few if any empirical investigations of police patrol efficiency had been made. This would change with the 1972-1973 Kansas City Patrol Experiment. In the Experiment, *"researchers increased patrols in one area, eliminated patrols in another, and kept patrols at already-existing levels in a third."* (Correia and Wall, 2018, p. 175). In their final report, the researchers who conducted the Experiment explained that "analysis of the data gathered revealed that the three areas experienced no significant differences in the level of crime, citizens' attitudes toward police services, citizens' fear of crime, police response time, or citizens' satisfaction with police response time." (Kelling *et al.*, 1974, p. v). The Experiment was important because it upended:

> [...] many commonsense assumptions previously made about policing, such as the
> assumption that it can prevent crime, control narcotics, deter offenders through patrol,
> or produce a public sense of well being, are quite functional for the maintenance of
> police morale and the officer's sense of personal efficacy but are not representative of
> actual police goals. - Manning (1977, p. 373)

If the police are then not the efficient crime fighters portrayed in the media or by politicians, what are they? And by extension, as Marxist criminologists Chambliss and Mankoff (1976) asked in the title of their highly influential work, "*Whose law? What order?*" are the police serving. The same questions had been raised by classic police ethnographers, but "What is left unexplored in Bittner, as in Banton and Skolnick, is a systematic questioning of whose interests are the police pursuing" (Reiner, 2015, p. 323). The answer from a range of critical scholars was that police above all defended and reproduced class society (Cohen, 2009).

Parts of these critiques were in-depth investigations of how the police utilize and promote their image of being neutral, efficient crime fighters to make authoritative claims to truth, which was thus found to be "an ideological obfuscation intended to mask the contradictions of policing in this society" (Manning, 1977, p. 362). In particular, this ideological obfuscation related to police use and promotion of early computer systems as "[The police] could now present their work as crime-responsible professional work based upon applied scientific knowledge and technology" (ibid, p. 98). Police power in this sense is thus a power of monopolizing and black boxing information and data on their own activities to promote themselves as authoritative technoscientific experts who perform a generalized good. Policing was also found to be a means of governing in a more discursively-oriented way as societal problems were ideologized as law and

order issues that demanded more policing and use of the penal system in lieu of other solutions (Hall *et al.*, [1978]).

These academic critiques were accelerated by, and in dialogue with, the new social movements whose recurring and sometimes violent confrontations with police officers who defended the political status quo (Reiner, 1978). These developments were also mirrored in the Danish context where large-scale rioting broke out from the Vietnam protests of the late 1960s, to the World Bank summit in Copenhagen in 1970 and to the squatting movement at the end of the same decade (Stevnsborg, 2016). Such events were part of seriously undermining the legitimacy of policing, as new social groups that previously had little police contact, faced and opposed police violence (Braga and Weisburd, 2010).

Taken together, these critiques (practical or theoretical) of police power and its associated politics, alongside the failure to produce efficient police power through technoscientific means, translated, according to Cohen (2009), into a general crisis for those academics and their fellow travelers attempting to produce an efficient police power in service of liberal social order. For Kuhn (1970), such crises are a constitutive part of scientific paradigms. This conceptualization is opposed to the ideal of the positivist scientist who disinterestedly tests hypotheses and abandons them when they are falsified, which philosophers like Popper (2005) had championed. Instead, Kuhn shows that scientists are motivated by social values and that when their hypothesis are falsified scientists produce ad hoc hypotheses or put their hopes in new technologies/models to rescue their theories. Moving onwards, I detail such attempts to rescue the technoscientific efforts imagined through enacting new and more efficient police power from the harsh critique of critical criminologists and the failures of the Kansas City Patrol Experiment.

2.5 The Empire Strikes Back –Two Efforts to Save Policing in the 1980s

2.5.1 Community Policing

One response by police forces and their allied academics who had been routed by critical criminology was to – at least rhetorically – retreat from how police power had been imagined as best enacted through top-down, centralized and managerialist professional policing. An alternate way to imagine police power was instead developed through the concept of community policing, which became immensely influential both globally and in Denmark from the 1970s onwards (Stevnsborg, 2016). While community policing is, like many other policing concepts, highly nebulous, some of its central characteristics can be summarized as "(1) community-based crime prevention, (2) reorientation of patrol activities to emphasize nonemergency

servicing, (3) increased accountability to the public, and (4) decentralization of command, including, under certain circumstances, civilianization" (Skolnick and Bayley, 1988, p. 5).

Due to this focus on decentralization and connection to local areas, community policing is intertwined with imagining police power in the form of "the quintessential village constable or the night watchman, who lives in the same community that he serves. At a mythic level, community policing reminds us of a world we think we once had, but have now lost. Of course, it only seems that way" (Skogan, 1998, p. 243). That is to say, community policing is close to the ideal of police power found in Bittner's sympathetic account of discretion. In Denmark, this development was materialized in new forms of governing the police that were institutionalized in 1983 with the "*nærpoliti*", a term which roughly translates to "local police." Stevnsborg (ibid) refers to the development of "*nærpoliti*" as part of an ongoing struggle between centralization and decentralization efforts in the police, which were interlaced with issues of what were imagined to be the best ways to enact police power. As such, the turn toward local policing denoted "almost a nostalgic return to foot patrols and, in general, to community-oriented, decentralized police work from small rural police stations, district police stations, and local police stations without 24-hour service." (my translation, p 397). This way of imagining police power has survived until today and has been the most significant alternative way to imagine police power in contrast to the ideal of data-driven policing spanning both international scholarship and domestic political critiques of POL-INTEL. That is, in such accounts, community policing is imagined as a politically or morally better police power than data-driven or predictive policing. As I will show, this is done typically by denoting the latter as cold, hard, top-down and quantitative in contrast to the former's warmth, bottom-up and qualitative forms of policing. At the same time, community policing is not a radical critique of police power and what social effects are performed by it, but rather a commitment to police power, albeit police power with a human face (Correia and Wall, 2018; Vitale, 2021; Calhoun, 2023). In contrast, another significant development in attempts to save policing can be found in Problem-Oriented Policing. Such innovations later become a core part of top-down, data-driven and Intelligence-Led ways of imagining what is good and efficient police power, as revealed below.

2.5.2 Problem-Oriented Policing

Another milestone in the development of new policing concepts was Goldstein's (1979) article *Improving Policing: A Problem-Oriented Approach*. Goldstein relates the Kansas City Patrol Experiment not as an example of the impossibility of efficient police power but as impetus for re-imagining a scientific, analytical approach to improving policing.

Working from Bittner's suggestion that the police meet a bewildering number of problems, Goldstein argued that officers should become problem solvers who identify the root causes of the complexities of

local crime problems and then assuage these (ibid). Goldstein's ideas, subsequently popularized as "Problem-Oriented Policing" (POP), became a highly influential policing concept and serve as a precursor for later technoscientific policing concepts that ultimately led to predictive policing.

POP also became popular in Danish law enforcement during the 1980s (Stevnsborg, 2016) though the degree to which POP was actually enacted and not merely a way to imagine efficient police power is uncertain (Høigård, 2011). Yet clearly the popularization of POP coincided with the increased digitalization efforts during the 1980s that also saw the development of digital crime mapping (Manning, 2008). In Denmark, the development and implementation of systems such as the POLSAS police case handling system are milestones on this trajectory (Stevnsborg, 2016). As such, POP is a milestone in the genealogy of POL-INTEL and data-driven policing in general. Specifically, POP directly inspired the various efforts to digitalize policing in the 1990s.

2.6 Digitalizing Policing in the 1990s
2.6.1 COMPSTAT

In the early 1990s, police departments across the world were significantly affected by budget crises and austerity measures imposed and materialized by and through state governance bodies (Jones and Newburn, 2002). In response, one of the most important modern technoscientific innovations in policing came about in the form of New York City Police Department's 1993 COMPSTAT program (Coldren, Huntoon and Medaris, 2013). In the words of the architect of COMPSTAT, New York Police Commissioner William Bratton "Compstat [sic!] stands for Comprehensive Computer Statistics. It incorporates four basic premises: timely accurate Intelligence data; rapid response of resources; effective tactics and relentless follow-up" (Bratton, 1998, p. 34). COMPSTAT functioned by overlaying a grid over a map of the city on which crime statistics were visualized. These maps were used by police leaders to question subordinate police commanders during bi-weekly public meetings to force commanders to increase efficiency (Lu, Yang & Thomas, 2021). Bratton (1998) himself notes the inspiration for COMPSTAT came from policing concepts such as Problem-Oriented Policing and community policing. Importantly, COMPSTAT was able to function through the improvement of computer capabilities that allowed more efficient crime mapping efforts compared to its historical antecedents (Wilson, 2019a). While the efficiency gains in COMPSTAT are unproven (Moore, 2003), clearly COMPSTAT did manage to infuse the police with business logics as it attempted to quantify efficiency and demand accountability in a top-down process (Benbouzid, 2019; Lu, Yang and Thomas, 2021).

These means thus materialized new and intensified forms of governance over the police where datafication, austerity and management became united.

Similarly to what Skolnick had found, some consequences of this way of quantifying governance were that police officers would "juke stats" (Richardson, Schultz and Crawford, 2019, p. 16) to be perceived as more efficient than they were as well as prioritizing filling quotas rather than fulfilling more qualitative police goals (Moskos, 2008). As such, COMPSTAT is closely linked to the development of New Public Management (NPM) (Benbouzid, 2019). In Denmark, the development of NPM in the early 1990's was also significantly interlaced with materializing increasingly fine-tuned data-driven measurements of police efficiency to govern the police (Stevnsborg, 2016). Such efforts affected daily police work by emphasizing policing by quotas where the appearance of effectiveness in statistical terms took precedence over other forms of police work (Holmberg, 2003).

Coinciding with, and being inspired by, COMPSTAT, a range of positivist criminologists such as Sherman and Weisburd (1995) drew on the acceleration of digitalization to map crime in an explicit attempt to disprove the conclusion suggested by the Kansas City Patrol Experiment that policing could not be efficient. One of the main theoretical models within this school of place-based criminology was that crime was spatiotemporally clustering in "hot spots" of crime and that policing such hot spots intensively should then ameliorate crime. The hot spot concept becomes a central predictive technique that is later automated in modern data-driven policing platforms (Bennett Moses and Chan, 2018).

2.6.2 Intelligence-Led Policing

Another important development in the genealogy of data-driven policing is the invention of the concept of Intelligence-Led Policing (ILP) at the start of the 1990s by the police in the UK city of Kent, from where it spread (James, 2013). ILP was inspired by Problem-Oriented Policing and soon after its implementation also by COMPSTAT (Ratcliffe, 2016). It also depended upon the wider development of crime mapping tools (Oosterloo and van Schie, 2018; Egbert and Leese, 2020). In Denmark, the first steps to ILP were taken with the institutionalization of the National Investigation Center (*Nationalt Efterforskningscenter*) in 1998, which was tasked with surveilling biker gangs (Christensen, 2018).

In relation to surveillance, one of the most important aspects of ILP can be derived from the term "intelligence" in its name, referring to the working methods of domestic and military spy agencies who attempt to map and predict enemy movements and actions (Horn, 2003). As such, ILP is, in many respects, a

return to high policing that also focused on gathering intelligence to predict risk and crime (Bowling, Reiner and Sheptycki, 2010).

Like other policing concepts, ILP is not just a set of theoretical tools but includes specific forms of governance to be materialized in the police force to change it from reactive to proactive policing (James, 2013). Central among these is the so-called intelligence cycle. In its most common modern form, the intelligence cycle describes five steps, "planning & direction", "collection", "processing", "analysis" and finally "dissemination" (Ratcliffe, 2016, p 78–79). The cycle is intended to feed previous cycles into new ones, to constantly readjust and perfect policing through better and more advanced intelligence and police operations (James, 2013).

The development of ILP is deeply tied to the work of Jerry Ratcliffe who in 2008 published the influential book *Intelligence-Led Policing*. The political motivation is clear in Ratcliffe's work and suggests that by "drawing on the ideas of English philosopher Thomas Hobbes, the police are the pivotal representative of strong central government within a network of partners in the provision of governance and security" (Ratcliffe, 2016, p. 151). From these premises, Ratcliffe argues that the best way to enact police power is through scientific analysis, which he contrasts with community policing, critiquing the latter for its lack of efficiency in suppressing crime (ibid). As this thesis highlights later, this perspective is re-articulated within parts of the Danish police. Specifically, the legacy of place-based criminology takes center stage in Ratcliffe's definition of the sciences underpinning ILP:

> Intelligence-led policing emphasises analysis and intelligence as pivotal to an objective, decision-making framework that prioritises crime hot spots, repeat victims, prolific offenders and criminal groups. It facilitates crime and harm reduction, disruption and prevention through strategic and tactical management, deployment, and enforcement. - ibid (p. 6)

The near repeat phenomenon that Ratcliffe references is one of the foremost innovations of place-based criminology. It suggests a precise equation for the increased chance of a burglary occurring after another burglary has been committed in the recent past within the same neighborhood (Townsley, Homel and Chaseling, 2003). As the definition suggests through its reference to "management, deployment, and enforcement", the insertion and adoption of such concepts is related to how ILP "revived earlier professional models of top-down control, where analysis and intelligence flowed up to the executive level, who would set targets and priorities to be enacted on the frontline." (Wilson, 2019b, p. 9)

The issue of top-down management also reflects how economic considerations are a main motivation for introducing the concept, as police forces from the 1990s and onwards struggle with austerity (Kirchhoff Hestehave, 2013; Sanders and Sheptycki, 2017). ILP is thus closely linked to New Public Management since it accelerates market logics inside the police by aiming to cut costs and to do "more with less" (Wilson, 2019a; Dahl *et al.*, 2022). As such, ILP is a project to materialize new and stricter forms of governance over police forces.

Many researchers have investigated how the same economic conditions have been highly impactful in the Danish police, particularly in relation to the 2007 police reform and the Danish police turning to ILP (e.g. Balvig, Holmberg and Nielsen, 2009; Degnegaard, 2010; Diderichsen, 2017; Holmberg, 2019). This research has produced an in-depth, empirical link between how the state materializes governance over the Danish police through imposing top-down goals and the unexpected and sometimes counterintuitive enactments of police power that result from these efforts. However, while this literature touches on data, digitalization and computers to some extent, these are not its main focus, nor does it address in depth how non-human actors affect the enactment of police power. In this thesis, I attempt to contribute to the literature by adding precisely such a focus on non-human actors to better understand the complexities and contradictions within the Danish police, while also infusing the study of data-driven policing with concrete analyses of how materialization of governance through data by the state affects police power in the digital era.

A significant part of this previous literature, both in Danish police studies and in accounts of data-driven policing, relates to how such attempts to materialize stricter forms of governance over the police through austerity and in relation to ILP impact on discretionary police power specifically. For instance, critics of ILP such as Dahl *et al.* (2022) have echoed Bittner in arguing that the constraint of police discretion in Intelligence-Led Policing translates into inhibiting qualitative or human forms of police-citizen interactions. ILP is thus one of the latest battlefields over the competing ways of imagining which kinds of police power are most efficient and/or preferable in moral or political terms. ILP is also a direct historical antecedent of predictive policing (Sandhu and Fussey, 2021), as described in the next section.

2.7 Predictive Policing
The term predictive policing originates from a 2008 article co-authored by William Bratton, the aforementioned chief of NYPD and COMPSTAT system builder (Hughes, 1987). After his tenure in New York, Bratton became the head of the Los Angeles Police Department (LAPD), where he developed a new policing concept called predictive policing: "We will move from near real-time analysis to true real-time analysis and then to a 'predictive policing' posture wherein more accurate and reliable probability modeling will be

utilized to forecast potential crime trends over an increasing time span." (Bratton and Malinowski, 2008, p. 264)

With Bratton's position as police commissioner of the LAPD, predictive policing was, from its inception, more than just a theoretical concept as it was also institutionalized through changing workflows and, above all, through the implementation of automated predictive platforms. In LAPD, these platforms functioned through dividing the city into 500x500 grids colored green, yellow or red depending upon the mathematically calculated risk of crimes derived from concepts such as the near repeat phenomenon (Linnemann, 2022).

This new predictive policing was designed to increase managerial efficiency, as the title of the article co-written by Bratton and LAPD sergeant Sean Malinowski, suggested: "*Police Performance Management in Practice: Taking COMPSTAT to the Next Level*." Predictive policing thus accelerates the same design philosophies produced in COMPSTAT, i.e. it focused on improving police performance (i.e. efficiency) through algorithmically regulating (Yeung, 2019) the work of police officers and is thereby a form of materializing governance over the police.

In their article, Bratton & Malinowski (2008) suggest that such efficiency can be achieved by importing working methods from private industry such as how American retailer Target uses Big Data to produce efficiency through "real time feedback" (ibid, p. 264). Thus, Bratton & Malinowski's imported ways of imagining Big Data as a catalyst of immense efficiency from private enterprises into policing, a belief proliferated widely in other sectors (Kitchin and McArdle, 2016; Beer, 2018). A significant example of this way of imagining police power comes from the then-LAPD Chief of Detectives, Charlie Beck and data scientist Colleen McCue's (2009) highly cited article "*Predictive Policing: What Can We Learn from Wal-Mart and Amazon about Fighting Crime in a Recession?*" where they rhetorically ask "Why just count crime when you can anticipate, prevent, and respond more effectively?" (p.1).

The inspiration from the private sector in the birth of predictive policing was not limited to re-imagining police power through the lens of Wal-Mart and Amazon but in their article, Bratton and Malinowski called on colleagues to actively "partner with business at the forefront of performance management" (Bratton & Malinowski, 2008, ibid. p. 265). While market logic had existed beforehand in law enforcement in the form of, for instance, New Public Management this has been related to the materialization of forms of governance *from* the private sector into policing (Wilson, 2019a). With predictive policing, private companies would instead be inserted *into* the police organization itself.

2.7.1 The Emergence of the Police Efficiency Improvement Paradigm

Support for Bratton & Malinowski's project of creating predictive policing came from different state agencies in North America that, early on, organized a series of workshops and meetings to discuss, teach and promote predictive policing (Pearsall, 2010; Sklansky, 2011). In the report from two such "Predictive Policing Symposiums" (National Institute of Justice, 2012) held in late 2009 and mid-2010, speakers and attendees from many large American police departments are present, including LAPD, NYPD, San Francisco PD and Chicago PD, underlining how predictive policing quickly became a popular policing concept that was widely institutionalized in the United States. Among the keynotes of this Symposium is George Kelling, one of the principal authors of the Kansas City Patrol Experiment, who thus personifies the relationship between the Experiment and the efforts of predictive policing to overcome its failure in identifying a way to produce police efficiency through data analytics.

These governmental-police-academic reports and meetings were forerunners of the publication of academic articles that attempted to scientifically develop different predictive models. One of the most important articles in this development was a 2011 article co-written by, among others, mathematician George Mohler and criminologist Jeff Brantingham, which argued that "Crime hotspot maps are a well-established tool for visualization of space–time crime patterns and can be used as a method for prediction of near-repeat crimes" (Mohler *et al.*, 2011, p. 104). This quote helpfully traces inspiration for predictive policing modelling from earlier place-based criminological theories. What Mohler and his colleagues accomplished was to take these theories, alongside crime mapping and COMPSTAT's grid system and unite them in an automated predictive system that was updated in real time within devices situated right in the squad cars on patrol.

Mohler and Brantingham's association with predictive policing did not limit itself to academia, as they also became entrepreneurs in the new predictive policing market advocated by Bratton & Malinowski. Together they founded a company called PredPol, short for Predictive Policing (Egbert and Krasmann, 2020). PredPol became public in 2012 and would become, together with its competitor Palantir Technologies, one of the most recognized brand names in predictive policing (Benbouzid, 2019). The development of PredPol and Palantir thus created a market for predictive policing technologies and inserted private interest into the police force and into the scientific study of predictive policing.

After this early work, a range of academic articles were published based on the same theoretical, methodological and political premises. That is, these articles were theoretically inspired by concepts such as

hot spots and the near repeat phenomenon. They were methodologically quantitative and while they generally spent little time discussing politics explicitly, their support for policing as an unproblematic public good is implicit. Concretely, these articles have in common their attempts to develop predictive algorithms for the purposes of improving police efficiency and thereby police power. Most of these articles were written from within the fields of criminology or Computer Science and were concerned with developing place-based predictions (e.g. Haberman and Ratcliffe, 2012; Bachner, 2013; Inayatullah, 2013) though a few instead developed person-based predictive analytics (e.g. Berk, 2012; Papachristos, Braga and Hureau, 2012; Wang, Gerber and Brown, 2012). Together, these articles constitute a paradigm in Kuhnian (1970) terms where the structure and practice of a scientific theory depends on underlying, implicit premises that shape scientific work and its conclusions.

In contrast to the nascent police efficiency improvement paradigm, the legal scholar Ferguson (2012) published one of the first critical academic accounts of predictive policing in 2012. In his article, Ferguson approaches the potential impact of predictive policing on law, specifically the "Fourth Amendment consequences of this police innovation, analyzing the effect of predictive policing on the concept of reasonable suspicion" (p. 262). The Fourth Amendment in US law "protects against unreasonable seizures and searches" (p. 285) and Ferguson's argument is that since predictive policing draws on a vast range of data that is then turned into an algorithmic prediction that someone might commit a crime in the future, the police would be able to use said prediction as probable cause. Such cause can then be used to access police powers such as the right to search a citizen without said person having committed a crime, or even planned to do so.

Ferguson's work also stands out for noting the blurred boundaries of what defined predictive policing as: "Predictive policing has become a generic term for any crime fighting approach that includes a reliance on information technology (usually crime mapping data and analysis), criminology theory, predictive algorithms, and the use of this data to improve crime suppression on the streets" (ibid, p 265). This conceptual unclarity will later become a highly loaded question and is produced, as the quote suggests, by the unclear demarcations (Gieryn, 1983) between predictive policing and other policing concepts.

An alternate definition can be found in the influential 2013 report by the RAND Corporation on predictive policing: "Predictive policing is the application of analytical techniques – particularly quantitative techniques – to identify likely targets for police intervention and prevent crime or solve past crimes by making statistical predictions" (Perry, 2013, p. 1). The report furthermore differentiates different types of predictive analytics, such as hot spots, which are based on different mathematical formulas, and software but suggests that what defines a platform as predictive is its use of: "[...] methods that draw on large data

sets. In this context, large refers to an amount of data beyond what a single analyst could recall without the assistance of a computer program or similar resources" (ibid, p. 18).

The RAND report also noted that: "Predictive policing has been so hyped that the reality cannot live up to the hyperbole" (ibid, p. 27). This gives a sense of the dramatic ways of imagining predictive policing that proliferated both within policing and in the media at this time. However, only a year later, in 2014, another RAND report was published. It contained a quantitative review of how predictive police power was enacted that contrasted sharply with the dramatic ways in which predictive policing was imagined. In the "Shreveport Predictive Policing Experiment", researchers had designed an experimental patrol study akin to the Kansas City Patrol Experiment, this time in the US city of Shreveport. The report came to the conclusion that: "This study found no statistical evidence that crime was reduced more in the experimental districts than in the control districts" (Hunt, Saunders and Hollywood, 2014, p. xiii). Similarly to previous historical examples, this failure in producing police efficiency did not end the scientific quest to enact a more efficient form of policing. Instead, this failure (and others) is typically ignored in later publications by scholars in the police efficiency improvement paradigm who, like Kuhn's scientists, continue their attempts despite their experiments failing to produce the hypothesized results.

2.7.2 Critical Theorists Reacts

In clear contrast to the development of the police efficiency improvement paradigm, one of the first critical theoretical works on predictive policing was published by Reigeluth (2014) who explained that:

> Recent pilot crime-prevention programs in US and British cities have apparently turned Philip K. Dick's science-fiction story, Minority Report—in which law enforcement is a prescient organization that stops crimes before they can be committed—into reality. Building on models used for predicting earthquake aftershocks, the real-world crime-prevention program called PredPol (or Predictive Policing), allows police to follow real-time crime patterns and establish extremely precise—although perhaps not relevant—'hot-spots' throughout the city. - Reigeluth (2014)

As Jasanoff (2015) and before her Haraway (2016) have explained, references to science fiction serve as ways of imagining dystopian or utopian futures in relation to the technological politics of present society. By drawing on the science fiction work Minority Report (a reference that is highly popular in reference to predictive policing), Reigeluth imagines predictive police power as immensely powerful. Consequently, he also links predictive policing to the production of a new "algorithmic governmentality" (ibid, p. 252) through

increasing the capacities of the police and thus the state to discern the present and past and to foreclose the future.

Importantly, Reigeluth's article is also one of the first to critique the belief in a correspondence between crime data and actual crime rates, which the police efficiency improvement paradigm implicitly assumes in its production of predictive models. Instead, he suggests that "the self-evidence and objectivity of data to be the legitimizing factor for its compilation and correlation, as if data can spontaneously and irresistibly speak the truth and provide knowledge" (ibid, p. 246). Instead of true knowledge, police data is thus conceptualized as potentially black boxed and as creating the illusion of certainty alongside functioning to legitimize police power.

From Reigeluth's opening salvo, a range of articles were published that followed the same theoretical, political and methodological lines. Just as with the police efficiency improvement paradigm, these underlying premises constitute these articles as a paradigm. On the level of theory, the articles typically utilize Foucault or Deleuze's thinking to indicate how predictive policing entrenches and develops police and thereby state powers, particularly through accelerating surveillance capacities (e.g. Andrejevic and Gates, 2014; Amoore and Piotukh, 2015; Erwin, 2015; Stalcup, 2015). For instance, Sadowski and Pasquale argue that:

> Police power to surveil large areas, use remote scare tactics, automate escalation of enforcement, and even practice what's being called 'predictive policing' is supposed to lead to a more orderly society. To the extent such measures deter legitimate protest, they entrench a more mechanized, inorganic society — one where surveillance is used to capture, and replay, one set of power relations, over and over again. The body politic mummifies into a very different type of social organization: a leviathan machine -
> Sadowski and Pasquale (2015, p. 13)

In this quote, the politics of predictive policing are inversed from how the police efficiency improvement paradigm imagines police power as a neutral, general good. Instead, Sadowski and Pasquale suggest that predictive policing produces a machinic power of domination in the form of a digitalized Leviathan whose power is extended from the now into the future. As such, they produce an important link between the enactment of police power in the digital era and its relation to state and politics, which also serves to inspire this thesis.

However, while such arguments are relevant in linking data-driven policing to politics, the relationship between methodology, data and how conclusions based on these are made in this paradigm is at times

problematic. That is, articles in the critical theory paradigm are based almost exclusively on data from secondary sources and public material (c.f. Behrndt and Wagner, 2015; Monica, Molteni and Quassoli, 2015). As the quotes above suggest, this material presents and imagines predictive policing as enacting immense police power. Thus, critical theorists tend to take the claims of police efficiency improvement theorists, police and the marketing of predictive policing companies for granted.

In contrast, earlier police studies have shown both a distinct lack of efficiency in policing in general and revealed that the police themselves use technical and scientific advancements to appear efficient and authoritative (Manning, 1977; Ericson and Shearing, 1986). In this thesis, I attempt to take such insights from earlier policing studies and marrying them to modern critical theory alongside a deeper, empirical investigation to trace not just how police power is imagined but also how it is enacted in the digital era. This is an attempt to produce a critical theory attentive to how (police) power is not totalizing, which would thereby foreclose alternatives to policing (for a similar argument, see Butler, 2006). It is also an approach that allows further analytical nuance by extending critical reflections to the ideological claims and data produced and presented by police, private companies and in scholarship on the supposed efficiency of their platforms.

2.7.3 The Police Reform Paradigm

One of the main reasons I state that work on predictive policing can be demarcated into different paradigms is the continuity throughout the years of the style or form of articles sharing the same methodological, political and theoretical bases. This can be traced by how, from 2016-2017, both critical theorists (e.g. Joh, 2016; Andrejevic, 2017; Brennan-Marquez, 2017) and those improving predictive models for efficient police work (e.g. Lloyd, Santitissadeekorn and Short, 2016; Rosser *et al.*, 2017; Rummens, Hardyns and Pauwels, 2017) produce articles that worked from the same theoretical, methodological and political premises as established earlier. As such, these also produced very similar conclusions to previous work in the same paradigm. In Kuhn's (1970) theory on paradigms, this is "normal science" – the scientific continuation of attempting to perfect models or solve puzzles articulated within the paradigm that scientists work from.

Alongside the normal science produced by the police efficiency improvement and critical theory paradigms, a few groundbreaking studies stood apart from either paradigm. One of the most influential and, to this day, most unique of these was Lum and Isaac's (2016) comparison of public health data on narcotics use in Oakland against how police arrests for narcotics use were spatially distributed in the city. Lum and Isaac then reverse engineered a public version of the PredPol algorithm released by PredPol and subsequently

showed that the algorithm would not just reproduce how police overwhelmingly targeted racialized and poor areas of Oakland (and thereby racialized and poor individuals) but even increase police attention to these areas. The issue was thus a feedback loop where biased police practice would be amplified or reproduced in predictive policing platforms and increase and tech-wash police attention to racialized and poor areas, communities and individuals (ibid). The feedback loop concept has since become one of the most significant concepts in studies on predictive policing.

These findings were echoed by Brayne (2017), who conducted one of the first, and most influential, ethnographic accounts of predictive policing. Examining the Los Angeles Police Department's use of PredPol as well as Palantir's Gotham platform Brayne shows how police surveillance practices widen as "dragnet surveillance" (p. 992), extending across society through the capacity of Palantir's software to merge a variety of different databases into one joint platform. At the same time, Brayne showed how surveillance efforts relied upon and interacted with very practical work. This includes filling out forms that require meticulous labor to enter police databases, a process shaped by and through the structure of analog police forms, police systems and legal-bureaucratic regulations. In turn, Brayne (ibid) details how predictive policing materializes governance in relation to data-driven systems by directing, controlling or curtailing discretionary police power through automated processes and new managerial systems of control and surveillance. Through describing how officers resist this process and instead champion their own discretionary power and intuition, Brayne's work re-actualizes for the digital era the classical debates between Bittner and Skolnick on police discretion.

Aligned with this revival of classical debates about police discretionary powers Ferguson (2017) published the highly cited *The Rise of Big Data Policing: Surveillance, Race and the Future of Law Enforcement.* In it, Ferguson details issues of how predictive policing produces increased surveillance, inhibits freedoms and civil liberties, and produces feedback loops. Rather than just posing a general critique, Ferguson distinguishes himself by suggesting how to use predictive policing systems against the police themselves as: "Parallel to the innovations to monitor and understand crime patterns, police can now map and track police patterns to better understand police practices and predict future personnel problems" (p. 151). Ferguson refers to the data that develops in this process as "blue data" (p. 150) and argues that it can be used to surveil and control the police, that is, used to materialize stricter governance over police power.

In the wake of Ferguson's monograph, a range of similar scholarly accounts appeared throughout 2017–2019. Like work related to the critical theory paradigm, these articles drew on secondary sources or public material. Yet, distinct from this paradigm, these scholars did not criticize police power as such but underlined like Ferguson the need for police reform to materialize the means of governing the police

and/or for general societal reflection in the face of predictive policing (Cohen and Graver, 2017; Oswald *et al.*, 2018; Sheehey, 2019). One succinct example of this reasoning can be found in a widely cited article by Bennet Moses & Chan:

> **Our goal is not to argue that predictive policing tools are bad or shouldn't be used.** Such an argument would require at a minimum a proper comparison with other bases for law enforcement decision-making which may be equally or more flawed. **Our goal is to understand predictive policing so that those using it, or considering it, are aware of its limitations as well as its potential**, **can build in opportunities for evaluation, and can construct knowledge-sharing and regulatory frameworks that preserve accountability.** Predictive policing provides tools that have the potential to leverage developments in data science in order to improve the effectiveness and efficiency of law enforcement agencies. However, this ultimately depends on humans understanding the limitations and assumptions embedded in the software and ensuring that ineffective and unjust outcomes are avoided. – my emphasis, Bennett Moses and Chan (2018, p. 818-819)

This quote highlights the reformist politics of what I therefore dub the police reform paradigm, which contrasts with the critical theory paradigm. Rather than offer a critique of police power as such, it instead calls for reflection and limitation on predictive policing. This often, but not always, relates to how many scholars in this paradigm are legal scholars who suggest legal or regulatory changes to be materialized to govern policing (Isaac, 2017; Gstrein, Bunnik and Zwitter, 2019).

Moreover, Bennet Moses and Chan's work underlines the conceptual unclarity that continued to affect studies on predictive policing. In their definition: "predictive policing uses new analytic tools within a pre-existing ILP approach" (p. 808). However, the reasons why predictive policing would be subordinate to ILP, and not, for instance, it being the other way around, remains unclear. That is, this is an example of how predictive policing is differently conceptualized and defined, and that the reasons for why different scholars produce different definitions is unclear.

How to define and demarcate predictive policing was and is not merely a scholarly issue. By 2018, large-scale protests had developed in Los Angeles (the birthplace of predictive policing), which related to the critiques of predictive policing as increasing discriminatory policing through feedback loops and strengthened surveillance. In particular, such critiques concerned Palantir as the company suffered through a range of scandals, including becoming targets of critique due to its alleged involvement in supporting the Trump administration's efforts to accelerate expelling undocumented migrants through the Immigrant and

Customs Enforcement (ICE) agency (Bloch-Wehba, 2022). These protests ultimately caused the city of Los Angeles to ban predictive policing (Brayne, 2021). However, Willam Bratton would, after the ban, launch a new policing concept, Precision Policing (Bratton and Anderson, 2018). The concept of Precision Policing "consists of two important components: an intelligence-led investigative component and a neighborhood coordination component. The intelligence-led investigative side of this policy uses predictive analysis of all crimes" (Ashraf 2020, p. xv). Thus, the boundary (Bowker and Star, 2000) demarcated (Gieryn, 1983) between not just predictive policing and Precision Policing, but between these concepts and Intelligence-Led Policing, became even more porous.

Later in this thesis, I argue that the demarcation between predictive policing and concepts like ILP is driven by political interests as much as academic unclarity and I develop a reconceptualization of prediction. However, in order to avoid some confusion about the concepts being used, I utilize the broader concept of data-driven policing as a more general way of describing police use of data analytics (c.f. Browning and Arrigo, 2021; Sausdal, 2022; DaViera *et al.*, 2024). To set the stage for this discussion, I will now give an account of the earliest scholarly work on POL-INTEL.

2.7.4 Interrogations of POL-INTEL

As the introduction explained, the Palantir Gotham system which, dubbed POL-INTEL in Denmark, was legalized in 2017 and has been operational since 2018. POL-INTEL was the object of a critical public debate, and following this, Volquartzen (2018) wrote one of the earliest scholarly articles on the platform. In her work, Volquartzen refers to the platform as part of how the Danish police turn toward ILP while warning of Palantir's dark reputation in the United States by highlighting the authoritarian right-wing politics of its co-founder Peter Thiel. Following Volquartzen's article, Flyverbom and Hansen (2019) investigated POL-INTEL in a manner owing much to the critical theory paradigm. Before moving on, it is worth noting that in both these articles the demarcation between predictive policing and Intelligence-Led Policing is unclear, which underlines the unclear borders between the concepts. What is apparent in both articles, however, is that they align POL-INTEL with sweeping changes in police work. For Flyverbom & Hansen, the development of POL-INTEL suggests that:

> […] we may see the emergence of standardized ways for analyzing data in policing. The potential flaws or assumptions built into these systems may therefore be reproduced, rather than challenged, or even go unnoticed. What counts as crime or gets detected as an anomaly will be shaped by the set-up and design decisions built into such systems.

We therefore need to 'open up the black boxes' (Latour 1988) of digital policing systems

(ibid, p. 182)

The issues that concern Flyverbom & Hansen (2019) and Volquartzen (2018) thus relate to the potential for reproducing feedback loops, black boxing, and increasing police and state power. Moreover, in both articles, an important issue is the datafication of the Danish police in relation to the entry of Palantir as a large-scale Silicon Valley-esque private actor and the changes in policing this might bring about: "Thus, the datafication of police work, as well as broader processes of what we have termed pluralization, privatization and technologization, may lead to rather extensive transformations of professional identities and practices in police work. These issues deserve more empirical scrutiny in future research" (Flyverbom & Hansen, 2019, p. 183). Taking this suggestion to heart, this thesis attempts to empirically build upon, develop and problematize these more general notions developed on POL-INTEL.

2.7.5 The STS-Ethnographic Paradigm

I have earlier traced the normal science within each of the three paradigms to 2017. Moving forward in time, the same continuities appear. For instance, work within the police efficiency improvement paradigm continued to produce predictive models based on hot spots (Mohler and Brantingham, 2018; Fitzpatrick, Gorr and Neill, 2019; Nair *et al.*, 2019). Generally, the police efficiency improvement paradigm had been, and is, relatively unconcerned with critiques leveraged against it by scholars outside of the paradigm. A rare reply to critics came in Brantingham, Valasik and Mohler's (2018) article "Does Predictive Policing Lead to Biased Arrests? Results from a Randomized Controlled Trial." The article is an attempt to meet the accusation that predictive policing causes feedback loops. After noting their study's methodological limitations, Valasik and Mohler conclude that predictive policing platforms did not, in their investigation, *worsen* potential biased police arrests. Similarly, the police reform paradigm continued raising issues that called for reflection on the power of predictive policing in relation to how to materialize governance over the police (Ferguson, 2019; Grace, 2019; Van Brakel, 2020). Lastly, critical theorists pressed on with critiques of how predictive policing entrenched state power (Joh, 2019; Scannell, 2019). A notable development in this critical thinking is the appearance of a few empirically-based articles (Jefferson, 2018a; Barabas, 2019).

A new development gradually emerged by 2018 that broke with the earlier paradigms by producing knowledge based on ethnographic investigation of predictive policing in practice. One of the first of these accounts is Kaufmann, Egbert and Leese's (2019) investigation of how predictive policing was enacted by the German police. While work based in other paradigms suggested that predictive policing leveraged an immense, sometimes even ascribed science fiction-esque, police power, the authors instead drew on thinking along Science and Technology Studies lines to detail how such systems rely upon specific, mundane

human work to classify and categorize input that predictive systems then utilize. For instance, predictive systems based on the near repeat phenomenon develop their predictions from inputted point scoring by police officers at the scene of a crime "For example, if a window has been professionally drilled in order to access the crime scene, a certain amount of points is added to the case's overall score" (p. 678). Once a certain threshold of points has been reached, the system then issues a predictive alert for a potential repeat burglary in the neighborhood. Such an ethnographic specification of the enactment of predictive police powers stands in contrast to the more dramatic ways of imagining predictive policing that I have presented earlier.

These discrepancies between how predictive policing was imagined as being enacted versus police practice was developed further in Egbert & Leese's (2020) influential *Criminal Futures: Predictive Policing and Everyday Police Work.* Through drawing on the work of Callon and Latour, Egbert and Leese specified the minutiae of predictive policing as requiring translation (c.f. Callon, 1984) in and through sociotechnical networks that compose different parts of the police. Building on their previous insights detailed above, they showed how intelligence workers required standardization and acceleration of data entry practices by police patrol workers. This caused friction between these groups and within the wider police institution. Moreover, predictive policing itself was shown to be unevenly performed as patrol workers might ignore or set aside predictions.

Similar findings were developed by Brayne (2021) in another landmark monograph in the field of predictive policing, *Predict and Surveil: Data, Discretion and the Future of Policing*, which expanded her 2017 article. Like Kaufmann, Egbert and Leese, Brayne's disciplinary background is not STS itself. Instead, she draws on the work of STS scholars such as Latour, linking it to perspectives from classical police ethnographers such as Bittner. Thereby, Brayne details how police discretion is displaced upwards by predictive policing platforms, how data becomes meaningful only in relation to larger social relations and institutions, and how data relates to power. For instance, Brayne follows how LAPD officers are instructed to increasingly fill out "field interview cards" in their interaction with citizens. Each card then produces point scoring within the Palantir Gotham system and, in practice, produces feedback loops. In contrast to the rest of the burgeoning STS-ethnographic paradigm, Brayne empirically investigates the relation between policing and state governance structures, such as through the aforementioned LAPD City Council's ban on predictive policing. This thesis builds on, and attempts to further analytically and methodologically develop, these general suggestions to concretely and empirically understand the relationship between police power and state power in the digital era.

In the wake of Egbert & Leese's (2020) and Brayne's (2021) influential publications, a range of studies appeared that continued drawing on theories from Science and Technology Studies and ethnographic methodology. Many of these studies analyzed questions of changing work practices, organizational restructuring and resistance efforts within the police in the face of the implementation of data-driven policing (e.g. Gundhus *et al.*, 2021; Sandhu and Fussey, 2021; Lally, 2022; Waardenburg, Huysman and Sergeeva, 2022; Gundhus, Skjevrak and Wathne, 2023). These studies imported an STS-inflected politics of skepticism towards expert systems and technological solutionism (Latour, 2004; Moore, 2010; Sismondo, 2011; Lynch and Cole, 2017) and a typical STS sympathy for the underdog in a given system (Söderberg, 2021). In so doing, they re-actualize Bittner's (1990) defense of discretion in relation to the machine justice (and governance) imposed by predictive policing software.

STS interest in questions of knowledge production has similarly been translated by scholars working in this field into the study of how predictive policing platforms produce claims to expertise and epistemic authority (Duarte, 2021; Egbert and Mann, 2021). Epistemic issues have also been raised in reconsidering the relation between data, ontology and knowing. For instance, Kaufmann and Leese (2021) have argued that data is not given, but requires being inserted into broader social relations to become legible and that this is a process of constant renegotiation and becoming, a situation of "information in-formation" (emphasis in original, ibid, p. 1). To conclude, it is due to these theoretical, methodological and political similarities that I argue that these articles constitute together the last of the four paradigms within the field of studying data-driven policing.

In relation to methodology, Kaufmann is one of the few in the field of data-driven policing who has written extensively about methodological issues (Kaufmann *et al.*, 2020; Kaufmann, 2023). Building on the notion of non-human agency from STS and Barad (2007), Kaufmann suggests that the researcher should aim to "follow the data" through the data life cycle, analyzing the specific effects and frictions that appear at every stage.

At the same time, work involving this paradigm has almost exclusively centered on the site of the police institution itself. Therefore, in contrast to earlier ethnographic police studies (e.g Banton, 1964; Bittner, 1967; Manning, 1977; Skolnick, 2011), police use of force in support of the status quo is off stage (c.f. Coleman, 2016) in the STS-ethnographic paradigm. The politics of the police and its relation to social order and the state has consequently often been unclear. Similarly, except for Brayne's general description of state governance institutions, the role of the state in materializing governance in relation to data-driven systems has been relatively unexplored. For that reason, in this thesis, I take critical theoretical perspectives that have engaged with the state and synthesize them with these detailed STS concepts to attain a fine-tuned set

of concepts for tracing the relationships between the police, state, technology, science and social order. This aim is explicated and developed in detail in the next chapter, on Theory.

3.0 Theorizing Data-Driven Policing

To analyze how police power is imagined and enacted in the digital era, and how governance is materialized in relation to data-driven platforms, I require a set of theoretical tools that elucidate and relate policing to phenomenon like digitalization, data, technology, materiality, imagination, and power. Furthermore, as the police are a fundamentally political organization reflecting the monopoly of violence of the state, I need concepts that are attentive to the state, state-making, and politics. Building on my argument in the previous chapter, these concepts are to be found through synthesizing a variety of concepts that, in particular, hail from critical theory and STS concepts. Yet, as I elaborate below, at least parts of STS developed through ontological and epistemological premises are at odds with some core critical theory concepts. Consequently, the first task in this chapter is to investigate and reassemble (Latour, 2007) and these differences to produce a theoretical framework attentive to the complexities of how the human and non-human intermingle when introducing new predictive platforms in law enforcement.

The ontological differences and divisions between critical theory and parts of STS involve how the field of STS was formed. To be precise, foundational STS work demarcated the field from previous studies of technology and society by rejecting supposedly totalizing, abstract theorizations (e.g. Latour and Woolgar, [1979]). One of the most significant theoretical frameworks in early STS, Actor-Network Theory (ANT), was a "a little-narrative, thoroughly empirically-grounded, very material, small-scale relative of (say) Foucault's larger-scale epistemic project or Deleuze's rhizomes" (Law, 2008, p. 10). That is to say, these ontological perspectives in STS were related to claims made in the wider school of poststructuralism (Eagleton, 1997). While poststructuralism is a broad theoretical current, it generally denotes an ontological rejection of objectivity and corresponding epistemologies that attempt to locate and define true knowledge (Eagleton, 2013). Specifically, poststructuralist thought developed in reaction to the philosophy of Louis Althusser (Hall, 1985). A major trend in the theoretical reorientation of poststructuralists like Foucault is to shift the perspective from Althusser's focus on the reproduction of capitalist society (Althusser, 2008) to an ontological model where power is dispersed albeit ever-present (Žižek, 2010).

In relation to STS, Söderberg (2017) argues that poststructuralism has split the field into two "camps" (p. 186) divided over the ontological question of how heterogeneous the world can be said to be. On the one side is the "political economy" (ibid, p. 186) camp and on the other the "empirical post-structuralist" (ibid, p. 186) camp. Their difference lies in how empirical post-structuralists argue that the world is radically heterogeneous and split over a multiplicity of social sites to the extent that overarching concepts such as "capitalism," "state" or "class" cannot adequately capture this complexity and are thereby superfluous. In contrast, the political economy camp is built on the premise that the world is ontologically stable enough

for such critical concepts to be deployed and thereby a societal critique can be developed concerning how political economy shapes the world.

Such ontological questions related to multiplicity also involve how to analyze the enactment of police power. For instance, Hald's (2011) STS and Deleuze-inflected analysis of crime scene investigators in Denmark focuses almost exclusively on research sites within the police. Consequently, what is "off stage" (c.f. Coleman, 2016) from these sites, such as the police use of violence, is made invisible. That is, in such a post-structuralist theorization, police practice seems interchangeable with any other investigatory or knowledge production process enacted by other professions such as firefighters, insurance investigators or journalists. From such a perspective, the link between police, state and social order is lost and power seems to be both nowhere and everywhere (c.f. Haraway, 1988) with the concomitant loss of analytical clarity of how police power is enacted.

Ontology is thus a central concern for how to understand and analyze data-driven policing. Yet, while I have presented the issue with the ontology of post-structuralist STS work, my argument has not been that all the concepts in this camp are incommensurable with critical theory. Specifically, this relates to how STS developed historically from critical theory and thereby their relation can be likened to the DNA of the shared *gene*alogy of the two theoretical schools. While the previous John Law quote signifies the importance of Deleuze and Guattari's work for STS, another cornerstone is how STS was formed in relation to critical theorists such as Althusser. This influence is explicit in the work of Latour (e.g. 1993), Callon (e.g. 2007) and Law (e.g.1984). As an example of this influence in the field in general, Althusser's anti-humanism has survived in STS' interest in non-human actors (Söderberg, 2017). Similarly, Deleuze and Guattari's work is written in critical dialogue with Althusserian theory (Oh, 2022) and also serves to transmit underlying Althusserian conceptions to foundational STS thinkers such as Latour and Callon (Jensen and Auld, 2022).

Moving back even further up the family tree of STS and critical theory, these theories are related to the ontology of the Dutch 17th century philosopher Spinoza ([1677]). Spinoza developed a monist materialist ontology featuring the philosophical position that the world consists of a single essence (Loux, 2002). In other words, Spinoza's philosophy discarded both dualist and idealist ontologies that claimed that the world was fully or partly composed of also non-material things. Instead, materialist monism regards what appears to be highly diverse phenomena such as institutions, technologies, speech, beliefs, groups, or structures as consisting of the same materiality. Consequently, these things must be analyzed as immanent to the materiality of the world, rather than through recourse to transcendent categories. That is to say, the foundation of Spinoza's materialist monism is the interconnectedness of all entities (Spinoza, 1949).

These ontological Spinozan foundations are explicitly embraced in a range of seminal works such as Althusser's (2008) *On Ideology*, by Latour (1993) in *The Pasteurization of France* and by Deleuze and Guattari (1987) in *A Thousand Plateaus: Capitalism and Schizophrenia*. This influence can be read more widely in STS interest in the interplay between different modalities of materiality to break up dualisms in Western thought between subject/object, actor/structure, human/material and nature/culture (Sismondo, 2011). As such, Spinoza is the "missing ancestor" of the critical theory and STS ontological family tree, and it is through this shared ontology that they can be combined. But how can this be accomplished in more concrete terms? I will now answer this question drawing on a range of concepts connected to Spinoza's monism and situate these in relation to studying data-driven policing.

3.1 Reassembling the Police: Ontological and Political Interrogations

I will begin by drawing on one of the clearest examples of monist materialist thinking in STS, found in Callon and Latour's conceptualization of the state, which they denote as "at the same time machine, market, code, body and war" (Callon & Latour, 1981, p. 294). In this sense, the state is not an abstract, macro-theoretical entity but rather made up of a multiplicity of heterogeneous components assembled to form the Leviathan. Applying this perspective and drawing on Hobbes' image[3] of the Leviathan as a creature composed of smaller bodies, both human and non-human, Callon and Latour (ibid) emphasize how the Leviathan is composed in practice by micro actors who assemble allies to become macro actors. This process of changing scales (Latour, 1983) is used in Callon and Latour's theorizing to break up and traverse the division between micro and macro and thus connect different analytical levels.

The notion of changing scales is particularly helpful when analyzing the relation between different levels of the state and the police. Different states materialize different organizational forms of governance over police forces in relation to the structure of the state in question. In Germany, the police are federal whereas in the United States, police forces are organized on a municipal level. In Denmark, "[T]he Danish police are the *state's* police." (my translation, emphasis in original, Diderichsen, 2018, p. 204) which means that law enforcement is a single, unitary organization that is centralized and subordinate to the Ministry of Justice and, by extension, the Minister of Justice. In terms of changing scales, this means that the Danish police are heavily influenced by political initiatives launched from government and imposed on the police force in a top-down process where political decisions "trickle down" from police leadership to the lower ranks. As I

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[3] This is both a figurative and literal image that Callon and Latour reference, as the first book cover of the Leviathan was an etching of a giant Sovereign/King whose macro body was composed of smaller, micro human bodies (see Hobbes: 2002).

engage with in more detail in the last section of this chapter, the reverse movement, where police officers produce and output data during everyday police work also then informs the political arena.

Significantly, this line of thinking also relates to analyzing developments within the police organization itself. For police power to be enacted, a variety of human and non-human actors must be successfully assembled and aligned. This is a process that changes scales: from the police director sending an order down the line, to the officer in a police car requesting support in a potentially volatile situation. In both cases, human and non-human elements must be aligned and put into relation with one another; emails must be sent, briefings organized, calls made, data produced, bodies moved, cars must start and logins to policing platforms must function. Thereby, I also apply Callon and Latour's (1981) way of thinking of the Leviathan state to the police specifically and how the state more generally interconnects with law enforcement in complex ways. Classical police studies analyzed technologies as auxiliary to policing (Bittner, 1967; Manning, 1977; Skolnick, 2011). Instead, this perspective lends itself to investigating how technologies are constitutive features of law enforcement. That is, to reformulate a popular STS slogan from Latour (1993b), the police have always been technological.

Thinking of the police as constituted in and through technology is a perspective that opens up for unravelling how specific innovations – from the police car to the predictive platform – re-articulates and reassembles (Latour, 2007) how police power can be enacted and how governance over the police is materialized. The historical way to ensure that the police are capable of enacting police power is through instituting a strict hierarchy inspired by top-down military organizations (Manning, 1977). Consequently, artifacts and material actors form a central element in materializing governance by attempting to enforce, and make possible, certain ways of acting and being (c.f. Latour, 1992). However, a central contradiction in how governance is materialized over the police is that police officers at the bottom of the hierarchy are generally difficult to surveil since their work is often away from management (Granér and Kronkvist, 2016). Significantly, this structure of police work also means that "the police department has the special property [...] that within it discretion increases as one moves down the hierarchy" (Wilson, 1978, p, 7). The division of labor between "management cops" and "street cops" also correlates with how these groups often have very different ways of imagining what is efficient and morally good or politically preferable police power (Reuss-Ianni and Ianni, 1983).

This internal class struggle within the police relates to how a range of technologies have been materialized to govern the rank-and-file of the police. In the digital era, data-driven policing platforms are one of the most significant ways of controlling discretionary police power (Benbouzid, 2019; Wilson, 2019b, 2021;

Egbert and Leese, 2020; Brayne, 2021). In this thesis, I use the term algorithmic regulation to specify how this occurs. Algorithmic regulation denotes:

> [...] decisionmaking [sic!] systems that regulate a domain of activity in order to manage risk or alter behavior through continual computational generation of knowledge by systematically collecting data (in real time on a continuous basis) emitted directly from numerous dynamic components pertaining to the regulated environment in order to identify and, if necessary, automatically refine (or prompt refinement of) the system's operations to attain a pre-specified goal. – Yeung, (2018, p, 507)

In this thesis, I apply this definition to the specific case of POL-INTEL to specify how governance is materialized over the police in relation to how the platform works to control and surveil, and thereby affect, the enactment of discretionary police power. However, these processes are not direct, instant, or necessarily smoothly enacted but subject to what Callon (1984) refers to as *translation*.

Callon's (1984) model of translation underlines four steps in how sociotechnical networks are produced: 1. problematization where an actor specifies *what* a given problem the network is assembled around, then defines the relevant actors and posits themselves as an obligatory passage point that all other actors must pass through. 2. Interessement where the actors are "interested", that is, locked into roles. 3. Enrollment where actors are defined and coordinated in a process of alliance-building to form networks. 4. Mobilization where an actor emerges as a representative for the network who appears as unproblematically speaking for it. This end stage of translation is also closely associated to black boxing, which refers to the obscuring of the political and social history and effects of a given technoscientific process, theory or artifact (Latour, 1987). In turn, black boxing is also closely linked with what Latour (2004) refers to as the turning of a phenomenon from a matter of concern, which can be debated and contested, to a finalized matter of fact that appears neutral, technical, determinist and a-political.

Significantly, black boxing does not mean that translation is itself a closed or determinist process. Rather, Callon (1984) underlines how actors may desert or betray the network at any point. The translation perspective is helpful in reconceptualizing data-driven policing from the sometimes abstract critical theoretical publications suggesting that police power is smoothly enacted into state power (e.g. Reigeluth, 2014; Joh, 2019; Linnemann, 2022). Instead, translation is useful as a way of conceiving how every moment of translation opens up for a chance of failure: the algorithmic prediction might never actually be translated into an actual police patrol for instance (c.f. Kaufmann, Egbert and Leese, 2019; Egbert and Leese, 2020; Duarte, 2021; Sandhu and Fussey, 2021).

The theoretical concepts that flow out of the ontological premise of Spinozan monist materialism I have defined are key to understanding how the enactment of police power in the digital era and the materialization of governance in relation to data-driven policing are connected to practice, work, change, politics and materiality. Yet, ontology "only" describes the structure of the world and in classical philosophical schemas, it is always interrelated to epistemology, to how knowledge is gained and developed. In what Söderberg (2017) refers to as the empiricist post-structuralist camp of STS, this epistemology is, as its name suggests, empiricist. I will turn now to critiquing this empiricism and from there develop an argument of the necessity of utilizing the notion of ideology when analyzing state, knowledge, and social order.

3.2 Going Camping with Althusser: On Ideology, Epistemology and Police Power

Söderberg (2017, see also Söderberg, 2021; Söderberg and Bjurö, 2023) denotes Latour, Callon and others not just as the post-structuralist camp but as a *"empirical* post-structuralist*"* (my emphasis, p. 188) camp. Söderberg argues that the consequences of empiricism in this camp further dissolve the use of overarching concepts such as state or class, since post-structuralist empiricists claim that these concepts are not empirically observable. Thereby, Söderberg concludes that scholars in this camp use empiricism in combination with post-structuralist ontology to produce a "ban" (ibid, p. 196) on critical theoretical notions such as ideology critique. Accordingly, as I build a theoretical framework which draws heavily on STS and since issues of societal power are central to considering police power, it is thus necessary to engage more deeply with epistemic issues and, by extension, ideology, and ideology critique. I begin by examining Latour's position due to his immense influence as a stand-in for the empirical post-structuralist camp (and STS as a whole) at large:

> The fact that we do not know in advance what the world is made up of is not a reason for refusing to make a start, because other storytellers seem to know and are constantly defining the actors that surround them – what they want, what causes them, and the ways in which they can be weakened or linked together. These storytellers attribute causes, date events, endow entities with qualities, classify actors. **The analyst does not need to know more than they; he has only to begin at any point, by recording what each actor says of the others.** He should not try to be reasonable and to impose some predetermined sociology on the sometimes bizarre interdefinition offered by the writers studied. **The only task of the analyst is to follow the transformations that the actors convened in the stories are undergoing**. For instance, an anonymous editorial, written just after the Franco-Prussian War, states: 'It is science and the scientific spirit that have

conquered us. Without a complete resurrection of the great French science of former times, there is no possible salvation' (1872, p. 102). **Is this an 'ideological' rendering of what really caused the French defeat? Is it a 'false' representation of what happened? Is this a pure 'expression' of late nineteenth-century scientism? The analyst does not have to know.** – my emphasis, Latour (1993, p. 10)

This quote is a significant example of Latour's, and the wider empiricist post-structuralist camp's, epistemology and the conclusions that flow from this. To summarize, Latour argues that all a priori explanations should be discarded and that an analyst should only follow the actors and record their actions. He thereby argues that notions such as ideology should be discarded *tout court*. But, as Karen Barad (2003) argues against poststructuralist linguistic ontologies, which claim that the world is structured by human language in one way or another, why make the assumption that human language is so immediately accessible and the rest of the world is not? By extension, why assume that it is so easy to "follow the actors" and so difficult, or even superfluous, to follow societal power structures like ideology? Spivak's (1988) critique of Foucault and Deleuze's empiricism is a relevant and precise criticism of the issues reproduced from these thinkers to the STS camp of poststructuralist empiricism:

> In the Foucault-Deleuze conversation, the issue seems to be that there is no representation, no signifier (Is it to be presumed that the signifier has already been dispatched? There is, then, no sign-structure operating experience, and this might one lay semiotics to rest?); **theory is a relay of practice (thus laying problems of theoretical practice to rest) and the oppressed can know and speak for themselves.** [...] – my emphasis, Spivak (1988, p. 74)

Spivak's critique of Foucault and Deleuze is perfectly mirrored in regard to Latour and the empiricist post-structuralist camp of STS where following the actor becomes a "relay of practice" (ibid.) where interest and power are obscured (see also Star, 1990, for a feminist STS critique of ANT:s obscurement of interests). Such issues are particularly acute in relation to how police power is imagined and enacted. As I argue at length below, in terms of the latter, even the seemingly most simple and mundane police categories such as "criminal" or "non-criminal" depend upon the wider (ideological) frameworks that Latour advocated abandoning. As Bowling, Reiner and Sheptycki contend:

> Modern societies are characterized by what can be termed 'police fetishism,' which conceives of a time-bound human product – the police institution – as if it was an eternal entity. It tacitly presumes that the police are a functional prerequisite of social

order and that without a police force chaos would ensue. This is an unwarranted
ideological assumption. In fact, many societies have existed without a formal police
force of any kind, and certainly without the present model. The police contribution to
crime control and order maintenance is debatable […]. – Bowling, Reiner and Sheptycki
(2010, p. 3)

In this sense, ideology concerns the misrepresentation of policing as the efficient and thin blue line
(Linnemann, 2022) without which there would be a Hobbesian "Warre of Everyone Against Everyone"
(Hobbes, 2002, p. 206). Such ideological assumptions are also at hand in the different paradigms on data-
driven policing. In the police efficiency improvement paradigm, the notion that police are efficient crime
controllers is its most central animating feature (e.g. Braga and Weisburd, 2010; Inayatullah, 2013; Mohler
et al., 2015; Ratcliffe, 2016). Similarly, police reformers assume that policing is both necessary and a social
good, which is the belief that animates their attempts in rectifying specific issues with discretionary police
power, while not critiquing police power as such (e.g. Bennett Moses and Chan, 2018; Van Brakel, 2020; Lu,
Yang and Thomas, 2021). This is not incidental. The scientification of the police force itself is a part of this
ideological process, as "The police wear the 'uniform' of science and law so that they can appear to be
making only technical decisions in fulfillment of their instrumental roles; […] the police are a key agency for
the ideological uses of science and law in the reproduction of dominant order" (Ericson and Shearing, 1986,
p, 134). Thus, without ideology critique, the role that scientific theories have in imagining police power is
naturalized, normalized, and legitimized. This argument begs the question however, of what is specifically
meant by ideology in this thesis?

3.2.1 "Hey, You There!" – Cops and Ideology
Latour (1993, 2004) and those following him, such as Jasanoff (2015), refer to ideology as a system of false
consciousness that refers to "the processes whereby interests of a certain kind become masked,
rationalized, naturalized, universalized, legitimated in the name of certain forms of political power"
(Eagleton, 1994, p. 202). It is through such a definition of ideology that Latour and Jasanoff discard ideology
as an unhelpful, abstract, a priori abstraction. It is correct that conceptualizing ideology in this way is one of
the most common ways of using ideology both in social theory in general (Eagleton, 1994) and in STS (e.g.
Gieryn, 1983; Haraway, 2016). However, while ideology as false consciousness produces tools that are
helpful when considering how police power is imagined, which I also draw on and utilize in this thesis,
Althusser's (2020) theory of ideology is distinct from this conceptualization. Instead, Althusser's conception
of ideology focuses on how capitalism is reproduced through subjects who are constituted as free
individuals in, through and by materialities such as apparatuses and rituals.

More concretely, in the first of his two theses defining ideology, Althusser explains that: "Ideology is a 'Representation' of the Imaginary Relationship of Individuals to their Real Conditions of Existence" (Althusser, 2008, p 36). In his second thesis, Althusser specifies that "Ideology has a material existence" (p. 39) and thus, ideological systems "always exist in an apparatus, and its practice, or practices." (p. 40) Althusser's conceptualization thus foreshadows one of the most famous notions of STS which is that artifacts have politics (Winner, 1980) that actively take part in producing societal effects such as the enactment of police power.

Building on this, it is worth noting that the police are intimately linked to ideology in Althusser's theory. In a famous example, Althusser describes a man walking down the street, thinking of nothing in particular as a policeman suddenly hails him by shouting "Hey, you there!" (Althusser, 2008, p. 48). As he turns around, recognizing that he is being hailed, the man is in that moment interpellated as a subject. Althusser thus explains how subjects are hailed into being to seem to "work by themselves" (Althusser, 2014, p. 407) – the man might flee, stop, submit or fight, but he does so within the ideology that subjectivizes him and the police officer within a wider ideological field of subject positions (Hall, 1985). This means that interpellation depends on a wider ideological system supported by a range of material institutional frameworks, referred to by Althusser as State Apparatuses. These frameworks are "always-already" (Althusser, 2008, p. 50), present and what enable the subject to recognize the interpellation in the first place.

This is key to the issue with post-structuralist empiricists like Latour and their use of the term "actor." In their accounts, actors seem to "work by themselves" (Althusser, 2014, p. 407) as their actions can be "followed" (Latour, 1993, p. 10) through empirical observation: in actuality, such assumptions are "arch-ideology because they compel us that the phenomena are just as they appear" (Adorno, cited in Söderberg and Bjurö, 2023, p. 215). Instead, ideology critique propels me to consider how police power constitutes the very subjects of policing.

At times in this thesis, it is valuable to distinguish actors such as POL-INTEL, the police institution or even a small server from individual human subjects. Thus, I use the term "subject" to denote only individual humans subjectivized through ideology and the term "actor" to encompass also non-humans. This is because the fundamental distinction between humans and non-humans is that, in Althusserian theory, the former is "always-already" (p. 46) subjectivized and live their lives within ideology. At this point, it is therefore relevant to specify and develop this proposition from ideology in general to the specific ideology that concerns this thesis.

3.2.2 Imagining Security Ideology

So far, I have designated how humans are interpellated and thereby subjectivized into ideology. However, it is more proper to state that humans are subjectivized into specific ideolog*ies* (Althusser, 2008). That is, different state apparatuses, such as the police, are part of reproducing different systems of ideology that overlap and sometimes contradict one another (Althusser, 2014). These specific ideologies produce subject positions that represent imaginary relations and thereby "As you enter an ideological field and pick out any one nodal representation or idea, you immediately trigger off a whole chain of connotative associations" (Hall, 1985, p. 104)*.* Consequently, the ideology of policing relates to a whole host of connotations that are triggered and imagined when subjects are interpellated. For instance, subject positions such as suspect or witness are not merely legal, bureaucratic categories but also contain moral and political dimensions (Balvig, 2015).

In Althusser's (2014) original conceptualization, he presents a range of different ideologies and how they correspond to different State Apparatuses. In this work, he refers to the ideology reproduced by the police as legal ideology (an ideology also shared by courts and the prison services). However, this thesis operates instead with the Neocleous' (2021) broader notion of security ideology that attempts to capture both how the police relate to law and legality, but also to trace the linking theme from policing to Hobbesian ideas of security. That is, policing is not merely about hailing subjects into positions in relation to the law but is also about how social relations are imagined through risk to security, state, and social order.

The concept of security ideology thus captures how subjects become suspect or suspicious to the state, police or others (such as the reader of a newspaper who is interpellated through an article describing the growing threat of immigrant gangs) not only through their actions in the present but also through how they are *imagined* as potential future risks (Horn, 2003; Neocleous, 2008; Amoore, 2014). Similarly, security ideology also encapsulates what Finstad (2003) refers to as "the police gaze", which is the special way of perceiving the world that becomes internalized in law enforcement and highlights what is out of place in the order of society. Security ideology also explains how and why quite abstract or intellectual work can be imagined as threatening social order itself. A prime historical example is Hobbes' own philosophical battle against the 17th century philosopher-scientist Boyle's use of experimentation as a means for reaching true knowledge. Hobbes understood this as a deployment of "the ontological resources of the enemies of order" (Shapin & Schaffer, 2011, p. 109). In this thesis, I draw on this latter form of thinking about security to analyze how POL-INTEL has been deeply connected to different ways of imagining threats to social order that have gone beyond direct or hands-on issues of crime.

The example of Hobbes' way of imagining Boyle's experimentation as a threat to social order underlines the imaginary element in how futures are predicted. For Hobbes, a survivor of a civil war, experimentation undermined proper and complete authority to the Sovereign (ibid). The future he predicted on the basis of his own experience was one where experimentation would lead to what he, in Leviathan, calls a "Warre of Everyone Against Everyone" (Hobbes, 2002, p. 206). What is significant for data-driven policing in Hobbes' example is that predictions are made by police drawing on historical crime data to predict the future (Kaufmann, 2019; Egbert and Leese, 2020). However, whether that past data is digital crime data or historical experience of civil war, both are fundamentally about imagining specific kinds of futures. To expand on my argument, imagining and thereby predicting risk is fundamentally related to Hume's ([1739]) induction problem, which refers to how past events cannot logically be used to deduce and predict future ones. There is thus a void between past events and predicting the future which cannot be overcome. Hume therefore claimed that humans "unite them in our imagination" (ibid, p. 53). However, imagination, as Althusser (2008) underlines, is not produced without recourse to societal power relations but is instead ideological. Therefore, instead of the "real conditions of existence" (p. 36), the subject imagines other forms of relations. This imaginary element of ideology underlines the Freudian-Lacanian inspiration in Althusser's theory (Hall, 1985). In Althusser's theory, ideology fills the "void" (Flisfeder, 2018, p. 459) between the individual and (class) society in a similar sense as when incestuous sexual desire is repressed and rearticulated by an individual in Freudian theory. In this thesis, I extend Hume and Althusser's theorizations on how futures are predicted in policing.

Security ideology thus produces subject positions (e.g., "citizen", "criminal") but it also contains the police fetishism that Bowling *et al* (2010) suggest characterized modern societies in imagining police as an effective and legitimate defense against such risks. In the chapter on the Genealogy of Predictive Police Power, I trace what is essentially police fetishism materialized in relation to how policing technologies from the telegraph to the predictive platform have been imagined as catalysts of truly efficient police power.

Significantly, Althusser's work (and those inspired by him) underlines that his concepts do not just account for how something is perceived or ways of thinking, but also specify that imagining also relates to performing futures. I use this line of thinking to not just explain how police power is imagined, but also how the imaginary relates to how police power is enacted and how governance is materialized in relation to data-driven policing platforms. To produce a deeper account of this line of thinking, I thus need to explain how I use the concept of performativity.

3.2.3 Performativity

How performativity relates to ideology has been developed most clearly by Butler (2006), who has evolved performativity as a broader notion compared to the more narrow notion of interpellation. Performativity in this sense refers to how practice produces new states of being that can encompass a wider set of sociomaterial effects than those typically denoted by interpellation, which are related to human subjectivity (Barad, 2003). As I ask how police power is enacted, and it is so popular in STS, it is worth distinguishing the Butlerian-Althusserian account of performativity from the concept of enactment found in Mol's (2003) and her long-time collaborator John Law's influential work. Often it is referred to as part of the post-Actor-Network Theory tradition.

Mol explicitly sets aside epistemology and epistemic issues (and thereby ideology) and argues instead that ontologies are enacted directly in practice. This produces different ontologies across a multiplicity of different sites. For instance, for Mol and her collaborator John Law, a sheep is not a single entity but multiple as it is the product of different enactments across different sites (Law and Mol, 2008). Similarly, a disease referred to in medical terminology by one name is actually multiple as the said disease is enacted differently in different departments of a hospital (Mol, 2003). In this account, a multiplicity of different worlds are thereby enacted by actors (Law, 2011).

Mol and Law's ontological stance is a radicalization of empiricist arguments that I previously critiqued which suggested that appearance equals phenomenon (c.f. Spivak, 1988; Söderberg and Bjurö, 2023). What has been done away with in their account is the empiricist epistemology in favor of stating that multiple ontologies and worlds are enacted in practice – that enactment equals appearance, which equals phenomenon. But how is it possible for poststructuralists like Law and Mol to argue that the world is so radically heterogeneous and constantly enacted in differing ways across different, multiple sites? In other words, that it is impossible or unimportant to use notions like ideology. Yet at the same time they deploy concepts such as actor or multiplicity across different historical eras, different geographical locations, and different social sites? This sort of contradiction is an issue in all sorts of philosophical systems that promote the local and subjective as sites for truth and still utilize overarching concepts to describe the world.

In distinction, in the Butlerian-Althusserian account, performativity is related to how imagined social relations are materialized and thereby how social order is reproduced. Such a perspective of how police

power is enacted echoes sociological concepts like "labelling" or "stigma" (Becker, 1963; Goffman, 1986), which were used to explain that police controls and surveillance produced the criminal identities they set out to police. Similarly, the shift in state security politics, and the police forces tasked with carrying out such policies, predicting and interdicting risk, has been found to actively produce insecurity (Ericson and Haggerty, 2002; Amoore, 2013; Calhoun, 2023). Likewise, "because predictive systems operate on the sociotechnical practices of police patrols, which are themselves contradictory enactments of the state's power to distribute safety and harm" (Shapiro, 2019, p. 457), such systems/platforms take part in performing the social order of the state. That is to say, a performative perspective on police power shows how police do not just limit and control but actively take part in producing social order (Neocleous, 2021).

Yet, in contrast to some of the more dystopian ways of imagining police power in critical theory (e.g. Andrejevic and Gates, 2014; Amoore and Piotukh, 2015; Erwin, 2015; Stalcup, 2015), Butler's (2006) conceptualization of misfires, when performativity fails, is helpful in distinguishing the difference between imagining and enacting police power. While I generally use the analogous concept of failures of translation (Callon, 1984) in this thesis, it is worth specifying how misfires relate to ideology due to popular conceptions of ideology being a theory that presents power as totalizing (c.f. Eagleton, 1994). Specifically, as I presented in the historical genealogy of predictive policing chapter, there is a significant disparity between how predictive policing was imagined, particularly during its inception, and the capacities for increased police power that it has been found to enact. Similarly, police organizations have materialized new forms of governance through implementing new technologies, changing workflows to become "Intelligence-Led", etc. in line with how they have imagined data-driven police power to be efficiently enacted. Yet, failures, unexpected and counterintuitive consequences and so on have occurred in this process. Police power, simply put, often misfires. It is therefore not a totalizing power but one open to contradictions and failures. But how does this operate in concrete terms in relation to policing platforms and their digital architecture? In the next subsection, I bring the different accounts of ideology together to answer this question.

3.2.4 Logging into the Ideology Machine

Chun (2005) contends that form of software "fulfill almost every formal definition of ideology we have" (p. 16). As such, computers function as "ideology machines" (p. 16) by producing a range of subject positions within their algorithmic architecture. In her work, she exemplifies this process by showing how operating

systems interpellate individuals as users, who seem to be free subjects who can accomplish anything within the computer, while hiding the constraints of the system (Chun, 2011).

Chun's characterization of the closeness between ideology and software, code and data is not incidental. Geoghegan (2022) shows that structuralist theory such as that of Lévi-Strauss' and Lacan's were deeply inspired by early work in cybernetics, which was transmitted into the social sciences by way of anthropologists such as Margaret Mead. In Lacan, this relates to his theory's basis in Freudian subject positions like mother-father-son, which he evolved. In Lévi-Strauss' structuralist anthropology, his mapping of kinship relations follows a similar schematic. These ways of thinking of subject positions thus takes the model of code as an abstract field and imports it onto how to map the social world.

In turn, Althusser is inspired by these structuralist thinkers in his own conceptualization of ideological fields that produce different subject positions into which individuals are interpellated. It is indicative that computers, code and software appear typically in Althusser's work as disparaging similes to technocratic reason (ibid) such as the off-hand remark that "gigantic computers [will not] resolve [the problems of the Soviet Union] by magic mathematical planning" (Althusser, 2014, p. 131). The reason computers are denigrated by Althusser is that he uses them as "pejorative signifiers of technocratic philosophy" (Barker, 2015, p. 94). Thereby, Althusser imports the notion of ideology from the model of software or code. This imposes specific governing logics upon the world by foreclosing multiplicity in favor of producing a field of subject positions which individuals can be interpellated into. To this end, Barker (2015) shows how the concept of interpellation is functionally analogue to a cybernetic feedback loop in the sense that interpellation is a moment that materializes and reproduces ideology: there is no ideology without interpellation, no interpellation without ideology. The notion of how code and software materialize ideology by foreclosing multiplicity and interpellating-reproducing social order is used in this thesis to trace how data-driven policing platforms function. For instance, platforms like POL-INTEL materialize security ideology in the sense that the subject positions that can be taken within police software relate to positions such as witness, suspect, accomplice or as a police officer user of the systems.

In turn, the notion of the feedback loop also directly concerns how platforms like POL-INTEL function as ideology machines. In the field of predictive policing, feedback loops stand in contrast to the original cybernetic conception and instead detail how racially biased data inputted into policing systems produces discriminatory predictive outputs (Ferguson, 2017; Brayne, 2021). In this thesis, I use both conceptions of feedback loops. First, I do it by detailing the contradictions and conflicts between how the police attempt to refine their own work through feedback loops in the cybernetic sense, for instance in and through the "intelligence cycle" (James, 2013; Ratcliffe, 2016) of Intelligence-Led Policing. Second, I use the notion to

denote how bias is inputted into POL-INTEL in the sense that predictive policing scholars have used the term. In this sense, I denote the feedback loop as a central contradiction between how police power has been imagined, the means of governance materialized in relation to data-driven platforms and how police power is enacted.

The discussion on feedback loops ends this subsection on code. While I have described how to understand code through ideology, this does not sufficiently explain the very crucial role in a thesis of data-driven policing on how police classification, statistics and data function. I will therefore now discuss these matters in depth.

3.3 The Hard, Incontrovertible Soil of Numbers: On Classification, Data and Statistics

3.3.1 Police Classifications and Its Consequences

This section is distinct from previous ones as it brings together concepts laid out earlier and applies them to how the "hard, incontrovertible soil of numbers" (Hall et al., 1978, p. 9) is produced in the interrelated forms of data, classification and statistics. I will begin by expounding on the politics of classification, as classifying events is crucial for the capacity to produce data and statistics (c.f. Bowker and Star, 2000; Scott, 2020).

Classical work in STS has understood classifications as fundamentally political both in how they are produced and in their effects (Bowker and Star, 2000). Working from this premise, STS-ethnographic work on data-driven policing has found that crime as a social phenomenon is not so much detected as it is performed through the entanglement of bureaucratic classifications, police discretion and the concrete materiality of forms and digital devices (Egbert & Leese, 2020). Similarly, the very digital architecture of police platforms is entangled with classificatory regimes. For instance, Kaufmann, Egbert and Leese (2019) detail how a burglary must be classified by police as the work of a professional for the predictive platform they are studying to predict whether further crimes will occur in a neighborhood.

Classifications thus act upon police practice and thereby the enactment of police power. This echoes the aforementioned instances of how legal classifications are intertwined with the conditions of when police powers are unlocked in law since police officers are only delegated rights, i.e. to search a person or vehicle, in certain circumstances. Since the right to interpret when such legal requirements have been fulfilled is at individual officers' discretion, police officers have been almost universally found to strategically utilize legal classifications to access and de facto legalize their own use of police powers (Bittner, 1967; Manning, 1977; Finstad, 2003; Holmberg, 2003; Moskos, 2008).

This also connects how legal classifications perform effects upon those who are classified. For example, those described by classical sociological work on labelling involve individuals taking on the very criminal identity they are classified as having (Becker, 1963; Goffman, 1986), as mentioned earlier in the chapter. Another effect of police classifications on individuals is that when police classify an act as criminal, these classifications have the special character of being able to move out of the site of the police itself and into the wider criminal justice system, such as criminal courts. In this thesis, I use this capacity to classify as a form of police power that translates (Callon, 1984) and extends this power into a range of other sites where it, in turn, potentially performs a variety of different effects such as sanctions in criminal courts.

These examples also underline how police classification of events or individuals as criminal function as an obligatory passage point (Callon, 1984) between the multiplicity of the world and how it is entered into bureaucratic systems. Due to the structure of police classifications and the police systems they are materialized in: "What goes into the dossier is never what actually happened. It could not be: it is a representation rather than the thing itself" (emphasis in original, Martin, 2017, p. 114). Such representation relates to the ideological character of classification: as I explained earlier, subject positions such as "criminal" or "suspect" reproduce a field of security ideological subject positions into which individuals can be interpellated. To distinguish my use of ideology from classification, I use classification to denote "a spatial, temporal or spatio-temporal segmentation of the world" (Bowker and Star, 2000, p. 10) that relates to both how specific classification schemes are constructed and how they are used in practice. Classification is thus not *necessarily* identical with or reducible to ideology, though many, if not most, forms of classification utilized by the police analyzed in this thesis also materialize security ideology.

As an example of classifications that are also ideological, criminal classifications are materialized in the architecture of the code of data-driven policing platforms. This is part of what constitutes these platforms as ideology machines (Chun, 2011). The specific ways classifications are materialized in platforms differ significantly, from the more narrow versions in automation of the near-repeat phenomenon that some platforms produce (see Egbert and Leese, 2020), to more totalizing attempts to map criminals such as in POL-INTEL, which I discuss at length later. Regardless of the differences, criminal classifications are central in every platform for producing the ability to describe patterns in crime that is necessary to map past crimes (Kaufmann, 2019) but also to predict future crime (Benbouzid, 2018; Egbert and Leese, 2020; Brayne, 2021). Classifications in this sense are abstract. They describe how data is given shape it but beyond that they do not articulate how data itself acts or the consequences of its entanglement with data-driven policing. That is therefore discussed in the next subsection.

I have already largely described the issues of police data in relation to phenomena such as ideology, classifications, unevenly distributed policing practices and the feedback loops produced in and out of these. When exploring and specifying these issues, a good place to start is with a core factor in how police data is produced that involves uneven reporting practices by the public. Some illegal actions, such as rape, are rarely reported and thereby not entered into police systems due to the stigma associated with the crime (Messerschmidt, 1993). Yet, crimes such as recreational narcotics use is, in some groups or places, considered legitimate and so is never reported, even when it occurs in large groups (Sarnecki, 2010). Similarly, crimes detected that can thereby be entered into data tend to be public crimes committed by working-class people that threaten the monopoly of violence of the state or public property (Bowling, Reiner and Sheptycki, 2010). Thereby, white collar crimes, which occur out of the public view, tend to be made invisible (Richardson, Schultz and Crawford, 2019). While some scholars in the police efficiency improvement paradigm have argued that their predictive platforms are not discriminatory due to how they are fed mainly by calls for service and not by biased police practice (e.g. Brantingham, Valasik and Mohler, 2018), my argument above undermines this claim. Rather, feedback loops are produced also in relation to how calls for service are unevenly distributed for different crimes and the social groups associated with them. Consequently, the old question "Whose Law? What Order?" (Chambliss and Mankoff, 1976) can be followed into the digital era with the added questions "Whose Data? What Prediction?" Such a question underlines that data does not speak for itself but instead is political.

Furthermore, police data is significantly impacted by social, political, and organizational factors emanating from the police or the state and how they materialize governance over the police force. These factors reflect differences in police or court regulations of how data should be produced across different sites and historical periods (Skolnick, 2011). They also signify how changes in the forms of governance materialized over the police organization can greatly impact how police produce data such as in the 2007 police reform in Denmark (Balvig, Holmberg and Nielsen, 2009). Moreover, changing political or police initiatives are liable to put a certain form of crime on the agenda for a period. This tends to increase how much data is produced on this crime (Sarnecki, 2010). Such differences in data production are crucial, as they give the appearance of the "hard, incontrovertible soil of numbers" (Hall et al., 2017, p. 9) while actually being systematically misleading.

The issue of data being misleading in data-driven policing concerns not only how the world is perceived but also the effects it performs. Perhaps the most significant such issue involves the paradox of predictive

policing, which is that "once [predictions produce] significant changes in criminal behavior patterns, it loses its power" (emphasis in original, Helm and Hagendorff, 2021, p. 9). In other words, if police can predict (and pre-empt) crime successfully, their arrest data will appear less efficient. Police data is thus highly fraught and complex. When such data is aggregated into statistics, these issues are compounded. This is deeply problematical for sites based on criminal statistics, such as those used by the state, as described below.

3.3.3 The State's Knowledge of the Police

One significant function of data is that it can change scales (Latour, 1983) from a singular data point to being quantified into statistics. Statistics are used by the state to materialize governance since they constitute "the state's knowledge of the state" (Foucault, 2009, p. 411). In this thesis, such knowledge comprises a vital aspect of the state and its need to identify threats to its order. This knowledge is specifically produced by the police institution and its surveillance and prediction of crime and social unrest. Police statistics are thus what allow the state and police to identify threats, to gather actors – that is to say, to materialize governance – in a process of translation (Callon, 1984) of state power into police power and vice versa.

The reference to Callon underlines that this process of translation is not smooth or direct. Rather, governing the police through statistics and quantifications lends itself to a range of counterintuitive or unexpected effects that I touched upon briefly in the previous subsection. For instance, a police force whose efficiency in registering crimes falls is likely to appear more efficient than it was previously as the statistics will suggest that crime rates are falling (Sarnecki, 2010). Thus, while police data and statistics might appear in the state and the police, as well as in the media and to the public, as another instance of the "hard, incontrovertible soil of numbers" (Hall et al., 2017, p. 9) that tells the truth of crime and social dis/order, my discussion above underlines its fallible character. Moreover, statistics also have an ideological character, as their correlations suggest that the social world looks in specific ways, such as correlating crime and ethnicity (Chun, 2021).

The effects of the ideological character of statistics can be traced to how the Danish state draws on statistics to audit the police and gain knowledge of crime. This knowledge is then utilized in the process of imposing new, quantitatively oriented goals (Degnegaard, 2010; Balvig, Holmberg and Nielsen, 2011; Holmberg, 2019). Since such statistics are built on fraught and ideological data, the state materializes governance based on imaginary predicted effects. That being the case, the police and state do not constitute an all-seeing Panopticon that seamlessly enacts police power, in the sense portrayed by some critical theorists (e.g. Brennan-Marquez, 2017; Barabas, 2019; Joh, 2019). Rather, the police take part in producing ideology,

here in the form of statistics, which also plays a role in imagining the world for the police themselves. They then enact their responses – their police power – in ways that might produce contradictory effects or even a lack of effect. The state's knowledge of the state, or of the police's knowledge of the police, for that matter, is thus never a final, concluded affair but liable to be caught within ideology, translation, and imagination. The distinction between how police power is imagined and how it is enacted, and how this relates to how governance is materialized, thus concerns not only statistics but how I theorize police more broadly. This concluding reflection ends the chapter, but the thoughts developed here carry over into the next chapter on my methodological strategies.

4.0 Methodology

4.1 Accessing the Field – Navigating the Blue Wall

On 7th of September 2021 I, together with my supervisors who conducted fieldwork together with me, stepped out of a car on the immense parking lot of the headquarters of the Danish National Police. It had taken six months since the start of my PhD to get here. We were nervous. The premises of the vast building complex, located outside of Copenhagen proper, were surrounded by high fences topped with barb wire. The main entrance was a locked turnstile gate situated beneath a camera trained on it. After ringing a doorbell, a woman's voice asked, in Danish, our business from a speaker set next to the gate. In uneven "Scandinavian", the mix of more or less mutually comprehensible Swedish-Danish some of us try to speak, we explained our business. Apparently, we had some success as the turnstile door became operational and we were let onto the premises. Inside, we were issued with keychains and cards identifying us with names and labelling us visibly as guests and told that the cards must be handed back after us leaving. After some waiting, a smiling police officer in uniform came down the stairs to lead us up into the spacious premises, past several locked doors. Once inside, we met more police personnel who took turns giving presentations, including a demonstration of POL-INTEL itself. We raised the question of further access to the Danish police. "Let's continue to communicate about this", the police said. Afterwards, weeks stretched into months as calls went unanswered. (Field notes, September 2021)

This brief vignette underlines the difficulties of accessing the police. This is not a unique experience as the Danish police (Degnegaard, 2010; Hald, 2011; Holmberg, 2014), like many other police forces around the world, are notoriously difficult to access (Høigård, 2011; Fassin, 2017; Holgersson, 2018). These difficulties of accessing the police are referred to as the blue wall by Coleman (2016) which marks the ways in which police control and restrict access of researchers to either the entire police or to sensitive parts of policing such as law enforcement use of force. The issue of the blue wall was a constant issue for this study and even after the initial meeting follow-up access required laborious attempts at cold calling, emailing and the employment of a variety of other access strategies that I will expound upon further below.

As Coleman (2016) notes, the blue wall does not exclusively denote complete lack of access but also the various ways in which the police can limit access. The blue wall thus also concerns how police strategically control access through giving access to sites that are unproblematic for the police to have studied and published on (Fassin, 2017). The blue wall also relates to the "spins and shutdowns" (Walby and Panag, 2022, p. 115) which the police deploys as well as to delays operationalized to limit the extent a researcher has to work and thereby the capacity they have for unearthing whatever might be problematic or

embarrassing for the police force (Stavrianakis, 2019). Similarly, the problem of the blue wall is related to attaining access to interviews which are more akin to "controlled public relations" (Coleman, 2016, p. 78) than proper research interviews. All these issues cropped up in my attempts to access the Danish police.

For instance, requests for further interviews and observations after the initial meeting described in the vignette went unanswered for months. Often the replies that did come included either requests for specification on what we were asking which in turn produced more delays as that information was processed or were denied outright. Denials related to a multitude of specific issues such as the police redacting parts of documents as well as denying my right for Freedom of Information through reference to the cost in labor time it would supposedly take to identify and deliver the correct documents. At one point, I waited a full year for a Freedom of Information request to be answered with the police ceasing to respond to my follow-up emails. The capacity the police have to control and deny data in relation to Freedom of Information Act requests is another example of the police power to make authoritative claims to truth through monopolizing information.

The slowness of attaining access is of course not unique to policing but a common feature in research. This goes in particular for any researcher interested in "studying up" (Nader, 2010). Studying up refers to researching powerful individuals, groups and organizations who possess the resources and know-how to control access to research that might threaten their interests (c.f. Ortner, 2010; Souleles, 2018, 2021) and which thereby includes the police. The typical answer to the inertia of attaining access seems to be simple persistence on behalf of the researcher (Ortner, 2010; Belcher and Martin, 2019; Buskermolen, 2023). This was true also for this study, and persistence did slowly bear fruit. In 2022 access issues through official channels had improved, but during the meantime I had begun to develop alternate paths of access.

These other ways of attempting to access the police was developed through a variety of different means such as emailing police districts or attempting to locate police officers through LinkedIn which is perhaps the only online site where police officers are listed with name and rank. The response to this attempt at developing alternative access was instructive in itself. Several times the team in charge of administrating, updating and developing POL-INTEL would reach out after long periods of silence to make a reminder that responses to the questions our team posed should be awaited and to not attempt to circumvent them. In this sense, this POL-INTEL team constituted a gatekeeper (O'Reilly, 2009) which actively policed access to the organization and upheld its secrecy.

However, as Pollozek (2021) explains, the practices of secrecy itself can be informative as such practices might be revelatory about how an organization functions or what it considers important or vital to keep

closed off. Similarly, the control of access, the enactment of hierarchy and protocol, are not merely methodological problems to overcome but can be treated as research insights. This specifically relates to how secrecy does not suggest police *power* but police fear. For instance, Hartmann (2014) describes in her ethnography of the Danish police that she was told "Just so you know, if you begin to ask us the wrong questions we will make sure that the rest of your research process will be hell for you" (p. 140). Such threats are related to multiple phenomena. The police as an institution risk losing legitimacy if research findings present them negatively. Relatedly, police leaders might have their career advancement imperiled if they are candid about problematic law enforcement practices (Degnegaard, 2010). Fears of consequences are also related to how technoscientific projects such as POL-INTEL are imagined. As the project leader of POL-INTEL told us, expressing why they were careful: "[POL-INTEL] is our baby. We want to take care of it" (POL-INTEL Project Owner, Field notes, September 2021). That is, if the dream of POL-INTEL was threatened by a critical study which might undercut how police power was imagined as revolutionized through the advancement of data analytics and thereby the police strategically limited access past the blue wall.

Even if the above reflections about how secrecy is instructive are important, these alone could not constitute a proper study on data-driven policing and so other means were required to produce access. The solution to the problem of accessing the blue wall came from reflecting on, and re-purposing, the police investigation as a methodology. That is, the police investigation is developed to overcome access issues for the police, in relation to how those being investigated typically have an interest in keeping data inaccessible to law enforcement.

To considering interest as a barrier to access rhymes with Star's (1990) insistence that the Latin proverb *cui bono?* (*Who profits?*) (p. 43) is one of the most fundamental methodological questions of STS. Combining Star's question with the analogue of the police investigation puts in this case the police themselves in the role of suspect who might be profiting from a given state of affairs. Thereby, it seems natural to not just interview the suspect but also to consider how to access other important sites or groups. That is, how could I further my access attempts by being inspired by the strategy of the police investigation of a crime?

The solution I developed to this question of how to access POL-INTEL can be understood to some degree as a triangulation strategy (Stavrianakis, 2019) where different methodological approaches and methods are used to unravel a phenomena. In this case, interventionism, ethnography and recent historiography were employed together in the hope of producing relevant access and knowledge. For instance, I routinely asked for documents through Freedom of Information Act requests ("*aktindsigt*") to retrieve historical documents on POL-INTEL for the purposes of gathering data for my historiography.

Many of these documents note which individuals were present at meetings, and through searching the Internet (often in LinkedIn) it was possible to contact these individuals. In turn, these individuals could either be relevant for ethnographic material or become gatekeepers in their own right or contributing to a methodological snowball referring to other relevant informants. At other times, I visited public events where policing was debated as part of an interventionist methodology which aimed to disrupt the black box of POL-INTEL through instigating or developing public debate around the platform. In these events I introduced myself as a researcher to police officers who were present in order to cultivate potential gatekeepers and request ethnographic interviews. Once this persistence began to pay off, and once my name was recognized, access began to snowball. To exemplify, during one public event I introduced myself to a police director who, in a happy tone, exclaimed "Ah! It's you!" and immediately promised access to some data I was interested in attaining. To be recognized, Althusser (2008) explains, is a central feature of how ideology operates by interpellating concrete individuals as subjects which, in turn, makes the same subjects able to recognize others (as well as themselves) in the social world. In this case, the recognition of the police director underlined how I had made myself intelligible and legible within the police organization and thus attained a position that allowed me to access it (at least to a slightly deeper extent than previously). In this sense, the exclamation of friendly recognition "Ah! It's you!" can be juxtaposed to the "Hey, you there!" (Althusser, 2008, p. 48) which police officers call out when they want to stop someone in the street to control and search them. While both of these hails are interpellative acts that subjectivize individuals (including myself) into being subjects of policing, the concrete relations articulated by and through each interpellation are distinct: in the latter, the hail relates to police control of a person in the subject position of being suspected as a criminal. In the former, it is a recognition of myself as a researcher as a legitimate, and perhaps even friendly, subject and who can thereby be granted some access. In this way, access can be performed in almost literal terms through how I took on the subject position, the role of, researcher when navigating the complexity of the blue wall.

However, even when I had been recognized, early on I realized that relying upon police points of access would not be enough. Instead, to circle back to the analogy of the police investigation, if it was not possible to access the police fully, then turning to those who were present during policing but who were not police officers themselves would be crucial. This led me to develop a methodological strategy of how to change situated perspectives in studying data-driven policing to which I will now move on to detailing.

4.1.1 Situating Knowledges, Shifting Perspectives

The idea of shifting attention to a variety of other sites differs from the police investigatory perspective in that the aim of the qualitative researcher is not to produce evidence, but to develop understanding which

relates to grasping the situated, heterogeneous multiplicity of a given phenomenon and how it functions in different sites (O'Reilly, 2009). By extension, this perspective lends itself to considering how vital access is related not just to shifting sites, but also shifting social perspectives. As feminist STS scholars (Haraway, 1988; Star, 1990; Harding, 1991) have argued, the capacity for understanding a certain object of inquiry is related to the social position from which this object is viewed. In this thesis, I use this shift of positionality as a methodological tool to suggest that rather than accessing the blue wall itself other sites, groups and moments of translation that fall outside of the police organization itself can be accessed to produce crucial insights into data-driven policing.

The most important such groups that I accessed were individuals who were racially profiled by the police. A deeper analysis of this group and how it relates to studying data-driven policing is situated further on in the ethnographic part of this chapter. Here, it is relevant only to state that when the object of analysis is policing, it is vital to study those who are policed, and particularly those who are policed the most. I found that this group of people is also much easier to access and that they produce important forms of knowledge that can be leveraged to understand how policing functions.

Correspondingly, when considering one of the most central elements of data-driven policing, the data itself, accessing the sites which illuminates how data moves out of the police organization and which effects it produces and is entangled with is crucial. This is often public information necessary for the function of the state and can thus be accessed easily. For instance, crime data is not merely utilized by the police, but informs politicians who in turn produce plans, funding proposals or political initiatives based on this data (Hall *et al.*, 1978). In turn, this data is used by the state for materializing governance through initiatives such as the multi-year agreements (Balvig, Holmberg and Nielsen, 2011) which detail funding for police and demands specific organizational changes or quantified goals such as how many gang members should be in prison any given time. When this public data is accessed and compared to other forms of data new meanings and understandings can be developed which would not be possible otherwise. Perhaps the most important non-police site which is relevant for POL-INTEL is the one we will turn to now, Palantir Technologies and the corresponding problem of the black box.

4.1.2 The Black Box – Palantir Technologies

Is this really the right place? Me and my supervisors have arrived at the address provided to us by the head of Palantir's Scandinavia branch. It is a nondescript, graffitied, brick building in the middle of Copenhagen, a place I have passed countless times but never took notice of. There is no sign outside, and the address listing for the floor we've been directed to lists a company renting out office space. We ascend the stairs and knock

on the door. A burly man with a card in a keychain reading SECURITY opens the door. He doesn't introduce himself or state where we have come but instead just asks about our business. We're here, we say, because we have a meeting with Palantir and uh, is this the right place? We're let inside into a spacious, bright office that seems almost deserted. It is the right place! Immediately, we are directed to a terminal by the entrance where we are asked to insert our name and affiliation and sign a Non-Disclosure Agreement to not relay anything we have seen or heard in the offices, nor reveal its location. We hesitate. From down the hallway comes an unassuming man in his 30-40's, dressed in a gray cardigan. In a very clear American accent, he greets us with a simple: "Gentlemen" and shakes hands. He has a relaxed presence. The discrepancy between his persona and his online CV that lists his Ivy League education, employment in American Special Forces and his work for a company with such a dark reputation, is stark. We step into a conference room. A sign inside warns that "This room is not soundproof, others may hear your discussion." The Palantir official explains to us that certainly, that Non-Disclosure Agreement does of course not cover relaying interview material.

Palantir Technologies is consistently framed in academic literature and in news media as a shadowy, secretive organization of which little is known (Pinard *et al.*, 2021; Stevnsborg, 2021; Iliadis and Acker, 2022; Linnemann, 2022). The opening vignette relays some of the differences, ambiguities and continuities between this popular image of Palantir which I will now elaborate on.

Overall, accessing Palantir was a much smoother affair than accessing the Danish police. The first interview was organized briefly after the meeting with the POL-INTEL team. From this initial point access inside of Palantir snowballed into acquiring interviews with the Privacy and Civil Liberties (PCL) team of Palantir. This team functions both as an internal team which reviews products and product developments, as well as handling external debates and actors such as through meetings with academics and Human Rights organizations. Taylor and Dencik (2020) suggest the PCL team exists because "an ethical review or discussion process can provide scaffolding for resolving disputes and defusing tensions, thus preserving the internal status quo that allows firms to do business." (p. 6) There is certainly a strong element of strategy in Palantir's engagement with civil society and academics, which is even explicitly described as such in a book that members of the PCL team co-authored (Bowman *et al.*, 2015). However, this access to the PCL team still garnered valuable insights into the historiography of POL-INTEL, how predictive policing has been re-conceptualized, Palantir's political economy and their political ideology and aims.

Another part of the access to Palantir came in the form of accessing interviews with programmers and product developers. Perhaps since questions of Computer Science and digital workflows do not seem to

endanger Palantir's business model, these interviews were quite candid. As such, these interviews were invaluable in opening the black box of POL-INTEL. It is also the case that Palantir themselves proudly and publicly champion their politics and how they envision their products with bombastic titles of their "Letters from the CEO" series such as "*In Defence of Europe*" (Karp, 2022) which describes the company's commitment to liberal, Western statehood. Such statements are part of the company's brand and align well with their potential customers such as intelligence agencies. Perhaps since Palantir takes such a public, political stance, I found that Palantirians were rarely shy in elaborating how they understood society, politics and technology.

Yet, access to Palantir is still also reflected in its character of being a private company. This means that the more precise function of its products, such as the Gotham platform which POL-INTEL is a customization of, is a trade secret (Ferguson, 2017; Pinard *et al.*, 2021; Brayne, 2021). This was part of making direct access to the platform or to observations of how work on it was performed off limits.

However, similarly to the blue wall, the notion of the black box lends itself to misconstruing how knowledge of a data-driven policing system can be gained. That is, to imagine that proper knowledge is produced through access the algorithmic structure of POL-INTEL and putting "our finger on the one line of code that was guilty of introducing racial bias into the algorithm" (Straube, 2019) is wrongheaded because such code is incapable of locating the specific, and much more crucial, social effects that platforms are part of in the same sense that a recipe says very little about how a dinner party goes. That is, the function of algorithmic systems such as POL-INTEL are better judged by accessing the social effects it performs and the wider assemblages they are entangled with (Chun, 2011; Beer, 2018; Yeung, 2018; Lee, 2021). In the next section, on ethnography, I will elaborate this point at length.

4.2 Ethnography – Follow the Data

With the suggestion that access to the blue wall and the black box is best approached through triangulation between different sites, changing of positionality and perspective and by giving specific attention to those who are policed my methodology differs from many classical approaches to conducting an ethnography of policing (Bittner, 1990; Finstad, 2003; Holmberg, 2003; Moskos, 2008). The move away from the classical back-of-police-car (Garriott, 2011; Drenth and van Steden, 2020), or the equivalent in data-driven policing which is next-to-police-analysts-desk (Kaufmann, Egbert and Leese, 2019; Waardenburg, Huysman and Sergeeva, 2022), began due to the previously explained access issues but blossomed into an alternate methodological strategy.

This methodological reorientation relates to what knowledge can be produced from what positions. Classical ethnographies of the police which aim for full immersion in the site of the police (e.g. Moskos, 2008) undoubtedly provides important insights but they also positions the researcher in a specific manner which has methodological consequences. That is, in such studies the researcher becomes situated (Haraway, 1988) within the police organization and typically only within a specific part or unit. Consequently, this affects the kind of knowledge which can be produced from this situated perspective (Haraway, 1988; Star, 1990; Harding, 1991). For instance, in ethnographic studies on intelligence workers, police work appears primarily as knowledge work (e.g. Waardenburg, Huysman and Sergeeva, 2022). This is because intelligence workers are not typically involved in the execution of their intelligence plans (Ratcliffe, 2016; Kaufmann, 2019) and thus the connection between police intelligence and police use of force and its role in reproducing social order is off stage (c.f. Coleman, 2016).

There is a range of scholarly work from the STS-ethnographic paradigm which, in contrast to studying a single site or unit, has moved between different sites within the police organization (e.g. Egbert and Leese, 2020; Brayne, 2021). This approach has produced accounts that more fully connect these different sites and data, technology and power. However, these studies are still situated within the broad umbrella of the police assemblage. As I have argued earlier, since my research interest lies within uncovering how police power is enacted in the digital era and how the state informs how materialization of governance is performed in relation to data-driven policing it is necessary to change situated perspectives by moving to different sites, groups and institutions that affect and are affected by data-driven policing.

The means by which I accomplish this methodological reorientation is by adopting the insights of Kaufmann *et al.*, (2020) that it is imperative to "follow the data" (p. 246) in order to understand data-driven policing.. This repurposing of the influential STS slogan "follow the actors" (Latour, 2007, p. 12) suggests that the study of algorithmic platforms like POL-INTEL is best accomplished through understanding how data is generated, how it moves into different sites and the transformations it produces as this occurs. That is to say, this is a perspective that suggests that police data is only given meaning through being "information in-formation" (Kaufmann and Leese, 2021, p. 1) which is entangled with different social institutions and practices and which in turn is part of performing different effects in the world. Moving on, I will concretely align the notion to the data life cycle (Kaufmann, 2023) and to how knowledge is situated.

4.2.1 Situating Data Subjects

The notion of situatedness has been a major methodological point of departure in feminist STS in order to make the position of the researcher transparent (Haraway, 1988; Star, 1990). Situated knowledges is

thereby an attempt at avoiding the "god trick of seeing everything from nowhere" (Haraway, 1988, p. 581) by emphasizing that knowledge is instead always produced from a specific, situated, historically and socially contextualized space. In this thesis, the notion of situatedness is relayed above all to what different capacities for knowledge that subjects situated at different parts of the data life cycle are liable to possess. In Figure 2, below, this is exemplified through positioning of two officers at opposite ends of the data life cycle.

The first officer, positioned on the left-hand side in Figure 2 right beneath Input, is situated in the position of a frontline law enforcement worker who enters data into POL-INTEL. Said officer also partakes of data which has been outputted from POL-INTEL which is visualized in the image by the curved arrow leading from the black box back to input. On the opposite end of the data life cycle is an officer who handles data as it is outputted from POL-INTEL. This is typically an intelligence officer or a member of police management. As the long, curved arrow leading from Output to Input

Figure 2: Police Situatedness in the Data-Driven Policing Life Cycle

suggests, it is the role of the analyst to produce products such as crime maps which is inputted back to the officer at the start of the cycle.

Neither of the police officers in this model can be said to have a privileged position (Haraway, 1988) where they possess a stronger insight than other officers into the data life cycle and the effects that are entangled with it. For instance, while the officer who inputs data might understand his own discretionary data entry practices, it is black boxed to the officer situated at the other end of the data life cycle. Similarly, the officer who stops a car and draws information from POL-INTEL which details the driver's past stops by the police is incapable of knowing precisely how data on this person was produced. While officers can – and often are-skeptical about data, the point is that their positioning within the police assemblage can be a decidedly un-privileged position which obscures the capacity for knowledge. By extension, when researchers situate themselves in one of these points of the data lifecycle, their positionality also obscures other parts of how data-driven policing functions.

In contrast, I shifted perspective away from the police to those who are policed. Since the group which most consistently has been connected to unwarranted policing through stops and controls are those profiled by the police due to their ethnicity (Hall *et al.*, 1978; Russell, 1998; Finstad, 2003; Holmberg, 2003; Skolnick,

2011; Ferguson, 2017; Jefferson, 2018a; Wang, 2018; Byfield, 2019), this group was chosen as the most important group to shift analytical perspective to.

The strength of shifting perspective to profiled people can best be specified through considering the difference in relation of these individuals and police officers to the data lifecycle. Police data is generated in the input stage where both an officer and a profiled person are present. Many ethnographies of policing have described this stage and related police bias to the discretionary power of officers to classify events (Bittner, 1990; Finstad, 2003; Holmberg, 2003; Skolnick, 2011; Brayne, 2021). However, even as they do so, the temporal experiences of such ethnographers who are physically situated in the back of the police car differ from those of the profiled person. The researchers arrive with the police, observe the stop and then leave with the officers. Typically, neither they nor the officers will interact with this individual nor follow the consequences of the stop further. The profiled person, instead, has a vitally different temporal experience of being stopped many times during their lifetime by different officers. These individuals also live with the consequences of such stops, whether these are social, legal, physical or psychological. Significantly, such effects are typically invisible to the position of the researcher who rides along with the police or who sits next to an analyst working on police data.

From the opposite perspective, while there are a range of scholarly accounts from feminist scholars which build from the researchers own situated experiences of racism (e.g. hooks, 1989; Mohanty, 2003; Ahmed, 2006). While these accounts often touch upon law enforcement, they do not deeply engage with the topic Even more significantly for this thesis, they do not engage with data-driven policing and the specific character of police power in the digital era.

One rare example of a researcher who has attempted to move between the positions of police and those being policed is Sollund (2007). However, she does not engage at length with the methodological possibilities of this approach, nor engages deeply with issues of technology. Thereby, while Sollund's work and the situated work of non-white feminists inspire this thesis, my emphasis is to develop these lines of inquiry by more systematically inquiring into how situatedness relates to the data life cycle of data-driven policing.

To accomplish this this change of situated perspective I draw on interviews as well as a range of data which many of these profiled individuals have produced themselves. This data was often produced as a part of resistance strategies which were aimed at aiding the profiled person in proving their innocence in relation to criminal cases which were fictionalized by police against them. This data was also produced by profiled people to counter being classified as a criminal by different social groups. For instance, filming police

controls and then posting these on social media was a strategy for one interviewee to present his own innocence to the public and to retain a sense of self-respect. Through drawing on data produced by some of these individuals which has been gathered through Freedom of Information requests, by their lawyers or by courts where their cases sometimes end up and in their own video recordings of police controls this has allowed me to follow how data is inputted and the discrepancies between the event and the manner in which it is classified by police.

When considering the specificities of studying the enactment of police power in the digital era this change of situated perspective is helpful in following the data of profiled people from the Input stage and onwards. The first step in the data lifecycle that I have studied are the discrepancies between the more or less strategical, discretionary way officers classify events and the event itself. From this point, I have followed how previous entries into police systems produce feedback loops for profiled persons (Ferguson, 2017;. Brayne, 2021) by analyzing how police officers act in ensuing stops by, for instance, articulating the reason for their stop as being due to a person having been stopped by police earlier.

By then following the data as it translated (Callon, 1984) into platforms like POL-INTEL, it is possible to compare and triangulate (Thurmond, 2001; Stavrianakis, 2019) the ways data-driven policing is supposed to function in the accounts of police officers and Palantir and the discriminatory police practices which is fed into it. That is, as argued earlier, algorithmic systems like POL-INTEL are best understood not through reference to their code, but to effects they produce and by studying their entanglement in wider assemblages (e.g. Chun, 2011; Beer, 2018; Yeung, 2018; Lee, 2021).

The clearest way effects of POL-INTEL can be traced is related to the Output step of the data lifecycle. In this thesis this relates to how data moves into four different sites; the court systems, police intelligence officers, parliament and to the Independent Police Complaints Authority (*Den uafhængige politiklagemyndigheden*). As one example of this methodological process I follow how profiled people face fictionalized police cases in court whichare given a veneer of objectivity through how they have been classified in police systems.

In the interest of following the data into the state and courts, my methodological approach has included studying these sites to some extent. This has entailed researching courts through the lawyers and judges that populate this site. Similarly, I have drawn on data from the Ministry of Justice and the parliamentary Committee for Legal Affairs (*Retsudvalget*) which are vital sites for governance of the police in Denmark.

This changing of situated positions from profiled people to the state or courts reflects a differentiation in the methodological strategy I develop from how situated knowledges are typically utilized. In modern scholarship, situated knowledges are often articulated as a call for personal reflexivity for the researcher

(e.g. England, 1994; Lumsden, 2013) or as an attempt to focus a study the experiences of a given group (e.g. Harding, 1991; Collins, 2022). While such perspectives are undoubtedly important, the way that situated knowledges has been utilized in this thesis instead focuses on moving perspective between different sites and social groups in relation to where they are situated in the data life cycle and how changing situated perspectives can produce different forms of knowledge.

These change in perspective has not always taken the form of direct access to a given site. That is, many requests for interviews with individuals situated in institutions such as the Committee for Legal Affairs and the head of the Danish Bar and Law Society (*Advokatsamfundet*) have been declined due to a stated lack of insight into POL-INTEL. However, similarly to how I argued in relation to police secrecy, this absence of insight has been informative in and out of itself. That is, when compared with statements from the police on how POL-INTEL will be helpful in producing transparent court cases, or in realigning the police into a more Intelligence-Led, modern police force, such lack of insight by politicians and courts stands in stark contrast. Once more, this lack of insight relates to their situated place within the data life cycle where the discretionary practices of data input, the black box of POL-INTEL and how data is outputted and produced obscures the capacities for relevant knowledge production. To conclude this section, I have thus argued that it is necessary to change situated perspectives and to follow how data moves into different sites in order to open the black box of data-driven policing. With the ethnographic methodology complete, we will now turn to an even more overt call for disrupting black boxing through an overtly interventionist methodology.

4.3 Interventionism

It has long been acknowledged that interviews and participant observations intervene in the social milieu that is being studied and thus affect it (Marcus, 1995; Alvesson, 2023; Buskermolen, 2023). Simply put, this means that the presence of the researcher changes what would otherwise take place. This is not necessarily a negative process. The presence of the researcher can provoke the elicitation of previously implicit thoughts or processes and make these transparent (Nunkoosing, 2005). An even more radical form of this is the attempt by a researcher to intervene with the aim of producing debates and contestations within society or in some specific site (Woodhouse *et al.*, 2002). In this dissertation such an interventionist methodology was developed in order to attempt to turn the relatively uncontested POL-INTEL and data-driven policing from a matter of fact to a matter of concern (Latour, 2004). That is to say, this approach aimed to disturb the black boxing of POL-INTEL by producing controversy around the platform. Controversies are relevant because these are key to disrupting black boxing and uncovering the politics,

contingencies and uncertainties within a given technoscientific system(Gieryn, 1983; Latour, 1987; Scott, Richards and Martin, 1990; Polleri, 2020).

The interventionist approach also, as I have underlined previously, served as a vital opportunity to produce gatekeepers and secure access. Practically, this was accomplished through organizing panel discussions at various events. The first was a panel held at the IT University of Copenhagen on December 12, 2021. This panel was attended by the Global Director of the Palantir Privacy and Civil Liberties Team, the former Data Protection Officer (DPO) of the Danish police and key figure in the implementation of POL-INTEL, and one of the most famous critical activists opposing police surveillance technologies who hails from an organization called the IT Political Association.

The second panel was held during the Welfare After Digitalization (WAD) conference at the IT University on November 28-29, 2022. In this, a senior intelligence analyst of the Danish police participated along with the NGO Statewatch and the Institute for Human Rights in Denmark, a former police officer and finally the head of Statewatch, a UK registered charity that promotes critical research, policy analysis and investigative journalism to inform debates, movements and campaigns on civil liberties, human rights and democratic standards.

The international conference *The Discreet Charm of Predictive Policing* which was held at the IT University on January 29-30, 2024 and organized two public panels. The first was titled "Engaging Civil Society: From the EU AI Act to Counter-Surveillance Practices" and included a member of the Danish Institute for Human Rights, a representative of the Prosa labor union (which is a civil society partner tasked with popularizing the research findings in the *Critical Understanding of Predictive Policing* project which this PhD thesis is funded by), and a member of the Greek civil society organization Open Lab.

The second panel of the conference was dubbed "Silicon Valley vs. the EU: Palantir in Denmark" and brought together the same representative for the Danish Institute for Human Rights as in the first panel as well as Vasilis Galis, Associate Professor (and the supervisor for this thesis) and professor Mikkel Flyverbom from Copenhagen Business School. Alongside these panels the conference organizers, me included, produced press releases and interviews to the media.

Accompanying these events came a number of other interventions such as press releases, the production of podcasts and meetings with civil society groups, labor unions, academics, journalists, and others. This included the previously mentioned public events set up by other organizations, such as two events on ethnic discrimination in the police by the Human Rights Institute that I attended and took active part in.

Concretely, all these events except the panel held during the WAD conference were filmed. During all events, but particularly the events which were not recorded, extensive field notes were written. These notes included both quotes by participants deemed particularly important but also non-verbal communication such as mood and details, such as how posters posted around the venue looked and which topics they included, were noted.

When considering impact these events were invaluable in producing debate and controversy which would otherwise most likely not have taken place. They were also helpful in that they brought together, and mapped, some of the most relevant actors on data-driven policing in Denmark. Because of this mapping, the interventionist methodology meant that it was possible to bring these different actors together to debate as well as to identify, recruit and cultivate gatekeepers.

In terms of the importance for the research these events were particularly important as sites to understand how data-driven policing is conceptualized, deployed and contested. For instance, the demarcations (Gieryn, 1983) between concepts such as predictive policing and Intelligence-Led Policing became clear during the first panel in 2021. Similarly, the limits of the critique typically raised by Human Rights organizations, which align closely with the police reform paradigm, was helpfully displayed in these panels. That is, the critique of Human Rights groups revolved both in these events and more broadly around the need for legal safeguards, technical solutions and for the need to be reflexive both for society in general and the police in specific.

However, all of these things are present (to some extent) in the Danish police, and due to the little insight into the specifics of POL-INTEL this critique thus became relatively easy to meet for police and Palantir. These debates were thus helpful in indicating the limits of critique which only relates to some of the negative effects of data-driven policing and attempting to mitigate these while not locating such issues as produced from the role of policing in society itself. The data from these events appear mainly in this thesis to how police power is imagined as a way to contrast to its enactment which appears in other chapters. For instance, I draw on material from a public event by the Human Rights institute to underline how controversies on police data were publicly imagined. Moreover, beyond these relatively rare mentions in the thesis itself the interventionist events also shaped the analytical process as a whole in terms of how research questions, critique, etc. were developed, a point I will return to in the last section of this chapter.

This reflection on interventionism has related to futures in the sense of acting in the now to affect what will be. I will now move perspectives to consider the past instead, through detailing the last leg of my methodological strategy: historiography.

4.4 Historiography

Historiography is the history of history, of how a given historical era has been articulated and understood (Becker, 1938). In this thesis this relates to how the history POL-INTEL has been written in the public through the interplay of actors such as the police and news media. The historiographic approach here denotes how to unravel how POL-INTEL:s history has been articulated to de- and reassemble it (Durepos and Mills, 2012). This process is thus closely aligned to Foucault's (1978) notion of genealogy which traces the evolution and mutations of concepts through attending to both overt, macro-related moments of significance and micro-oriented shifts in how actors articulate or orient towards an object of inquiry.

To operationalize this methodology, I drew on a variety of methods and data including interviews, document material and from sources such as the panels described in the previous subsection. Many of the methods that were used to produce this historiography have already been described to some extent such as interviews and public panel discussions where the police or Palantir attended. In terms of historiographic research this material was invaluable in making an account of official history as it was articulated at specific points in time. That is, the history of POL-INTEL has been substantially revised during its development. By comparing the public image of POL-INTEL during fieldwork which ranged from 2021-2024, it was possible to note stark differences to earlier, and far more utopian and grand visions of POL-INTEL which can be found in quotes to media, parliamentary debates and police briefings. The finding that the history of POL-INTEL - and its association with concepts such as predictive policing - has been substantially revised has been one of the successful results of the historiographic approach in this thesis.

The method which has been the most important in this historiography has been document analysis. Documents have played a significant role in reconstructing the different official historical accounts of POL-INTEL. They have also allowed the study of failures of implementation, shifts in strategies, delays and reconceptualization which underline the history of POL-INTEL not as a smooth process but one which, as the popular Science and Technology Studies slogan goes, could have been otherwise (Woolgar, 2014).

The use of document analysis has also played into a wider triangulation strategy (Stavrianakis, 2019) which has aimed at using different methods and methodologies to unravel POL-INTEL. For instance, findings in more or less obscure police reports often raised questions that could be asked in interviews. The strength in this approach is that I found that while police and others do not typically aim to deceive, more general questions generally produce answers which are typically aligned with Coleman's (2016) understanding of interviews with police management as repetition of what that can be read in official publications. More

precise questions have tended to give much more elaborate and precise replies than what would otherwise be the case.

With the completion of the historiographic section the discussion of methodology as a set of strategies to acquire knowledge is over. Now, I will move on to making a more precise account of specific methods and interview subjects.

4.5 Detailing Methods

In this section I detail the methods, along with coding practices, interview subjects and accounts of documents, that I have employed in my historiographic and ethnographic methodologies. This is done here since the same interview with a police officer, for instance, might speak to both historical background and present use.

4.5.1 Interviews and Observations

All interviews that I have conducted have been semi-structured interviews due to how this approach allows for ensuring that some vital, pre-planned questions are not lost during the process while still retaining flexibility in pursuing unexpected lines of inquiry or digging deeper into nuances and practices (O'Reilly, 2009). These interviews have been recorded and then transcribed verbatim to ensure some fidelity in the transcription to pauses and tone of voice (Bucholtz, 2000). The interviews, save for a few with profiled individuals, which in some cases were shorter, lasted for around an hour to two hours. Most interviews have been held in English, but some have been conducted partially and one completely in Swedish-Danish (which are mutually intelligible languages).

On an ethical level, all interviewees have been pseudonymized and are referred to by title in case of their work in institutions such as the police. Full anonymization would not be desirable, or perhaps even possible, as identification of which role or relation an individual has to POL-INTEL is important to relay. An exception to this is in the case of profiled people who have been fully anonymized with other names and with as much identifiable information as possible removed.

All participants have consented to their participation in this study. In some cases, participants have relayed information off the record which has not been reproduced as information produced in interviews. Following the suggestion of Belcher and Martin (2019) who note the importance of off-the-record information in security studies such information has not been discounted but understood as vital findings but which must be located and relayed through other methods, such as by requesting documents through Freedom of Information requests.

From these overarching specifications of how interviews were conducted, this subsection now turns to detailing the different interview subjects.

The Danish Police

From the Danish police I have interviewed individuals working both centrally in the Danish National Police as well as in one of the police districts. The interviewees were of different ages, situated in different parts of the police organization and had different titles and tasks. All except one has been male. Most interviews have been conducted with a single interview subject and have taken place once. A few of the interviews, however, differ from these specifications which I note specifically when this is the case.

I have conducted interviews with two managers of intelligence units, one in a district and the other located in the Special Crimes Unit of the Danish police. The latter has been interviewed twice. I have also conducted a group interview with the project owner of POL-INTEL, the head of a specialized anti-gang unit, an intelligence analyst, a manager responsible for data warehousing and the current Data Protection Officer (DPO) of the Danish police. During this group interview, I have also observed POL-INTEL in its use for a criminal investigation. The current DPO has subsequently been interviewed once more on Zoom along with two student workers working in the DPO's unit.

Furthermore, I have interviewed the head of a district Dispatch Center (*vagtcentralen*), the former DPO of POL-INTEL, a former police director of the Danish police and a civilian worker in the Danish National Police. Alongside this, I have interviewed two teachers at the police school in a joint interview, as well as a former police officer. Lastly, I have also conducted one further observation of the POL-INTEL system and some of its associated subsystems in action.

Palantir Technologies

From Palantir I have interviewed The Global Director of the Privacy & Civil Liberties Team and another senior representative of the Privacy & Civil Liberties Team who was interviewed online. I have also interviewed a senior engineer in Palantir in Denmark and the head of Palantir Scandinavia. The head of Palantir Scandinavia was interviewed first on their own, and then once more together with the senior engineer.

Profiled People

I have interviewed eight individuals where all but two are racialized men in the ages 20-45 with a life-long history of being routinely stopped by the police. The last two are a non-racialized man and a racialized woman whose violent arrest together is relevant not just because the man was a witness to the incident at large but also due to the existence of video material from a surveillance camera that can be compared with the police statement, the legal case against them and their own subsequent complaint to the Independent Police Complaints Authority.

Alongside these interviews I have gained access to several video recordings and documents from the police and the Independent Police Complaints Authority that relate to stops and controls of some of these individuals.

Miscellaneous

I have interviewed a former civil servant from the Ministry of Justice who was deeply involved in the POL-INTEL project. Furthermore, I have interviewed a lawyer specializing in Human Rights cases against the Danish police and who represents one of the profiled persons. I have also interviewed a former director of the domestic secret services, the PET, and a member of the Legal Affairs Committee (*Retsudvalget*) of the Danish parliament who oversee the police. The interview with the civil servant and the lawyer took place at the IT University while the interview with the politician and the PET director was held on Zoom.

I have furthermore analyzed video recordings from the website of Danish parliament (https://ft.dk) of several special open parliamentary sessions (*samråd*) which pertain to police discriminatory practices. Together with these videos I have also retrieved scripts for the speeches of the Minister of Justice to these sessions.

4.5.2 Document Analysis

This subsection details the different kinds of documents that have been collected as part of this thesis. These range from public documents to those which have been retrieved through Freedom of Information requests (*aktindsigt*).

News Media

Through the use of the Infomedia (https://infomedia.dk/) webservice which indexes and provides access to Danish media I have searched for, collected and analyzed all written news reports related to POL-INTEL. I have furthermore made more general searches for news media through search engines and in major

newspapers to ensure wider coverage. Taken together, this constitutes circa 100 articles on POL-INTEL from Denmark. Alongside this, a small group of articles in the international press that relate to POL-INTEL and/or Palantir has been collected by more unstructured searches in major international news media such as the Guardian, Washington Post and Haaretz. These searches have been regularly undertaken during the entire process of the PhD from 2021 to 2024.

Documents on Policing

This category of documents denotes institutional documents such as official reports by state agencies which relate to the police in Denmark in general and to POL-INTEL in specific. This includes, for instance, the yearly reports of the Independent Police Complaints Authority since the implementation of POL-JNTEL in 2018. It also includes parliamentary multi-year agreements that govern the police, a variety of reports by the state's accountants on the police and relevant Ministry of Justice documents.

Most significantly, this category also includes internal documents developed by the police as related to Intelligence-Led Policing and/or POL-INTEL. These have been retrieved through Freedom of Information requests. Some of the more important documents includes the Project Initiation Document, the Project Completion Report, the Analysis and Intelligence Doctrine of the Danish police and a handbook for the SmartSpot hot spot mapping feature in POL-INTEL. Parts of these have been reports have had segments redacted with reference to police security concerns.

Parliamentary Proceedings

The documents pertaining to parliamentary proceedings cover the initial legal draft for POL-INTEL, the hearing replies from various stakeholders, the final draft law and the transcript of the parliamentary debates. These aforementioned documents outline the full range of public parliamentary documents which pertain to POL-INTEL. Moreover, I have collected all questions regarding POL-INTEL raised to the Minister of Justice, so-called §22 questions, which members of parliament can officially ask the Minister. Such questions are often referred onward to the Danish National Police which are then published on the Danish parliament's website (https://ft.dk).

4.6 Coding and Analysis

As Althusser (2006) argues, it is never the case that intellectual work is solely mental, but the analytical process within this thesis is perhaps an unusually distinct example of this process. For instance, in the section on interventionism I related how producing data during these events allowed me to locate the limits of police reformist thinking in both the literature on predictive policing but also more generally. Similarly, it

was only after I myself began to interview police officers and compare their interviews with the often-excessive accounts of the press that I was able to critically examine accounts in previous literature. That is, in much scholarly production which drew on public sources - including that of critical theorists – the more or less fantastic ways of imagining the power of predictive platforms were often reproduced uncritically.

While I have previously lamented the issue of access, the analytical process actually suffered from how my fortunes were reversed in the sense of the mass amounts of data I managed to finally acquire. To repurpose a term from STS, this was in a sense an issue of overflowing (c.f. Callon, 1998) data. This related both to the gathering and production of a vast amount of material as well as a flowering of theoretical concepts that accompanied these. During my midway seminar in October 2022, this was pointed out which led me into the first of a set of important analytical revisions within this PhD which was to adopt the input-black box-output structure which now make up three of my four empirical chapters.

To structure these, I turned to drawing as a methodological tool which had been popularized by other PhDs as well as senior colleagues at the IT University (see for instance Douglas-Jones, 2021). Concretely, I put a huge roll of paper liner - which is used to cover floors when painting walls or furniture - on the floor. Subsequently, I drew flowcharts of phenomena as they moved through Input, into the Black Box and then to Output. After many revisions, these drawings appear in the thesis in the simple graphs that in different ways visualize the data life cycle of data-driven policing.

Significantly, this drawing produced also a small range of initial codes. However, it was only after this process of drawing that I conducted a full coding of all my material. This was related analytically to the desire to produce a bottom-up coding that could be critically compared to the input-black box-output model. It also related to how I believed at the start of coding in the fall of 2022 that fieldwork was complete (a point I will return to below) and thereby I began to code at this point.

To begin describing the process, the initial range of codes were developed by hand after closely reading the material. This was done in order to deepen my understanding of the data and to allow for critical reflection on it (c.f. O'Reilly, 2009). These codes have then been tried on the empirical material in a process involving refinement and revision. This was a process similar to Burnard's (1991) description of how coding is best accomplished through the production of tentative codes which are then redeveloped through an iterative, multi-step process. Thereby, some codes have been merged into others, some have been removed and some have been split into sub-categories. Thereby, the development of coding has created the capacity to combine, traverse and articulate data from the three different methodological legs that this thesis stands upon.

The work on coding has been a central part of the analysis work in that it has organized and structured the analytical work and served in a sense to operationalize my theoretical perspectives. At the same time, these codes opened up new vistas and spurred me in the direction of new theoretical perspectives. Significantly, the fieldwork opportunities which appeared after the coding process began and which constituted a few interviews and participation in some public events, were also a part of this development. For instance, one of the codes developed is labelled "Prediction" and once I found instances of prediction as a practice throughout my material it sharpened my capacity to identify when and how futures were predicted in further interviews or during visits to public events.

Coding also contributed to analyzing the data itself by opening up new approaches such as how data moved through output into a variety of different sites where they produced new, and often serious, effects. As I analyzed and wrote about these, I slowly began to realize that almost no other STS researcher had produced an account of sites outside of the police. After re-reading literature from the STS-ethnographic paradigm and then comparing and contrasting it to studies on the Danish police (e.g. Holmberg, 2003, 2016; Degnegaard, 2010; Balvig, Holmberg and Nielsen, 2011; Hald, 2011), classical police studies (e.g. Bittner, 1967; Manning, 1977; Reiner, 1978; Skolnick, 2011) and critical theory on policing (e.g. Dubber and Valverde, 2006; Sanders and Sheptycki, 2017; Neocleous, 2021), I began to more systematically analyze/write the relation of state and police in concrete, ethnographic terms. In this sense, "coding is analysis" (Miles and Huberman, 1994, p. 56) as the coding process became an integral part of working with the empirical data and refining it into analysis during a constantly ongoing, dialectical process.

However, while the coding work has been invaluable in structuring the data and creating a vast repository of relevant themes, I realized that this process would not be enough in and out of itself. This is because an almost overwhelming amount of data which pointed into a variety of directions emerged from the coding process. This is not an uncommon, or even undesired part of coding, but instead one which opens up the analytical process as coding makes "theories interlink, intensify, and increase territory […]" (St. Pierre and Jackson, 2014, p. 717). The issue with this was, as related concretely to analysis, another period of overflowing of data and theoretical concepts.

The solution to this analytical overflowing came, as so many other insights, in the shower. In the fall of 2023, I was on parental leave and, after working throughout the summer, I had a brief break from the PhD which suddenly produced clarity concerning what the thesis was about and what its disparate elements had in common: *police power*. Once I had formulated a specific research question in relation to police power, my previous coding appeared in a new light, and though I made only minor revisions to the code the entire analytical process opened up and the thesis fell into place. This related also to how I named and analyzed

the vast range of material I possessed which did not relate first and foremost to how police power was imagined and enacted, but to how police and the state interact with technology to control police officers. This became the question of how governance is materialized in relation to data-driven platforms, a perspective which I use to open up for the distinction between how police power is imagined, the ways in which police management and state attempts to impose that imagination onto the rank-and-file, and lastly how police power is actually enacted.

This final restructuring in the PhD, is an example of how the analytical process has thus been a constant, continuous process, moving back and forth between empirical material and theory, between research questions and analysis, between coding and the outline of the thesis.

With these words on how I developed my analysis, the thesis now moves from a description of tools to the use of said analytical tools by engaging with the first empirical chapter on the historiography of POL-INTEL.

5.0 From Super Weapon to Mundane Tool: The Historiography of POL-INTEL

The history of platforms like POL-INTEL can be traced back to the very beginning of law enforcement and a series of technological and scientific innovations that were entangled with different ways of materializing governance over the police in efforts that it was imagined would enact more efficient police power. In chapter 2, A Genealogy of Predictive Police Power, I followed this development from the inception of *polizeiwissenschaft* to technologies like the telegraph and onward to the modern history of digitalization. In that genealogy, the last historical milestone that I analyzed in reference to the case of Denmark was the 2007 police reform. Concretely, this reform centralized the police, increased the emphasis on quantification of police work and attempted to turn law enforcement activity from reactive to a proactive enactment of police power (Stevnsborg, 2010, 2016; Balvig, Holmberg and Nielsen, 2011; Holmberg, 2019). Accompanying these changes, new IT solutions were introduced and implemented, albeit unevenly and with mixed results (Degnegaard, 2010). The 2007 reform therefore attempted to materialize new forms of governance in, across and through technology, organizational structures and data. The 2007 reform can thereby be said to form the foundation for the project of implementing POL-INTEL by turning the police towards the path of digitalization.

However, in the history of POL-INTEL, this background is generally obscured. In key POL-INTEL documents, such as the Project Completion Document (Rigspolitiet, 2018b), and in PowerPoint presentations of the platform (Rigspolitiet, 2021a), the police officially trace the genesis of the platform to three interlinked reports published in 2012. These reports are collectively referred to as the "Police Analyses" ("*Politianalyser*") (Rigspolitiet, 2012b, 2012a, 2012c). For instance, the Project Initiation Document of POL-INTEL (Rigspolitiet, 2016a) stated that: "POL-INTEL is the next step in the development towards a more intelligence-led police operation, where the first steps were taken in connection with 'Police Analyses – Monitoring and Analysis' (2012)" (my translation, p.37). In this account of POL-INTEL's history, the Police Analyses were fundamental in reorienting law enforcement towards entirely new approaches in the history of policing – Intelligence-Led Policing, data analysis and modernization. Naturally, these culminated in POL-INTEL's eventual implementation. But what did the Police Analyses themselves say, and how did they influence POL-INTEL's eventual implementation?

> The fundamental idea of the project is that by working in a more intelligence- and analysis-based way, the police can make better use of the resources used for preventing, deterring, and solving crimes. This can create a better foundation for addressing future challenges related to a globalized and technologized development of crime. The analysis

of the current situation ("as-is") largely showed that the organizational structure is well-suited for intelligence- and analysis-based work. The main problems are insufficient communication, lack of trust between the OPA [*operative intelligence units*] centers and the lines, unclear expectations between OPA and NEC [*the National Intelligence Center*], as well as inadequate understanding at the "sharp end" for intelligence- and analysis-based work. Additionally, there is a significant lack of analysis competencies and an increased need for IT support. Furthermore, the quality of the data, which forms the basis for the analyses, is not very good. Finally, monitoring and analysis personnel in OPA are used for a number of tasks other than monitoring and analysis. Together, this means that the police are not getting the most out of the approximately 166 full time equivalents [*årsverk*] used for monitoring and analysis. - my translation, Rigspolitiet (2012c, p. 4)

The Analyses thereby articulated the problems of the police as connected to cultural, organizational and technical issues. These related to the inefficient use of resources and the predicted rise in new crime challenges, which would in turn be driven by technological and societal changes.

This was not just a diagnosis of issues within the police organization. Rather, as Callon (1984) pointed out: problems also anticipate the kind of answers that can be articulated (see also Hughes, 1987; Bacchi, 2015) and this was also the case in the Police Analyses. The answers to the problems the reports had produced were argued to be "competence development courses [*kompetenceudviklingsforløb*], technological developments and a cultural and organizational adaption" (my translation, Rigspolitiet, 2012b, p. 3). The Analyses thus succeeded in associating a range of problems (such as low data quality) and solutions (for instance, technological developments and cultural changes) into a coherent whole. This process also connected a multiplicity of concepts (e.g. Intelligence-Led Policing), activities (data-driven analysis), technologies (IT systems), economic-rational values (efficiency) and underlying normative premises (that is, policing as an unproblematic public good). While – as mentioned above – these associations existed before the Police Analyses, these documents modernized and actualized their relationship in the context of the modern, digital era of Danish law enforcement.

Of particular significance is the problem pointed out in the quote above that the "sharp end" (my translation, Rigspolitiet 2012c, p. 4) of the police did not see the value in analysis and intelligence. This issue is illuminated by Diderichsen (2017), who explains that the Danish police union in the years immediately before, during and after the Police Analyses rejected and resisted the professionalization, academization

and datafication of the Danish police which it perceived as threats to its members' job security. Thereby, the Analyses' critique of the sharp end related to the struggle between "management cops and street cops" (Reuss-Ianni and Ianni, 1983).

Though the Reports produced specific problems and solutions, other states of affairs became invisible. For instance, reported crime rates, including violent crimes, have been falling in Denmark since the 1990s (Balvig and Holmberg, 2024). Similarly, alternative ways of imagining what was good and efficient police power were absent in the reports. This refers most significantly to how good police power had been widely imagined in the Danish public debate as best enacted through community policing-inspired foot patrols (c.f. Balvig 2015; Volquartzen 2013). The omission of such phenomena is important because their inclusion would have disrupted the joint problems-solutions articulated within the Analyses, and thereby would have made the new forms of materializing governance proposed in these reports seem less than self-evident.

As part of this effort to modernize, the Danish police had already, since 2005, attempted to produce a new version of the police case handling system POLSAS called POLSAG (Rigsrevisionen, 2013a). POLSAS was (and is) a legacy system with origins in the 1980s and 1970s and whose capacity has long been considered outdated by the police (Degnegaard, 2010). The case of POLSAG is a vital part of the explanation of why POL-INTEL came to be, as explained below.

5.1 Arrested Development – The Failure of POLSAG

Concurrently with the publishing of the Police Analyses reports, the police attempted to implement a new case handling system, POLSAG "[…] was at the start of 2012 shut down after a long and costly development process" (my translation, Rigsrevisionen, 2013a, p. 13). Reports by the State's Accountants, who were tasked with auditing the failure of the new system, explain that POLSAG was intended to be "[…] distinctively different from POLSAS in two areas; case management would be digitally based, and the system would be implemented nationwide and be accessible across the police districts" (Rigsrevisionen, 2013b, p. 2). POLSAG was never operational across the police at large, but only trialed on the small island of Bornholm (ibid). It therefore marked both a failure but also indicated how the desire for developing a new digital platform for the purposes of efficient police power existed already at this point in time.

The final cost for POLSAG was tallied at DKK 567 million (ibid), which the State's Accountants explained as a major financial loss that is related to how "[…] the Police did not prepare and manage the POLSAG project in a satisfactory manner and in some areas the Police failed to follow good practice for the management of

government IT projects" (ibid, p. 2). This was thereby a sharp critique against the police institution and their management of finances in relation to a digitalization project.

While POLSAG is conspicuously absent from any official documents narrating the history of POL-INTEL, it is consistently referred to in interview material (e.g. Interview, Former Senior Ministry of Justice Official, Interview, Senior Intelligence Analyst, May 2022) as a significant reason for why the police turned to "an off the shelf system" (Interview, Former DPO, March 2021) which, it was imagined, would aid in the enactment of more efficient police power. Accordingly, the next task in this chapter is to investigate how the police accomplished this search for an outside actor who could supply the new IT tools they desired.

5.2 Taking Trips to the Future of Policing

According to the newspaper Zetland (Kulager, 2021) the idea of purchasing Palantir's Gotham system was born in 2014 as parts of the police leadership visited the Interpol general assembly in Monaco held on November 3-7 (Interpol, 2014). The Zetland article claims that during the assembly, Palantir successfully pitched the Palantir Gotham platform to a small group of high-ranking members of the police leadership of Denmark and this sparked the idea of purchasing the platform.

However, an internal police report detailed how already in September 2014 the police had sent a delegation to the United States with the objective of "[...] collecting experiences from police organizations who have already acquired and utilize IT analysis tools from the providers Palantir and IBM – experiences which the Danish police can hopefully benefit from in relation to the project" (my translation, Rigspolitiet, 2014, p. 1). Specifically, the Danish police visited Los Angeles Police Department, who used the Palantir Gotham platform, and the Boston police who utilized IBM's software (ibid). Thus, regardless of the chronology, clearly the police were engaged in a process of defining relevant and capable actors to solve the problems they have developed earlier, with Palantir at the center of this process from early on.

Concretely, the report from the field trip favorably compared Palantir's customers in the Los Angeles Police Department with the Danish context in that "LAPD is responsible for central Los Angeles with four million inhabitants and has about 10 000 employees, which in size can be compared to the Danish police." (my translation, Rigspolitiet, 2014, p. 1) Furthermore, the report continued by summarizing that "With the visit, it was clearly demonstrated that Palantir is a supplier who has actually developed a product that is used in practice as an investigative and analytical tool. It was also demonstrated that Palantir will be able to meet the needs of the Danish Police" (my translation, ibid, p. 2). These were not just descriptive statements, but recommendations for action.

On the other hand, the report from the trip to IBM in Boston concluded with the words that "It may be concluded that IBM does not currently have – or in the least could present – a standard product that was actually utilized by a police force in relation to investigation and operational analysis" (my translation, ibid, p 4). How IBM and Palantir were the companies chosen by the Danish police to visit and why only these were set up against one another is unclear. What is important is how two actors were set up against one another, with all others excluded from the beginning. These actors were Palantir Technologies, which was portrayed as suitable for the problems which have been defined, and IBM, which was ultimately disqualified and estranged (cf. Galis and Lee, 2014).

However, even after this selection through estrangement, the Danish police were unable to simply purchase the Palantir Gotham platform and plug it in. As several interviews indicate, this was because politicians were recalcitrant after the POLSAG failure to approve additional expenditures for IT upgrades in law enforcement (Interview, Former Senior Ministry of Justice Official, February 2022; Interview, Senior Intelligence Analyst, May 2022). The situation would, however, change after a specific, dramatic event at the end of 2015 that was classified as a terrorist attack, and naturally forms the next step in this chapter.

5.3 We Will Protect our Society and our Values: The Terrorist Attacks in Copenhagen

On February 14, 2015, a shooting occurred at the cultural center Krudttønden in Copenhagen. The shots were directed against the Swedish artist Lars Vilks, who is perhaps most famous for his visual depiction of the prophet Mohammed (which in some interpretations of, Islam is considered blasphemous). Vilks was unhurt in the attack, but three police officers were wounded, and a civilian bystander was killed. After this event, a manhunt for the perpetrator began but the attacker was able to reach the synagogue in Copenhagen later that night where he shot and killed a civilian guard and wounded two more police officers. After a tip from the public, the perpetrator was cornered by a specially trained and armed force within the police ("*Aktionsstyrket*"), and was killed by police gunfire (Rigsadvokaten i København, 2016). Just five days later, on February 19, the Danish government released a report entitled "*A Strong Defense Against Terror: 12 New Initiatives against Terror*" (my translation, Regeringen, 2015). The report began by stating that:

> We live in a world where violent forces want to attack our democracy and our freedom. We saw this in the terrorist attacks in Paris in January 2015 and with the attack in Copenhagen last weekend. The government will always protect Denmark and secure the safety of its citizens. We will protect our society and our values. Therefore the agencies

which protect our security shall have the tools and resources that are necessary. - my
translation, Regeringen (2015, p. 1).

The report framed the events as a violent assault not only on physical persons but as part of a global attack on more intangible phenomena such as Danish values and democracy itself. To ensure future security, the quote above underlines that the police and the secret services will be given new "tools and resources" (my translation, Regeringen 2015, p. 1). These tools were specified in the report in a 12-point list of initiatives including a variety of new forms of materializing governance by mandating organizational changes, educational initiatives for police and secret services, budgetary changes and the acquisition of a new policing platform:

> The government will allocate 150 million crowns in the period 2015-2018 to enhance IT
> and analysis capacity for the PET [the Danish Security and Intelligence Services] and the
> police. The government will allocate resources for the acquisition of a new and
> advanced IT system. This system is intended to provide the police and PET with a
> common analysis platform, enabling them to better utilize the significant volumes of
> data, which can be targeted towards countering terrorist threats and attacks. – my
> translation, ibid (p. 4).

The report thus institutionalized, at the highest levels of the Danish state, the imaginary that a new analysis platform would improve the enactment of a police power, creating security against future threats. Specifically, it would accomplish this as follows:

> It is the evaluation from the police and the PET that these new IT and analysis tools will
> mean a substantial strengthening of the possibilities to identify or localize potential
> perpetrators, before a terrorist attack or other very serious crimes are committed. – my
> translation, ibid (p. 5).

Through delegating expertise (Callon, 2003) to the PET and the police, the quote explained that the solution to stopping further attacks lay in acquiring predictive data analytics. Additionally, such analytics were imagined not merely to aid in enacting police power by predicting future terrorist threats but were also extended to predict "very serious crimes". Through such predictions, as the quote above argues, the police could pre-empt threats to security and social order.

The delegation of expertise (Callon, 2003) to the police also underlines how the tools and police powers, which were imagined to be necessary to uphold security, were a product of the police and secret services,

rather than a conclusion reached inside the Ministry of Justice or by elected officials (or, for that matter, from any other actor). In the acquired interview material for this project, the way the report was strategically used by Danish police to promote the acquisition of a new policing platform was described overtly. For instance, one centrally placed person in the Ministry of Justice explained that: "I think it [the police's insistence on acquiring POL-INTEL after the attacks] probably had more to do with the terrorist attacks being a way to sort of put this on the agenda and get the funds needed" (Interview, Senior Ministry of Justice Official, February 2022). Similarly, in an interview publicized as part of a Bachelor's project, a police director, who is also interviewed and cited in this thesis, says that after the terrorist attack, "The government comes along and says [...] you need to come up with something that can combat terrorism, and there's money in it. Well, great, we have a problem with 25 million kroner that we need to find for a system we'd really like to have" (my translation, Former Police Director in Student Interview, 2018). That is to say, the inclusion of a new IT platform in the 12 points was not the result of disinterested reflection on the issues of political violence. Rather, as Diderichsen (2022) explains, the 2015 attacks created for the Danish state and its politicians the "political need to show the ability to act [*vise handlekraft*]" (my translation, p. 71). The police were thereby able to strategically navigate this need to advance their project of acquiring a new data analysis platform.

However, a report in and of itself does not necessarily translate into a new platform. The next step was the demand by Danish law that a public tender had to be issued that should be open to different companies. How did Palantir Technologies and their Gotham platform become the winner in the tender process?

5.4 Do Tender Processes Have Politics?

On December 12, 2015, a public tender was issued that inviting private actors to bid on attaining the contract to deliver a new policing platform for law enforcement in Denmark. The tender specified that the platform that bidders would be competing for would be used both for the Danish intelligence services (PET), formally a part of the Danish police, as well as for the regular police. The PET version of the platform would be called PET-INTEL, while the police version is referred to for the first time as POL-INTEL (Rigspolitiet, 2015). What is of particular significance is how the tender articulated the necessity to purchase a new policing platform by referencing the "*A Strong Defense Against Terror*" report:

> The procurement is based on one of the 12 initiatives in the government's plan "A Strong
> Defense Against Terror" under the heading "Increased IT and Analysis Capacity", where
> it is stated that a joint analysis platform should provide the police and PET (Danish

Security and Intelligence Service) with better opportunities to utilize existing as well as future data volumes for, among other things, targeted counteraction of terrorist threats and attacks – my translation, Rigspolitiet (2015).

Notably, responsibility was previously delegated *to* the police by the state in the "*A Strong Guard Against Terror*" report. In the tender, the police then delegated responsibility *back* to the state. How the police worked to influence the process, alongside the complexity of how problematizations and solutions were produced earlier, meant that the actor responsible for instigating the project of acquiring a new, expensive platform for the purposes of enacting a new, predictive police power is obscured. Similarly, by referencing the inception of the platform as a product of the "*A Strong Guard Against Terror*" report, the longer background of POL-INTEL, described earlier as being black boxed and thereby accountability and responsibility for the project is obscured. This did not mean that nothing new was advanced in the tender, which detailed in depth what technical specifications were required, including:

> Monitoring, handling of confidential informants, tele- and data analysis, generic analysis functionality, and consolidated searching, filtering, and presentation of data from relevant data sources, which will include internal data sources, i.e., the police's own systems, external data sources (national and international), as well as importing ad hoc data sources. - my translation, Rigspolitiet (2015).

The tender also required that the platform must support exchanges of data with Europol and Interpol and to be able to support data analysis and visualizations to "work proactively, efficiently and integrated with crime prevention, investigation and monitoring" (my translation, ibid), as exemplified by open-source data collection. It also had to be "Commercial Off the Shelf" and delivered by a company of no less than 100 million in yearly revenue (ibid). But why did precisely these specifications appear in the tender document? To shed some light on this process, it is necessary to return to a quote cited earlier, presented here in more context:

> So an important point here is, this procurement, was one way we had a clear agenda saying that this should be commercial and off the shelf. We didn't want someone to go out and build something specifically for us, because there are many bad examples of that going wrong, and going over budget and it also had to be as they called it 'proven in combat' – Interview, Former Data Protection Officer, March 2021.

The mention of many things that can go wrong and go over budget refers to the POLSAG failure. Even more candidly, a centrally placed civil servant in the Ministry of Justice at the time stated that "For many, many years they tried to make something called POLSAG, which would replace POLSAS with something newer, more modern. And they had to ditch the whole thing because they could never make it work" (Interview, Former Senior Official in the Ministry of Justice, February 2022). These quotes indicate how the tender was a product of previous problematizations and ways of imagining what sort of actor could aid in enacting a better form of police power. The tender was thereby not merely a technical document, but had politics (c.f. Winner, 1980) which I will now argue affected which actors could realistically compete and participate.

At the start of the bidding process, 17 companies were present in the first orientation meeting on January, 11, 2016, among them IBM, Microsoft, Motorola and Palantir (Rigspolitiet, 2016b). Official documents, such as a PowerPoint on the history of POL-INTEL that was presented to me during a field trip to the Danish National Police, simply referred to Palantir's success over the other companies by a brief reference that in 2016 the "Palantir-contract [was] signed" (Rigspolitiet, 2021a). In an interview, a Palantir representative shed some light on why the company became the winning bidder:

> Once the actual competition started, we participated in it and you know by the end of it actually all of our competitors had dropped out because there was no way to provide this capability at this price point […] This has really more to do with Palantir, not so much with our customers' transformations and digitalization but for the set of things that our platform provides, if you list this all out, like these are all of the things we want, any other company in the world would have to sign up for building these things, and we can just [sign] up for just selling or deploying what we have already built. – Interview, Palantir Scandinavia Manager, September 2021.

The quote illuminates how the specifications in the tender uniquely corresponded to Palantir's technical capacities, alongside their ability to sell an off-the-shelf product for a low market price. The tender thereby de facto excluded the majority of interested actors by being designed in a way that asked for capacities similar to those found in Palantir's Gotham platform. This is not necessarily a statement of corruption, but a description of how the tender design reflected the imaginary that the police leadership had developed earlier and that the capabilities developed to realize the imaginary aligned solely with Palantir's Gotham platform.

Although Palantir won the bid for the tender in mid-2016 (Rigspolitiet, 2021a) that did not mean the platform was a product that could be directly implemented, a finalized matter of fact (Latour, 2004). Rather,

there was a long way to go still, and Palantir's win also sparked the first public debate on the platform which turned it into a public matter of concern (Latour, 2004).

5.4.1 From Public Tender to Public Concern

The public tender had the consequence of reaching the media and creating the first trickles of what would later become a much broader public debate about the platform. The first article ever written on POL-INTEL was published in the left-wing daily *Information* on October, 26, 2016 and was entitled "*Denmark purchases surveillance system for millions from NSA provider*" (Gjerding and Andersen, 2016). As the title suggests, the article associated POL-INTEL with mass surveillance by reference to Palantir's role in aiding United States intelligence agencies:

> Palantir's software has, among other things, been used to combat Mexican drug cartels
> and predict attacks in Afghanistan, reports the American media Forbes. It also played a
> role in the operation that led to the killing of Osama bin Laden, writes author Mark
> Bowden in the book The Finish. He therefore believes that Palantir's product can
> popularly be described as a 'killer-app'. The largest shareholder in Palantir is Silicon
> Valley billionaire and Trump supporter Peter Thiel, who also started the payment service
> PayPal and was among the first investors in Facebook. According to Forbes, Palantir was
> partially funded from the start by the CIA through the intelligence service's venture
> capital fund In-Q-Tel. – my translation, emphasis in original, ibid.

Through reproducing and importing accounts from the US public debate, where Palantir is depicted as a shadowy company closely linked to American intelligence agencies and their mass surveillance, as well as to far-right politics, (c.f. Johnson, 2016; Munn, 2017; Iliadis and Acker, 2022), the article re-imagined POL-INTEL from a critical perspective. That is, in this article POL-INTEL moves from being imagined by the police to enact a socially beneficial and desirable police power, to instead being a potential harbinger of a dystopian future. In particular, the article related these issues to the concept of predictive policing:

> "It is a pretty frightening system," says Edin Omanovic, research officer at the
> organization Privacy International. He refers to the fact that the technical details in the
> tender documents suggest that the system is not only intended to solve crimes but also
> to predict who might be likely to commit something criminal in the future—so-called
> 'predictive policing.' "If you use this for so-called open-source analysis, as stated in the
> tender documents, it will essentially be surveillance of innocent people who are not
> under any form of suspicion. The Danish people must ask themselves: Have we had a

thorough public discussion about this? Is this how it should function in a democratic society?" says Edin Omanovic. – my translation, ibid.

What is added to the general concern of surveillance powers is the issue of temporality of predictive policing in the shift from investigating crimes that have occurred to potentially criminalizing innocent individuals for crimes made in the future. This way of imagining POL-INTEL's police power was developed in a follow-up article published in the same newspaper on October 31, 2016. Additionally, the author imagined POL-INTEL's police power through reference to the name Palantir, which hails from the fantasy epic Lord of the Rings where palantiri are magical crystal balls capable of seeing futures:

> This exact mixture of investigative material and information gathering from the internet and social media should set off alarm bells. When is information recorded about someone? Who can see it? When is it deleted? And who supervises? Interestingly – as several critics have also pointed out – a Palantir in the Lord of the Rings is often deceptive. Indeed, it can be used to see into distant parts of the world. But those who look tend to misinterpret what they see and therefore act very inappropriately. Precisely, because of this danger, one must be critical of such surveillance systems. - my translation Gjerding (2016).

In the first part of this quote, issues of how governance would be materialized over the new platform and its police power are raised. In the second part, a much more speculative way of imagining police power through the fictional genre of fantasy is used to imagine what police power POL-INTEL would be capable of and the issues related to this. This quote thereby also signified the low level of concrete insight into the platform that existed at the time, which is why POL-INTEL's police power was imagined through drawing on fiction rather than more concrete events.

Following the *Information* article published on October 28, a parliamentarian for the liberal-left party Alternativet ("the Alternative") raised the issue in a formal, so-called §22 question, to the Minister of Justice:

> Will the minister account for the purposes of the state's purchase of the intelligence platform from Palantir, including whether it is correct that the system is not only to be used to solve crimes, but also can and/or should be used to predict who might be expected to commit a crime in the future – so-called 'predictive policing', as stated in the article 'Denmark buys surveillance system for millions from NSA supplier' published in

Information on October 28, 2016? – my translation, Retsudvalget (2016-17 REU Alm.del Offentligt', 2016).

In turn, the Minister referred the question to the Danish National Police, whose answer was published on November 25, 2016. The Danish police replied that the new platform was purchased as part of the reforms made on the recommendations from the "*A Strong Defense Against Terror*" report. Thereby, the police continued to delegate political responsibility back to the state and black boxed its own involvement. The reply also argued that the new platform was part of the continued "modernization and effectivization" (my translation, ibid) of the Danish police to ensure that the Danish police could combat complex and serious crime, such as gang criminality. Regarding the question on predictive policing, the Danish police authoritatively answered that:

> There is no question that 'predictive policing' can replace or render obsolete police experience, but it is a working method that can help ensure that police patrols, etc., are used most effectively to prevent or address, for example, personal crime. The experiences from countries that have implemented 'predictive policing' in their police forces seem to show that this working method can yield good results, including in the field of burglary crime. - my translation, ibid.

The Danish police thus embraced predictive policing as a method to enact more efficient police power. Notably, the way the police formulated their interest in predictive policing differed from how the predictive policing was imagined in the *Information* articles. In the quote above, the police instead imagined predictive policing as an element of the technical, a-political modernization efforts of the police. A part of how they were able to present the platform as simple, mundane and matter of fact (Latour, 2004) is how the police in their reply did not engage with questions of surveillance hinted at in the parliamentarian's question (by citing the title of the *Information* article). Thereby, in the early public debate, POL-INTEL and predictive policing were imagined very differently: from tools of mass surveillance like the Palantir in Lord of the Rings, to being mundane tools for improving police crime-fighting capabilities. Changing gears from the public debate, I will now move on to the next important step in the history of POL-INTEL, which was the drafting of a new law designed to legalize the platform.

5.5 How to Produce Police Power in the Digital Era: The Law Drafting Process

The process of developing a draft for a new law that would modify the existing police law began already during the public tender process (Interview, Former Senior Ministry of Justice Official, February 2022) and lasted until the draft law was published on February 10, 2017 (Justitsministeriet, 2017b). The process of

how and why the draft law came to be is almost entirely black boxed within official, written sources. But from the perspective of at least parts of the Ministry of Justice, there were political and strategical reasons for drafting a new law:

> And it was debated as well whether new legislation was actually needed. I remember somebody at some point argued […] that since no changes were made to the actual material rules on when you were allowed to use data it could be argued that […] that didn't require new legislation but quite quickly it was decided that it was too unsure whether that was actually the case and […] from the public point of view, would be quite a big thing, it would be the most proper thing to do to have specific legislation in place, giving police the mandate to do this. – Interview, Former Senior Ministry of Justice Official, February 2022.

In other cases, data-driven policing has been instituted as a means for producing legitimacy by drawing on the veneer of scientific objectivity, as opposed to biased police discretion (Shapiro, 2019). In the case of Denmark, as explained in the quote above, one of the main issues was instead that POL-INTEL threatened police legitimacy, and a new law was seen as a way to extend the legitimacy of the democratic process to the platform. Notably, the actual draft was not authored primarily by the Ministry of Justice, or for that matter the Minister of Justice or other elected representatives. Instead, the draft law **was written by the police themselves**:

> The first draft for this legislation was actually made by people working for the Danish National Police, which is a bit unusual, I would say. It was actually [the former DPO] who wrote the very first draft for this legislation back when he was working for the police. And so the whole process was a very close cooperation between the Ministry of Justice and the police and with Palantir sort of on the sideline, very much involved but not so much directly with the Ministry of Justice. It was more sort of through the National Police. – Interview, Former Senior Ministry of Justice Official, February 2022.

The production of the new draft as a process designed by the stakeholders themselves was thereby not common in a Danish context. The quote also relays the importance of Palantir as an actor and part of the law-drafting process – a background further elaborated by the former DPO:

> Then we also had a legal dialogue, when we drafted the Executive Order, we very carefully mapped that […] So we basically said can you [Palantir] build this, and they said no, but maybe we can build this and this and this, and then we said, OK then we put that

into law. So, they showed us something and then I wrote an Executive Order describing

that [...] – Interview, Former Data Protection Officer, March 2021.

While it is "standard procedure that those who are affected by this are involved in the legislative process because they are of course the ones who know how this is going to affect them in real life" (Interview, Former Senior Ministry of Justice Official, February 2022), the quotes above suggest that in the case of POL-INTEL this took on an unusually extreme character. By rewriting not just the police law but also the Executive Order detailing and specifying how the police are allowed to gather, integrate, analyze and retain data, the police themselves produced the legal draft that would materialize the forms of governance designed to both give them new police powers, and check their enactment of these powers. Moreover, this process related specifically to the inclusion of a private actor in public life. That is, the law and Executive Order – which both materializes public governance over the police – was specifically designed to suit the technical capacities of a private actor. This background is, as noted earlier, invisible and black boxed in the official public documents. Moving on, I will more deeply investigate the effects of black boxing the police law.

5.5.1 Black Boxing the Police Law

On February, 10, 2017 the legal draft aimed at legalizing POL-INTEL was submitted for public consultation (*høring*) by the Minister of Justice Søren Pape Poulsen of the Conservative party (Justitsministeriet, 2017a). On the surface, this draft seemed to conform to the democratic ideal of a law produced due to factual deliberations on real problems by a representative of the elected government. As I have shown above, however, this was far from the case.

The title of the proposed law was "*Law Amending the Act on Police Activities and the Customs Act (The police's use of database analysis tools and access to information about airline passengers)*" (my translation, Folketinget, 2017). As this title suggests, the new law proposed mandated airline companies to share information on passengers as well as changes to how the police could collect data. The changes to police data collection practices that would be inserted in the police law read:

> § 2 a. The police conduct cross-cutting information analyses on the basis of the
> information that the police process, when it is necessary for the performance of police
> duties, cf. § 2.

> Subsection 2. The police may collect and process information from publicly available
> sources, when it is necessary for the performance of police duties, cf. § 2. Subsection 3.
> The Minister of Justice lays down detailed rules for the police's processing of

information, including that which takes place pursuant to subsections 1 and 2. The

Minister of Justice also lays down rules regarding the purposes for which information

may be processed, when the deletion of information must take place, and the technical

and organizational measures that must be observed during processing. - my translation,

ibid, p. 1.

The proposed changes to the law and its accompanying executive order would thus widen the capacity for the police to collect, retain and process data. They would thus materialize new forms of governance over the police in relation to data-driven policing. This, as several scholars have underlined (Volquartzen, 2018; Stevnsborg, 2021; Christensen, 2024), would extend police powers to surveil in a broad and undefined manner. That is to say, the laws designed to oversee and control the enactment of police powers through POL-INTEL were, and are, relatively unspecified. However, with that said, the law's vagueness is not a historical break, but rather a continuity of the famously broad powers delegated to police through law for the purposes of upholding social order and security (see for instance Davis, 1970; Skolnick, 2011; Benjamin, 2021; Neocleous, 2021). The relation between police powers, security and social order is invoked in the comments to the draft law which returned to the "*A Strong Guard Against Terror*" report to make a case for the necessity of POL-INTEL and its accompanying law draft:

It is stated in the recommendations of the evaluation report on the terrorist incidents in

Copenhagen in February 2015 and the then government's initiative 'A Strong Defense

Against Terror' that a coordinated and intensive collaboration must be established

across the police and PET, including through increased IT and analysis capacity and the

provision of a joint analysis platform. - my translation (ibid, p. 3).

As Latour (1987) explains in his analysis of how citations are used in scientific papers "[...] all of these references are aimed at specific goals and arrayed for one purpose: lending support to the claim" (p. 38). Similarly, claims to the self-evident truth of the necessity of POL-INTEL were used and strengthened in the quote above from the law draft through reference and delegation (Callon, 2003) to the "*A Strong Guard Against Terror*" report, which continued the black boxing of the social and political background of the new platform.

Moreover, the problematizations the police had produced earlier resurfaced in the draft law. In the comments to the draft, the new law was necessary to give "the police the chance to effectively counter an increasingly complex range of crimes" (my translation, Folketinget, 2017, p. 3). The issue of complexity of crime, to remind the reader, was one of the original problems presented in the Police Analyses (Rigspolitiet,

2012a; 2012b). Thereby the law appeared to be a clear and obvious solution to a range of objective problems whose historical development had been black boxed.

But writing laws does not enact them, and in the Danish system of governance, drafts for new laws must pass a process of public consultation (*høring*) with a range of actors designated as relevant stakeholders, described below.

5.5.2 The Public Consultation Process of the Draft Law: POL-INTEL as a Public Concern

The new draft law was circulated for public consultation to over 50 organizations on March 28, 2017 (Justitsministeriet, 2017a). These organizations included a range of state criminal justice and security organizations, including the prison services, the army, the Danish National Police and all the district (*byretter*) and High Courts (*landsretter*). Furthermore, all the law faculties of the universities in Denmark were included. Outside of these cohorts, a group of state organizations whose areas of expertise deal with data were also involved, such as the Danish Data Protection Agency (*Datatilsynet*). Most likely since the legal changes included changes to what data airline companies were mandated to retain and deliver to the police, in addition, private businesses with interests related to air traffic such as the owners of major airports, were also included. The last two major groups included in the public consultation process were associations representing lawyers and a range of privacy-oriented civil society organizations such as Amnesty International, the IT Political Association, and the Danish Institute for Human Rights (ibid).

Out of these 50 or so organizations, 19 answered[4]. Out of these, ten replied that they had no comments to the proposal (ibid). Thereby, only nine organizations gave written feedback on the new draft law, which was published alongside an extensive argumentation for why the new law was necessary.

A few of these ten replies had very technical content. For instance, the owners of Kastrup Airport argued that more time was needed to harmonize different legislation with the European Union so that the airport would be able to comply with the new law. The replies which came from Human Rights, civil society and privacy groups, in distinction, had a more critical tone. Specifically, these were concerned with what was referred to as the vagueness in the new law proposal, such as the formulation in the comments to the law draft that "The assessment of when cross-cutting information analyses are necessary for the performance of the police's tasks will – as has been the case under current law – be a professional police assessment

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[4] The 24 Danish district courts are counted in the official documents as one organization as they answered collectively. I therefore also count these as one respondent in both the list of how many organizations included in the public consultation, and – since they also formally replied that they had no feedback – they are also counted as one in both the list of organizations who replied, and who stated that they had no comment.

[politifaglig vurdering], made with regard to the description of tasks in Section 2 of the Police Act" (my translation, Justitsministeriet, 2017c, p. 46). Before moving on, what is interesting to note is that while the police had earlier critiqued the police discretion at the "sharp end" (my translation, Rigspolitiet 2012c, p. 4) (i.e., the rank-and-file) of policing, the law proposal thereby enshrined another form of discretionary police power, the power of the police organization itself to decide when its actions were warranted, into law. This issue was linked by the Danish Institute of Human Right's to the vagueness of the police powers in the new law as they related to surveillance:

> The question, therefore, is whether these cross-cutting information analyses will
> effectively lead us toward general surveillance and, thus, the suspicion of all Danish
> citizens – only without the legal safeguards that usually accompany such practices. If so,
> we are facing a paradigm shift in the working methods of the Danish police, and it is
> crucial that the police's tools are precisely defined. – my translation, ibid, p. 48.

Thus, the Human Rights institute echoed earlier critiques on POL-INTEL as a surveillance tool. However, while these earlier critiques were more open-ended through invoking science fiction and fantasy genres to imagine police power, the Danish Institute for Human Rights and other civil society organizations articulated the issue as a problem of materializing governance over the enactment of police surveillance powers. For instance, the IT Political Association explained that: "The IT Political Association does not of course have any objections against an IT-supported efficient planning of the police's work, but we are very concerned with the question of whether Intelligence-Led Policing will mean increased mass surveillance" (my translation, Justitsministeriet, 2017a, p. 53). As such, this reply, which echoed that of the Human Rights groups, carefully demarcated (Gieryn, 1983) the critique of the draft law from a more general critique of police power as such. The issue for the critics in the public consultation process was thus that the forms of materializing governance that the new law proposed to control, limit and audit the enactment of police power were lacking.

In their official summary of the public consultation replies to lawmakers, which was published alongside these replies, the Ministry of Justice stated on this basis that there was no opposition to law itself. For instance, the Ministry's summary stated that: "**The IT Political Association** has no objections to IT supported planning of police work" (my translation, emphasis in original, Justitsministeriet, 2017b, p. 3). Thereby, the Ministry summarized that there was no critique in the public consultation of POL-INTEL or its police power *per se* and thereby also implicitly advised lawmakers that there were no deeper issues in the new law. POL-INTEL was thus one step closer to being realized. Before the final vote on the law, a public debate was reinvigorated which I will now describe.

5.6 POL-INTEL The Super Weapon – Public Imaginations and Debate on Police Power

Predating the publication of the replies of the public consultation by five days, the magazine *Ingeniøren* (The Engineer) published an article on February 5, 2017 on POL-INTEL that was significant as it, for the first (but not last) time, imagined the new platform through science fiction powers of awesome foresight: "Here, predictive policing begins to resemble the movie 'Minority Report' from 2002, in that the police work on clearing completely concrete murders before they are committed" (my translation, Ramskov, 2017). The movie Minority Report (a remake of a novel) has been an immensely influential way of imagining predictive policing, to the extent that predictive policing scholar Scannell (2019) refers to it as the "magnetic north" (p. 2) of all thinking on the concept. Even though the article warned of exaggerating police power, its invocation of Minority Report underlined how "Science fiction stories express fears and yearnings that are rooted in current discontents, either signaling possible escape routes or painting in morbid colors the horrific consequences of heedlessness in the present" (Jasanoff, 2015, p. 337). That is, much like earlier ways of imagining POL-INTEL through the genre of fantasy, this article imagined predictive policing by articulating fears and possibilities through fiction. This article exemplifies the start of the truly imaginary life that POL-INTEL would have in the coming months and years, which I will now show would also encompass how the police themselves publicly imagined the platform.

On February 10, 2017, the replies from the public consultation were published and made accessible. On the same day, a set of newspaper articles in the daily *Berlingske Tidende* were published. These articles drew heavily on interview material from the same police director who was cited earlier in this chapter. In these articles, the director articulated a new, utopian way of imagining POL-INTEL's police power. For instance, one of the articles proclaimed that: "A new IT system will predict crime in the long term. The police call it a revolution. […] '[POL-INTEL] will be a quantum leap into a modern police' says the police director to Berlingske Tidende" (my translation, Voergard, 2017). Similarly, the new platform was in another article on the same date dubbed a "*super weapon*" (my translation, Holst and Kildegaard, 2017) in the fight against crime.

These were not solitary references but were reproduced in how the platform was imagined by the police in a range of articles. For instance, on the following day, February 11, the same police director was cited in an article written by the Ritzau news agency in *Danish Radio*, a major state-owned news channel, wherein the director again referred to POL-INTEL as a "super weapon" and a "quantum leap" which "is a revolution for Danish police" (my translation, Ritzau, 2017c). Interestingly, the director claims that "If the police today use 80 percent of their time on collecting data and only 20 percent on processing it, this new tool will, according

to the police director, totally reverse how the police use their time." (ibid, my translation). This statement will be reproduced through POL-INTEL's life, but here it specifically denotes how it was imagined that POL-INTEL would enact immense efficiency to combat crime. Thereby, the police advanced a utopian way of imagining the police power of POL-INTEL.

On February 11, a first, albeit careful critique, appeared in a Ritzau article published by *Berlingske Tidende* with the headline "Police Officers: New system can help – but is not a miracle cure" (my translation, Ritzau, 2017a). This article drew heavily on an interview with the chairperson of the Danish Police Union that was initially positive about the time-saving aspects for the police, but said: "However, the Police Union warns against allowing the system to move officers from the streets to offices. The most important thing is still that we are visible in the streets. It is crucial to have close contact where we meet the public, says [the chairman of the Danish Police Union]." (ibid, my translation) These sentiments were echoed in another article on February 11 citing the police researcher Mette Volquartzen who stated that: "The nightmare scenario is that there will be a trend where fewer officers are needed on the streets because the police can predict crime. But police work happens out among people, not behind desks" (my translation, Ritzau, 2017b). Thereby, the conflict between "street cops" and their discretionary police power returned in the public debate as a warning shot to the public in relation to how the "management cops" (Reuss-Ianni and Ianni, 1983) of the Danish police leaders promoted POL-INTEL as a catalyst in producing a new, data-driven, predictive police power.

The article Volquartzen also briefly noted the critique that predictive policing platforms are liable to "stigmatizing both areas and people" (my translation, ibid). Such critical ways of imagining predictive police power were deepened as the debate went on, for instance the daily *Jyllands-Posten* published an article on February 14, 2017 entitled "*Two years after the attack on Krudtønden, our freedom is still up for debate*" (my translation, Vibjerg and Haislund, 2017). In the article the chairperson for the IT Political Association was extensively cited, and his opinions were succinctly summarized in the inline of the article with the words: "Are politicians selling out our freedom with increasingly more surveillance as a response in the fight against terrorism[?]" (my translation, ibid). This article marked the return of the critiques developed earlier, which posited the police power of POL-INTEL as a surveillance power directed against Danish citizens at large.

These two competing ways of imagining POL-INTEL as either a utopian super weapon in the fight against crime or a dystopian surveillance tool would be repeated throughout February and March in 2017 in articles that typically interviewed both the chairperson of the IT Political Association and the same police director as above, reproducing the same general content as previously (e.g. Bjørnager and Breinstrup, 2017;

Gjerding and Skou Andersen, 2017). However, throughout the public debate before the vote on POL-INTEL, set for April 2017, POL-INTEL was imagined by both critics and proponents as being potentially capable of enacting immense police power. For instance, in the newspaper Zetland, one journalist wrote that "What Polintel [sic!] can do would, just a few years ago, sound like pure science fiction" (my translation, Kulager, 2017). The return of the science fiction reference underscores how POL-INTEL was imagined throughout the public debate at this point as possessing fantastic police powers, whether these were for good or for bad. The only question critics raised was if the forms of governance materialized to control these police powers were sufficient or not.

To assuage the fears of critics, the police also provided private demonstrations of the platform to organizations such as the IT Political Association (Interview, Former Police Director, March 2021) as well as to members of the media (Kulager, 2017). This action, as well as the broader police media strategy, should be seen in the light of how the police attempted to navigate the public debate before the upcoming vote on the new law designed to legalize POL-INTEL. Moving on, I will attend to how the parliamentary debate on the new bill played out.

5.7 The Parliamentary Debate: Public Performances of Security

On April 25, 2017, the Minister of Justice at the time, Søren Pape Poulsen, submitted to parliament the final bill that aimed at enacting POL-INTEL into law:

> Danish police are confronted with an increasingly complicated task. The police
> increasingly meet investigatory challenges across a range of what can broadly be called
> IT-supported crime, e.g. sexual abuse of children, drug crime, radicalization and
> economic crime. In parallel with this, the police investigation is in a large number of
> cases increasingly dependent on the police being able to analyze ever-increasing data
> quantities, recognize and predict crime patterns and deviations from the normal picture,
> etc. and utilize investigative resources and efforts on the basis of qualified knowledge
> and intelligence. There is thus a need for continued modernization and increased
> efficiency of the Danish police through implementation of an analysis-based police
> effort. The bill proposes to provide the judicial framework for such analysis-based
> policing by introducing a new provision in the Police Act that provides a clear basis for
> the police's use of database analytics tools across the police's activities as well as within
> and outside the criminal justice system. – my translation, Former Minister of Justice
> Søren Pape Poulsen, Folketinget (2017b).

The Minister's speech thus publicly envisioned that the law would enact new, more efficient and better police power to combat serious crime and threats to security. Through so doing, he reproduced the same problematizations, solutions, associations and ways of imagining police power which had been developed in-house by the police themselves in the Police Analyses and which had travelled into the "*A Strong Guard Against Terror*" report and to the present day.

After the Minister's opening speech, parliamentarians from across the political spectrum spoke in support of the new law in statements, which essentially reproduced the same ways of imagining the police power that the new law would enact in the same way as the Minister had. For instance, a representative of the main opposition party at the time, the Social Democrats, underlined that:

> It is a proposal that we, from the Social Democrats, support, and we do so because data
> and analysis are increasingly important tools for the Danish police in the fight against
> those who want to harm our society and break our laws. The old, romantic notion that
> police work could be handled solely by the local officer on a bicycle unfortunately does
> not hold in a modern society.– my translation, Trine Bremsen, Parliamentarian of the
> Social Democratic Party, Folketinget (2017a).

As this quote exemplifies, parliamentarians fundamentally articulated the problem to be solved as one of security in the face of crime and threats to social order. POL-INTEL was imagined as a solution to such threats through enhancing the enactment of police power. Furthermore, this argument was predicated upon a notion that there had been a paradigm shift: from an old, pre-digital, pre-modern world to the new, digital society which thereby necessitated corresponding data analysis tools for the enactment of police power in a digital era.

Even representatives who were critical of the law seemed to agree with these basic premises. To exemplify, a parliamentarian from the far left Red-Green Alliance (*Enhedslisten*) stated that "Purely generally I want to say that [The Red-Green Alliance] of course do not have any kind of objection that we have an IT-supported and efficient planning of the police's work" (my translation, Folketinget, 2017a). There was thereby no disagreement on the fundamental ideological premises of the new law which assigned the police the unproblematic role of enacting security. What critique was raised was directed at the specific ways of materializing governance in relation to POL-INTEL. For instance, one speaker from the left-liberal-green party *Alternativet* ("The Alternative") said that:

> I think I will use a quote from the Danish Institute for Human Rights' consultation
> response to explain where we in Alternativet stand on this bill. On page 4 of their

response, they write, and I quote: 'The bill pursues a legitimate purpose, but the question is whether the legal basis is sufficiently clear, and whether the measure is necessary and proportionate.' That is the challenge with this bill. It is also why it has been so widely criticized in the consultation responses. The Danish Institute for Human Rights, the University of Copenhagen, the Association for the Rule of Law, and the IT Political Association all criticize the fact that the bill provides a very broad mandate to the minister to initiate or determine, so to speak, some of the more specific elements of the bill. This means it will not be based on legislation but rather on Executive Orders, which creates unease among these organizations. And I believe we need to take that very seriously. – my translation, ibid.

This quote exemplifies how parliamentarians delegated critique (Callon, 2003) to the actors in the public consultation and how little first-hand insight they acquired in regard to POL-INTEL or data-driven policing platforms, which was depicted in the debate. Instead, parliamentarians reproduced ways of imagining police power developed by others, whether that was the utopian imaginaries of the police, or the skeptical accounts articulated by critics in the public consultation process.

Thereby, the parliamentary debate on POL-INTEL appeared as a performance where lines were borrowed from a script written by other authors. In the ideals of liberal democratic governance, police power should be a result of the delegation of powers to the police by and from transparent, democratic processes such as parliamentary debate and vote which function as ways of materializing governance over the police (e.g. Skolnick, 2011). However, as one parliamentarian explained, the very process of governing, particularly in relation to law, criminal justice and law enforcement, is difficult because:

> […] politicians change a lot. And I think that's the problem. We are about three people left who might know something about [POL-INTEL]. Because it's not a discussion and I know […] the Ministry of Justice, it's one of the ministries where we have the largest amount of bills, laws, coming out. So, it means that if you want to try to survive in the system you have to keep focusing on the bills and it means you don't look much back because you don't have the time for it. And that's a democratic problem, but that's the conditions for the way we work with those things. And I think that's part of the problem, you don't have five minutes to sit down and think "was this good? Is it working? And how do we control it now? – Interview, Parliamentarian, September 2021.

The parliamentarian indicated here the issue of attempting to govern a platform like POL-INTEL by relating it to specific issues in how governance is materialized over the police, for instance through the lack of expertise by most lawmakers due to brief terms in parliament. This is specifically related to the high production rate on bills related to crime and justice, which means that established laws are rarely if ever reviewed and revisited. As the quote suggests, once police powers have been written into law, it is very difficult to re-open and re-visit these powers. Added to this, in the concrete example of POL-INTEL, the platform itself was black boxed, and thus the debate mainly concerned how the platform and its police power was imagined. Thereby, the means materialized to meaningfully govern data-driven policing in and through parliament was fundamentally limited. After the first debate, second and third parliamentary debates were scheduled. The second debate was held on May 30, 2017. The speaker of parliament opened said debate with the words:

> There are no proposed amendments. Does anyone wish to speak?
>
> [Silence]
>
> Since that is not the case, the debate is closed. I propose that the bill goes directly to the
> third reading without further committee consideration. And if no one objects, I will
> consider this adopted.
>
> [Silence]
>
> It is adopted." – my translation, Speaker of Parliament, Pia Kjersgaard (Folketinget,
> 2017b).

To make the events explicit, what occurred was that no parliamentarian took the opportunity to speak, and the speaker then immediately called for a third reading of the law. When there was still no-one asking to speak, the speaker immediately enacted (in the legal sense) the bill into law.

With this silence in parliament, the police now finally had a law which gave them the right to use the platform they had acquired. They also had a dream of an imagined better enactment of police power through data analytics. What they did not have was the actual POL-INTEL platform as that would require an implementation phase where different source databases would be merged, a process described below.

5.8 From Imagination to Enactment: Implementing POL-INTEL

5.8.1 The Issues of Data Integration

The law on POL-INTEL being passed did not end the public debate about the platform. Rather, utopian and dystopian ways of imagining POL-INTEL's police power, and how it should be governed, continued (e.g. Jarlner, 2017; Sommarand, 2017; Thøgersen, 2017). However, these articles – like the preceding debates – were not based on experience with the platform itself. The discrepancy between ways of imagining and enacting police power can be traced by moving from the public debate, and to the data integration process.

As the platform was legalized in late May 2017, the process of integrating the source databases the police had access to into POL-INTEL began. As the Project Completion Report (published internally in the police in July 2018) stated, this was not a smooth or frictionless process. POL-INTEL was supposed to be operational by the end of 2017 but was postponed due to data integration issues to the start of 2018. The report specified the issues in how: "The project is […] generally [*overordnet*] successful but there have been challenges in relation to the very old source systems […] This means, among other things, that some source system implementations were postponed, and similarly some other tasks were postponed to the later development phase of POL-INTEL" (my translation, Rigspolitiet, 2018, p. 1). Specifically, the problem involved integrating the Criminal Registry (*Kriminalregistret*), which the Report suggested was a problem due to its status as an old legacy system built in the 1970s, and that:

> The delivery of a new informant system was further delayed as the project was tasked
> with integrating the money laundering database (goAML) into POL-INTEL instead.
> Additionally, security considerations necessitated a changed technical solution design to
> ensure the required very high level of security. However, the new solution design means
> that the general, good POL-INTEL search capabilities cannot be utilized for the informant
> system - my translation, ibid (2018, p. 2).

The quotes above indicate that the data integration process of POL-INTEL was hampered by a variety of technical issues that were either referred to as a postponement of the integration of some data sources or as impacting the capabilities of the platform itself. The postponement of some sources will become important later in the chapter, but for now, the important thing is to note the contradiction between how POL-INTEL's police power had been imagined and how it was concretely realized. That is, the police, the media, parliamentarians and critics had all imagined POL-INTEL as a tool that would directly translate into enhanced police powers, whether for good or for bad. Instead of immediately realizing this new police power, the process was hampered. Moving on, I will show how this was just the first of several issues that

also relate to how POL-INTEL became re-imagined. One important part of this is detailed in the next section, which traces how the platform started to become demarcated (Gieryn, 1983) from being a predictive policing platform and the politics connected to this.

5.8.2 Demarcating Predictive Policing; Redefining POL-INTEL

An important development in POL-INTEL's status as a predictive policing platform was sparked in an interview with the same police director as cited before, held on March 5, 2018 in the online edition of *Danish Radio*. In this article, entitled "*The police roll out new IT system: Say no to artificial intelligence*" the police director distanced POL-INTEL from predictive policing:

> POL-INTEL was originally intended to have predictive functionality, but this idea was abandoned for a very simple reason. Fortunately, there is so little crime in Denmark that it is not possible to create a system that can mathematically predict where the next burglary or similar incident will occur geographically, says [the police director]. According to the police, there is therefore no reason for us to worry about being singled out by a computer algorithm and ending up on the police's radar based on that. – my translation, Hardenberg (2018).

While POL-INTEL had previously been defined by the police as a predictive policing platform, this article re-defined the platform by demarcating (Gieryn, 1983) it from an "authentic" predictive policing viewpoint. That is, in this account, predictive policing requires mathematical automation to some degree and argues that since the crime levels are so low in Denmark that it is not possible, then POL-INTEL cannot be said to be predictive. This change in how crime rates are described is also a change in how the police articulated both what was necessary for predictive policing but also for how the state of affairs of society is described. While it might be argued that very few but quite serious crimes occur in Denmark, such specifications had not been a part of earlier descriptions of the crime situation in Denmark which had been used to argue for the acquisition of the platform. Very notably, these new criteria were used by the police director to support an argument that there was no need for citizens to be concerned about the broad surveillance powers in POL-INTEL that critics had warned of.

The question of what defined predictive policing was brought up once more in an official §22 question published on June 19, 2018. The question posed by a member of parliament was: "Will the minister clarify whether the Danish police use algorithms as part of data-driven policing?" (my translation, 'Retsudvalget 2017-18 REU Alm.del endeligt svar på spørgsmål 919', 2018). The Minister of Justice, who the question was

posed to, delegated the answer to the Danish National Police, who replied that algorithms are a part of all software, and then went on to explain that:

> The National Police is currently working to ensure that the police act more knowledge-based and data-driven, for example through the analysis platform POL-INTEL. It should be noted in this context that if the question aims to determine whether the police use algorithms to forecast which individuals are expected to commit crimes, the National Police can confirm that this is not the case. The police thus do not use algorithms for profiling and predicting crime at individual level. – my translation, ibid.

In contrast to the quote by the police director immediately above, the Danish National Police thus now demarcated (Gieryn, 1983) POL-INTEL only from one kind of predictive policing, the individual-based form. Why this single form of predictive policing was pointed out, and not also the more common, place-based versions of predictive policing, is unknown. What is clear is that a conceptual redefinition of POL-INTEL had begun, one that I will return to later. Before then, it is important to note that such revisions did not occur in a vacuum but followed international developments such as the ban on predictive policing in Los Angeles in the summer of 2018 (Brayne, 2021), which led to the redefinition and reconceptualization of data-driven police work in the city (see chapter 2). Thereby, the re-conceptualization of predictive policing in Denmark was part of a wider, international redefinition and revision of the notion which was interrelated to political critique and opposition. But regarding Denmark, the question was then if the new platform did not afford predictive capabilities, then what good did it do? Moving on, I will relate some public answers to this question.

5.8.3 What Did You Get for Your Money? Publicizing POL-INTEL's Power

With the implementation of the platform in the first half of 2018 the police issued press releases on June 6, 2018 detailing two arrests they claimed occurred due to the new platform. These were in response to a rape case in the town of Helsingør, and a pickpocket operating in the train station of Denmark's second largest city, Aarhus (Klein, 2018). The reason for the police publicizing these arrests was because "this would be a nice way to tell everybody that this is what you got for your money. Because this was quite an expensive investment for the police, [for] tax payers money […]" (Interview, Former Police Director, March 2021). The police director thus related that there was an element of retaining legitimacy in the public that motivated the publication of these cases.

However, the relatively mundanity of the crimes and the arrests, which the police marketed as successes, caused the daily newspaper *Politiken* on August 5, 2018, to ask "*Was it too much when the police caught a pickpocket with a new cyber weapon?*" (Scheuer-Hansen, 2018). That is to say, the discrepancy between how POL-INTEL's police power had earlier been imagined as a "super weapon" (my translation, Bjørnager and Breinstrup, 2017) against terrorism and other serious crimes, and its actual mundane enactment, was stark. A more high-profile chance to test POL-INTEL came in the case of the murder of the teenager Emilie Meng, which became a highly publicized case in Denmark. This case uncovered issues in the ongoing data integration of some source systems of POL-INTEL.

5.8.4 The Murder of Emilie Meng and the Little Actor Who Couldn't: The Non-Enactment of Police Power

In 2016, a young woman called Emilie Meng was abducted and then found murdered in the small town of Korsør on Zealand. After frustration with how the police had handled the case (which became a national scandal), Emilie Meng's mother wrote to the Minister of Justice. This resulted in a meeting in the summer of 2018. Thereafter, the police reviewed their work and put additional resources into the investigation (Albrektsen, 2018), including POL-INTEL as a central part of the investigation, which the tabloid Ekstrabladet wrote about in the following manner on the September 7, 2018:

> **Help from new super-system**
>
> In the hunt for the murderer of the young girl the police have also utilized their new system Pol-Intel [sic!]. The system gives the police possibilities to search for information across several systems and to compare traces, DNA and other data. - my translation, emphasis in original, Nielsen, (2018).

However, the police did not end up finding Emilie Meng's murderer at this time, but in their review of the case they did find something else of great importance for this thesis: an error in the telecommunications data that Danish telecommunications companies are, by law, compelled to transmit to the police by way of an automated system (Datatilsynet, 2021). One of the telecommunications companies reported the issue in mid-November 2018 to the leaders of the police National Cyber Crime Center (*Nationalt Cyber Crime Center*) and the national intelligence unit (*National Efterforskningsafdeling*), who in turn presented the issue at a meeting with the top levels of leadership of the police on February, 27, 2019 (Rigspolitiet, 2019b). The precise issue at hand was that:

> The IT system which the telecommunications center [*telecentret*] uses to convert telecommunications data had a self-developed timer built into it. The function of the

timer has been to secure that data is sent to the requisitioner [*rekvirenten*] as fast as
possible after data from the telecommunications provider has been received in the
telecommunications centers systems. The time function has made it so that data in
some cases has been sent even as the full conversion was not completed, and this
meant that datasets that were not finished being converted were sent to the requester.
It was the intention that a complete dataset in such cases would be sent after, which did
not always occur […]. The timer has been set differently, and it has been set to send data
after both 30 minutes and 1, 3, 6 and 24 hours. From 2017 to March 8, 2019, the timer
has been set to be sent after latest one hour. An update of the IT-system, which changes
the way converted telecommunications data was read into the system has brought with
it that the transmitting of data became on the one hand slower and on the other hand
that the IT system skipped sections of files. - my translation, Rigspolitiet (2019).

In total, a preliminary investigation (which was later substantially revised downwards) initially suggested
that there could be damaged or missing telecommunications data in 10,000 criminal cases
(Justitsministeriet, 2019). Such telecommunications data is utilized, for instance, in police investigations by
triangulating where a suspect's phone is located. This can then be used in court as evidence of an individual
being present at the scene of a crime. The issues identified by the preliminary investigation were
communicated during a set of meetings throughout the spring between the police and officials within the
police division of the Ministry of Justice, though the report by the Ministry of Justice also notes that an
unnamed source within the police "was ordered to conceal the seriousness of the situation and if necessary
lie to the Ministry of Justice" (my translation, ibid, p. 14).

The problems in the telecommunications data were at the same time invisible in the continued public
debate. For instance, a debate article published on February, 28, 2019 by a member of a Human Rights
groups claimed that: "The police's new system Pol-Intel [sic!] constitutes a quantum leap in relation to
making the police's work more efficient" (my translation, Mchangama, 2019) which thereby reproduced the
police's own words on POL-INTEL to imagine its capacity to enact police power as immense. The article then
used this to evoke questions of how this power should be governed. But behind the scenes, the problem in
telecommunication data evolved. On June 13, 2019, the State Attorney sent a letter informing the courts
and organizations representing lawyers on the issue (Rigspolitiet, 2019b). It was only shortly after this
period in mid-June 2019 that news reports on what will be called the "telecommunications data scandal"
(*teledataskandalen*) appeared in what would become a major public relations issue for the Danish police
(Aagaard and Pedersen, 2022), though these did not connect the problem to POL-INTEL.

The connection between the telecommunications data scandal and POL-INTEL refers not just by the failure of the enactment of police power in and through the platform which had been imagined as a great "**Help from new super-system**" (my translation, emphasis in original, Nielsen, 2018) to find Emilie Meng's murderer (who was caught in 2023 after committing another kidnapping). It also relates to the failure of integrating the Fønix (*Phoenix*) source system, which the Danish police use to surveil telecommunications data, into POL-INTEL:

> Since there were dependencies on technical clarifications in the Fønix project, which were ongoing concurrently with the POL-INTEL project, and as these still have not been resolved, and in the meantime an investigation into the police's handling of telecommunications data and its quality has been initiated, it remains uncertain when the integration will take place. – my translation, Rigspolitiet (2019a).

That is to say, the defection and betrayal (Callon, 1984) of a single, small actor – a server – disturbed the project of moving POL-INTEL from how it was imagined to how it could be used to enact police power.

The issue with integrating Fønix was also not a one-off example. Fønix was one of the four systems that the Danish police had postponed integrating into POL-INTEL from the original twelve the police had aimed for (Rigspolitiet, 2019a). While two of these systems (POLPAX and the PED systems) were integrated in the summer of 2019, the Automatic Number Plate Reader (ANPR) which scans number plates of motor vehicles has, alike Fønix, not been integrated by the time of writing. These continued issues then once more actualize the contradiction between how POL-INTEL's police power was imagined, and how it could actually be enacted.

But how did the police themselves understand these issues? In the Profit Realization Report for POL-INTEL, published on November 18, 2019, the police related some of the issues with producing new, improved, efficient police power as related to cultural and organizational issues:

> That several of the originally defined benefits have not been achieved, or have not reached the expected level, must be seen in the context of several factors: This should be seen in light of the significant cognitive and structural adjustment required of most users in the police force in connection with integrating a powerful analysis platform into their daily work processes. Furthermore, it should be seen in light of the fact that the organization is still undergoing a transformation to become more intelligence-led and therefore, culturally and organizationally, still has potential for optimization in terms of

integrating intelligence and analysis methodology into existing workflows and decision-

making processes. - my translation, Rigspolitiet (2019a, p. 5).

The issues in achieving the expected police power of the new platform were thereby related to the users of the platform who had not "cognitively" or "structurally" (my translation, ibid,) adjusted, alongside how the police organization had not yet adequately integrated intelligence and analysis work. The Project Realization Report thus reproduced and returned to the same problematizations which had been developed in the Police Analyses and their critique of the police organization seven years earlier. Similarly to the Analyses, the Profit Realization Report suggests that an improved, data-driven police power was possible in the future. That is, the timeline imagined as necessary to achieve this power was here postponed from POL-INTEL's launch to the future. This stumbling block did not mean that POL-INTEL was not realized, or that some source systems could not be integrated later, but instead underlines the contradictions and frictions with enacting police power in the digital era as regards to technical, social and organizational issues. However, this was not the end of the issues for POL-INTEL and the associated dream of imagining an efficient, data-driven police power, as a new political majority in Denmark would strike a new course for how the police should be governed that oriented law enforcement back towards community policing. As we will now see.

5.8.5 Shifting Political Winds

The Social Democratic party came into power after elections held on June 5, 2019. In her opening speech to parliament on October 10, 2019, the new Social Democratic Prime Minister, Mette Frederiksen, marked a new course for the welfare state in general and for the police in specific:

> More citizens are experiencing that the police do not respond. Or that their cases are
> dragging on. We need to be able to trust the police and the justice system. Anything else
> is frightening. What has happened? New tasks have been added. Gang crime. Terrorism.
> Bombings. Border control. But is that the whole explanation? Or has pseudo-work also
> been allowed to take time away from the real work here? Today, there are more than
> 1,900 employees in the National Police. That is more than double the number in the
> entire Funen [*Fyns*] police force. Many are employed centrally. Instead of being out with
> the citizens." – my translation, Mette Frederiksen, Prime Minister, (Dansketaler, 2019).

The concept of "pseudo-work" which the Prime Minister cites derives from a sociological theory that too much funding in welfare systems goes to unproductive bureaucratic functions such as documentation and

data production as opposed to direct work such as with patients in hospitals or children in daycare (Nørmark and Jensen, 2018). In the case of the police, the Prime Minister used the term pseudo-work to argue that the police should move back from data-driven policing in offices and back to community policing traditions. This was not a break with the desire of enacting an efficient police power *per se*, but rather, an argument about what ways of materializing governance over the police would produce good police power.

This was not merely a matter of political rhetoric as the Prime Minister's speech was accompanied by cutbacks in the Danish National Police which employed many analysts and data workers. In turn, this led to complaints by intelligence analysts within the police affected by this reorganization (Ritzau, 2020).

This new development did not signify the end of POL-INTEL and Intelligence-Led Policing in any respect, but it did mark a reorientation on behalf of elected state representatives. That is, the government, which previously and enthusiastically had reproduced the police's way of imagining police power, defected (c.f. Callon, 1984) from the project of producing a data-driven law enforcement which was imagined enacting an efficient police power. But this was not the only change in how data-driven police power was re-imagined as POL-INTEL's journey towards being re-classified from a predictive policing platform to a non-predictive tool would be completed.

5.8.6 Navigating Predictive Policing

On May 10, 2021 a member of parliament submitted a §22 question to the Minister of Justice, asking if "the Danish police's IT system provided by Palantir (POL-INTEL and PET-INTEL) uses algorithms for 'predictive policing', and whether it complies with UN and the Data Protection Agency's requirements for responsibility for the rights of individuals?"(my translation, 'Retsudvalget 2020-21 REU Alm.del', 2021). This question echoed a previous §22 question from 2018 analyzed earlier, and just like that previous question, the Minister delegated the question to the Danish National Police, who replied that:

> The initial observation notes that the National Police has understood the question as seeking to uncover whether POL-INTEL is used to conduct forecasts regarding which individuals are expected to commit crimes and whether, if so, this is done with due consideration for individuals' fundamental rights. In this context, the National Police can state that POL-INTEL is not used for profiling or predicting individual-level criminality, and the analysis platform is not used to predict crime patterns at an aggregated level. - my translation (ibid).

The police thus rephrased the question to state that if the parliamentarian was asking if POL-INTEL was a predictive policing platform in the sense of being a person-based predictive tool, then no, it was not. The police, however, then added that:

> If, for example, patrol planning is to be directed towards a higher number of burglaries in a specific area, this planning can be based on existing data about where and when burglaries typically occur in a given geographical area. POL-INTEL can be used to carry out such data analyses, but it is not a prerequisite for doing so, as such analyses were also part of the police's crime prevention tools prior to the implementation of POL-INTEL. – my translation, ibid.

What the police described is the use place-based predictive analytics, which is the dominant strand of predictive policing in general (c.f. Perry, 2013; Egbert and Leese, 2020; Brayne, 2021). However, their reformulation of the parliamentarian's question allowed them to avoid explicitly defining POL-INTEL as a predictive platform. The above answer by the police marks another waypoint in the journey of POL-INTEL from being defined as a predictive policing platform to becoming non-predictive. This is echoed in how the police, and many Palantir representatives, in interviews and during public events, from 2021 and onwards define predictive policing in a specific manner and thereby demarcates (Gieryn, 1983) the platform from the concept. For instance, the former DPO claimed that "[POL-INTEL] doesn't do prediction. It is purely a tool to exhibit data you already have" (Interview, Former DPO, March 2021). This argument is predicated upon the demarcation of the platform from a "true" predictive policing which in this view would be characterized by a high amount of data and/or automation.

From 2021 onwards, POL-INTEL appeared in the public debate in Denmark mainly in two respects. On the one hand this occurred in and through articles produced on, and by, the project this PhD thesis was written as a part of, *Critical Understanding of Predictive Policing* (e.g. Sylvester-Hvid, 2021; Scharling, 2023). On the other hand, a range of articles (e.g. Kollerup, 2022; Thoby, 2022) were written about various scandals where police misuse the platform by accessing data they were not authorized to access. For instance, on February 14, 2022, the newspaper Zetland, which had covered POL-INTEL for a long time, published an article entitled "*An officer spied on his family and neighbors. This is how the police misuse our data*" (my translation, Kulager, 2022). In articles such as these, the issue was thus that officers used the surveillance capacities of POL-INTEL to retrieve data on innocent citizens. In a sense, this builds upon earlier concerns over surveillance powers, but also denotes misuse as an aberration that signifies a lack of effective means of materializing governance over the police. But where are the grand ways of imagining the police power that

POL-INTEL would enact? One police leader, answering a question if there had not been a shift in how the platform was described and imagined, stated that:

> When it came then you had, as you say, a 'super weapon' which at least felt cool, and everyone said that 'when POL-INTEL comes then we can really… […] now we can catch all the criminals.' Also beforehand, we know where crime will happen, these things. But again, as you say, it just became a part of our toolbox, so there is no more wow factor in it. It just became a tool we use. – my translation, Interview, Dispatch Center Chief, October 2022.

Thereby, POL-INTEL, which was once imagined as a "super weapon" (c.f. Bjørnager and Breinstrup, 2017) for the enactment of a new, modern, data-driven police power is thereby now re-imagined as a mundane police tool. This shift signifies the contradiction between how police power in the digital era was originally imagined in the case of POL-INTEL and how the issues of enacting said power resulted in new, far more modest, ways of (re)-imagining the platform. That is, POL-INTEL is today articulated by the police as a matter of fact (Latour, 2004), a part of the technical, a-political toolbox of the police, disassociated from the critiques on predictive policing. In the following three chapters, I challenge this view by ethnographically following how POL-INTEL is entangled with the enactment of police power in the digital era and the contradictions, conflicts, politics and feedback loops performed and reproduced in the process.

6.0: Input

Aligned with the concept of the data life cycle (Kaufmann *et al.*, 2020), this chapter signifies the beginning of the three moments of translation (Callon, 1984), consisting of Input, the Black Box of POL-INTEL and finally Output that designate how data moves through POL-INTEL. The way Input is performed by police forces relies upon where police officers are physically present. And as this process is influenced by the interlaced phenomena of police discretion and predictive patrol mapping (Lum and Isaac, 2016; Jefferson, 2018; Brayne, 2021), this chapter on Input also analyzes these sub-moments of translation (Callon, 1984) which are nestled within the broader Input stage.

Figure 3 develops the original model I presented in the Introduction by detailing three sub-moments of translation within the Input stage. These different phases also reflect the titles, and associated content, of the different sections of this chapter and therefore help to map the chapter and how it is connected both internally and to the thesis at large.
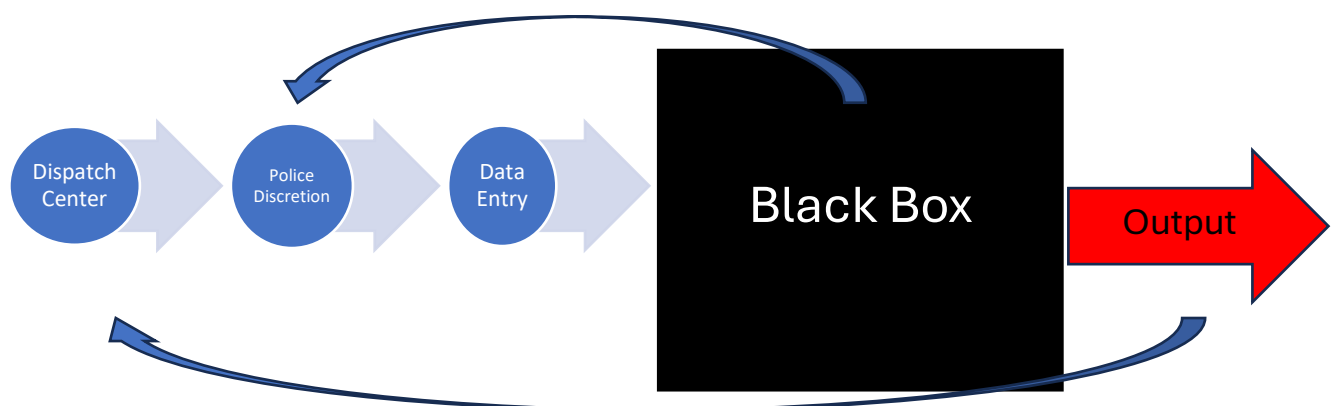
Figure 3: The Sub-Moments of Translation Phase of the Input Stage of the Data Life Cycle of Data-Driven Policing

6.1 The Dispatch Center as a Translation Site Between the Past, Present and Future of Policing

As explained in the previous chapter, in order to transition Danish police towards enacting an improved, data-driven police power, a number of new forms of governance were materialized. These included the implementation of POL-INTEL along with new workflows and strategies. In relation to these, the Intelligence and Analysis Doctrine (Rigspolitiet, 2018a) of the Danish police explains how the modern, analytical, data-driven police should be enacted as "a continuous process" (my translation, p. 15). Through

constant "feedback […] so processes or work can be improved, or successful processes can be maintained" (my translation, p. 21), the Doctrine states that policing should be performed through an "intelligence cycle" (my translation, ibid.) where historical crime data and prior police action informs how policing is conducted in the present and the future.

The ideal of data-driven policing is thus imagined as one where the police organization develops through feedback loops that re-insert historical data into the police to improve its capacity to enact police power. Feedback loops are generally understood in scholarly works on data-driven policing as the act of inputting biased data from racially discriminatory stops into predictive platforms that then reproduce said bias through further police deployments against vulnerable groups (e.g. Ferguson, 2017; Brayne, 2021). However, the original sense of the concept was as a process of self-regulation and self-improvement in and of cybernetic systems (Yeung, 2018; Burrell and Fourcade, 2021; Geoghegan, 2022). In this thesis, I use the concept in both senses to trace the continuities, contradictions, unexpected consequences, biases, and performative effects entangled with POL-INTEL. Aligned with such an approach, this chapter begins by focusing on the dispatch center (*vagtcentralen*) of the police district whose job is to direct daily operations through drawing on historical crime data and translating it back into police practices (Olesen, Gylling and Vaaben, 2023). The role of the Dispatch Center is also to organize police responses to calls for service and to control and manage police patrols. The chief of one such center explained his role in the police in this manner:

> […] so I get my orders, if there is something I should handle when I am on duty, that is to say, things which are transferred to me, or, I am responsible for what occurs in operations. That is, out in society, when I am on duty, if there's speeding it is me who is responsible for making sure we send patrol cars, if there is a robbery it is my responsibility. I am responsible for six to eight staff in the Dispatch Center who have different roles. Some speak on the phone, some speak on the radio, some make sure we send patrols out to the correct places at the correct time. […] And then I am responsible if something bigger occurs, some larger event […] – my translation, Interview, Dispatch Center Chief, October 2022.

As the chief explains, the Dispatch Center is at the heart of the police district due to its role in organizing everyday work, which by extension means that it is a vital part of the police organization as a whole (see also Balvig, Holmberg and Nielsen, 2011). During the interview, the chief elaborated that the role of the Dispatch Center is not only to react to events, but also to execute intelligence plans based on previous data:

"That is to say that both the reactive and the proactive is our responsibility." (my translation, Interview, Dispatch Center Chief, October 2022.) Said proactive work is related to the reorientation within the Danish police, which I have analyzed in Chapter 5 where efficient police power is imagined to be data-driven, analytical and Intelligence-Led. One of the new forms of governance materialized in the police to accomplish this form of policing is by disseminating data through briefings that are held at the start of every police shift:

> So we sometimes give [police patrols a] specific task but we can't order them, so we will
> ask them to… someone else can order them, their own boss can order them […], So
> [police leaders] will order us to do like a couple […] PowerPoint slides, right? Telling
> about like where we've seen burglaries for the last [years], maybe even going back say in
> 2017, 2018, 2019 at Easter, because of Covid, 2022, 2021 isn't relevant so we've done
> the analysis on the background of before Covid. So, in Easter time, the burglaries were in
> these three areas so if you want to do like, or rather, your boss said you have to do
> something about burglaries at Easter, we recommend you go here and here and here. –
> Interview, Senior Intelligence Analyst in District, May 2022

The analyst describes the ideal of data-driven policing as one where intelligence officers analyze previous crime data to make predictions of future crimes. These will then be used in briefings as a background for directing police patrols to proactively police and pre-empt said crimes. While a full account of how such predictions are produced and the complexities and translations required for this process are situated in chapter 8, what matters here is the friction between prediction and police operations:

> It is often the case that the analyses they make are suggestions to some things we can
> do if there is time. […] Because the daily operations are more important than such
> projects. And, of course, there are tasks we shall solve, and so daily operations have to
> wait, burglaries, speeding, they have to wait. And so… you drive out and you get to work
> with a task from the analysis and then something happens that means they have to
> close down again and drive out to something else. - my translation, interview, Dispatch
> Center Chief, October 2022

The Chief went on to specify how data-driven and Intelligence-Led Policing is often undermined by reactive calls for service "Because it goes fast when a new call for service comes. We can't just sit down and begin to analyze and start to think thoughts. Because we have to be ready to take a new call" (my translation, ibid). This suggests that the way police power was imagined to be enacted in POL-INTEL as producing a proactive,

predictive police differ from the way policing is often enacted through how reactive calls for service by citizens disrupts these aims. As Sausdal (2022) argues, contrary to the ideals espoused and imagined by the police leadership, the Danish police force as a whole has not meaningfully changed from its traditional enactment of police power in the form of the reactive standard model of policing (Braga and Weisburd, 2010). The insertion of POL-INTEL into the police therefore resembles other reforms in the Danish police that have produced both *"continuity and change"* (Holmberg, 2019) and "renewal and retraditionalisation" (Diderichsen, 2017). Seen in this light, POL-INTEL is the latest instance of the contradictions within the attempts to modernize the Danish police and the past, present and future of concrete police operations, and regarding how the data-driven, analytical, and predictive police power was imagined.

The insertion of data-driven tools is thus neither a smooth nor effortless intelligence cycle or feedback loop but rather a process marked by frictions, contradiction and complexities that differentiate how police power is imagined and how it can be enacted. In this instance, the development of data-driven policing in Denmark mirrors similar developments in other countries where police forces have moved from utopian ways of imagining police power in the digital era to less dramatic and more mundane ways of expressing what data-driven policing is capable of (Egbert and Leese, 2020; Vepřek *et al.*, 2020). In the Danish case, the response by the police to the lack of demonstrable efficiency in POL-INTEL was the claim that cultural and organizational issues were what hampered the enactment of efficient police power in the digital era as "the organization is still undergoing a transformation to become more intelligence-led." (my translation, Rigspolitiet, 2019a, p. 5) Such an ad hoc explanation suggests that issues in enacting data-driven and Intelligence-Led police power are unrelated to the materiality of POL-INTEL. I will therefore in the next subsection shift the focus from how POL-INTEL is used, to investigating the materiality of the platform in relation to reactive police power.

6.1.1 A Feature or a Bug? – Reactive Policing in and through POL-INTEL

One reason POL-INTEL was implemented was to improve the Danish police's capacities in manhunt scenarios, such as the scenario the police faced during the terrorist attacks in Copenhagen in 2015 (Regeringen, 2015). Manhunts are the epitome of reactive law enforcement whereby the police receive a call to which the police are then dispatched to intervene in the situation at hand. This objective is also reflected in the structure of POL-INTEL:

> I mean, Palantir is a great program, [for the Dispatch Center] where they are controlling
> all the police patrols, where they need quick answers. 'Ok, [you], are living there, ok,
> what was his phone, address, he has a company there,' all that data that's system based,
> one click, bap, bap, bap, yes, send them. You can do the manhunt, all that stuff. That's

> the fast-thinking organization, the reactive police organization. I'm trying to make
> [something] proactive. And there's a need for analytical tools there. And it takes a bit
> more time to do it, it takes a slightly different kind of mindset and all that, so in that
> perspective, Palantir doesn't solve anything. I can't do anything with Palantir that I
> couldn't do before. I can do it faster, and in sending the patrol car at the right place, that
> is a very efficient tool, but it doesn't show me where the next burglary will be. –
> Interview, Senior Intelligence Analyst, May 2022

In this quote, the analyst suggests that the material structure of POL-INTEL is inappropriate for predictive policing but tailor-made for reactive police work. In this account, POL-INTEL enhances the enactment of reactive police power by drawing on the vast amounts of data in the platform that will supply the police with information such as where to search for a perpetrator. This function of relaying information fast as part of the command-and-control function of the Dispatch Center was explained by the Dispatch Center in this manner:

> We get a call about one thing or another, and the first thing our patrol asks is 'who lives
> at the address? What are they known for? And what can we expect when we land out
> there?' and then we just quickly use Finder and go in and see who is registered there,
> what they are known for, and that's that. Three seconds later, there is a new call. So, we
> don't have time to go in depth. So, they are quick searches in Finder to go in and "five
> people live there, two adults, three children, they are not known for anything special." –
> my translation, Interview, Dispatch Center Chief, October 2022

In one sense, the quote from the Dispatch Center Chief continues the description of POL-INTEL, and specifically its Finder version, as entangled (Kaufmann, 2023) with the enactment of reactive police power. However, the specification of how information is relayed due to these constraints serves to complicate the contradiction between reactive/proactive police work. When the Dispatch Center reproduces data from POL-INTEL's Finder functionality to suggest that a family is "not known for anything special," they do not merely present neutral information. Rather, similarly to how officers modify their actions in relation to how they interpret individuals they encounter (Holmberg, 2000; Moskos, 2008; Fassin, 2017; Møhl, 2022), historical police data informs police interpretation of the now and of the future.

This interpretation is related to how POL-INTEL's code materializes (Chun, 2011) a range of ideological subject positions that differentiate between citizens who are "not known for anything special" (my translation, Interview, Dispatch Center Chief, October 2022), and those who are. It is through interpellating

(Althusser, 2008) individual officers into this ideological field that POL-INTEL suggests to a patrol "what we can expect when we land out there." This expectation is a form of police prediction in action where the officers draw on historical crime data to make forecasts about the future actions of the subjects of law enforcement.

While predictive policing has typically been associated with automated mathematical risk scoring (c.f. Perry, 2013; Mohler *et al.*, 2015; Egbert and Krasmann, 2020; Ratcliffe *et al.*, 2021, see also Chapters 2 and 5), the distinctions and demarcations (Gieryn, 1983) between a "true", automated, predictive policing and the example of the Danish officers on patrol becomes untenable in practice. To elaborate, no forms of predictive policing has materialized complete governance over police officers. Rather, even the most automated predictive platforms function through producing suggestions to officers of where to patrol and/or have officers "check in" to predictive hot spots they enter sometime during their shift (c.f. Egbert and Leese, 2020; Brayne, 2021). When POL-INTEL is used to relate suspicion about a person (or a place) the same elements of police discretion and interpretation appear, albeit through a platform with more qualitative characteristics of detailing what a person is known for in a police database. The distinction between POL-INTEL and automated predictive platforms thus involves a difference of degree, rather than kind. The objective is the same: to predict future events based on historical crime data. Thereby, the demarcations (Gieryn, 1983) that demarcated POL-INTEL from predictive policing which I investigated in-depth in Chapter 5, are also fraught and untenable when turning to the enactment of police power.

Furthermore, "those who are not known for anything special" (Interview, Dispatch Center Chief, October 2022) is not a group distributed equally across different social strata. As I will show later in both this chapter and in the thesis overall, young, racialized men are particularly prone to being interred in police systems in Denmark, as well as across the West (Russell, 1998; Holmberg, 2000; Lum and Isaac, 2016; Hall *et al.*, 1978; Byfield, 2019; Richardson, Schultz and Crawford, 2019; Institut for menneskerettigheder, 2022). Thus, those who *are* known for something special are likely to be a specific group in society that the police will act towards in one manner, while other groups will likely be approached in another. Thereby, POL-INTEL is also performative (Butler, 2006) as the ideological character of the platform interpellates (Althusser, 2008) individuals in the police force which relate to how they interpret, predict and subsequently act and hail subjects into being within the world. As such, the platform is not just entangled with describing the world, but also with making it.

Furthermore, as police officers draw on past data to make predictions about the future, the division between reactive and proactive police work is tenuous. That is, even when officers arrive at an address where a crime has been reported, a seemingly reactive practice, police officers imagine and predict

situations and futures based on previous data. In this sense, police power is meant to function as a "temporal hinge" (Dubber and Valverde, 2006, p. 4) between governing the past and governing the future. The means to accomplishing this in the Danish police is the materialization of the Dispatch Center, POL-INTEL and intelligence briefings that are imagined performing an improved, efficient, data-driven police power. As I have shown, this is neither a straightforward nor smooth operation of power, but rather one of contingencies, contradictions, and complexities. In the next section, I move to the next moment of translation (Callon, 1984) to investigate how POL-INTEL relates to the work of police officers on patrol.

6.2 "The Ones with the Apps and the Guns" – Discretionary Police Power in the Digital Era

This section investigates how data-driven policing is enacted by those police officers who are, in the words of a former Data Protection Officer for the Danish police, "[…] the ones with the apps and the guns. In uniform, patrolling the street, controlling the border, responding to 9-11 calls […]" (Interview, Former DPO, March 2021). This section focuses on two main areas: discretionary police power (Davis, 1970; Skolnick, 2011) that officers in the field possess, and how this is enacted in the digital era. Specifically, the data I draw on to produce this and the next section details patrol work from a privileged perspective (Haraway, 1988) of those profiled by the police. By following their data (Kaufmann *et al.*, 2020), it is possible to locate the contradictions between how police power is imagined and how it is enacted.

6.2.1 Police Discretion: Police Power in the Streets in the Digital Era

Previously, I have drawn on material that underlines how police leadership and their allies imagined police power in the digital era. Shift the perspective from the police and their ideal of analytical, Intelligence-Led and data-driven policing to how police power is enacted from the situated (Haraway, 1988) perspective of those profiled by the police, and stark differences appear. Rather than utilizing sophisticated analyses and digitalized solutions, police officers in the field appear to conduct controls based mainly on ethnic identifiers. Nicholas, a profiled person in Denmark, exemplified this situation by referring to the quantity of entries on him registered in the POLSAS case handling system:

> I'm noted, and that's three years ago, 3500 times. And [a third party found] in my own video material that that's a lot of times that they don't even write anything, so who knows how many times I've been in contact. I know my personal record is seven times in one day, it's three times in an hour, it's twice in ten minutes. – Interview, Nicholas, Profiled Person, October 2021

Nicholas thus explains how he has been stopped thousands of times due to his skin color with controls occurring sometimes several times a day. This is not unique for Nicholas. Other profiled people, explain in interviews how controls by the police happen "2-3 times a week" (Interview, Suleiyman, Profiled Person, January 2022) or "once a month for ten, twelve years" (Interview, Ahmed, Profiled Person, May 2022), or "since I was 18, I'm 29, now I think I've been stopped 2000, maybe 1000 times" (Interview, Amir, Profiled Person, April 2022). These stops are also connected with instances of verbal degradation (**Interview, Reyeb, Profiled Person, May 2022**), physical violence by officers (Interview, Fatima, Profiled Person, March 2022) and humiliation (Interview, **Ahmed, Profiled Person, May 2022**). Such stops follow a global pattern of police control of racialized groups and individuals (Cohen, 2009; Bowling, Reiner and Sheptycki, 2010; Neocleous, 2021). They also reflect previous findings on how the enactment of discretionary power in the Danish police is related to a wide-spread bias involving who the police decide to stop and check (Holmberg, 2000; Institut for menneskerettigheder, 2022).

When analyzing police patrols and police discretion, it is important to note that controls often occur without the police utilizing POL-INTEL or other digitalized systems such as the Automatic Number Plate Reader (ANPR) system. The police have mounted this system on 50-100 patrol cars and utilize it to automatically register vehicles and potentially flag vehicles for stops (Rigspolitiet, 2020). When Ahmed, a profiled person, was asked to clarify whether police officers stopped him due to some previously recorded data, he responded that this was impossible, since he was often stopped in a variety of cars he had leased or used for different forms of work: "they cannot get information about you because the car could be leased, then it is registered to a lease company, **so they know nothing about you before stopping you, they just know the color of your skin and the car you drive.**" (my emphasis, Ahmed, Profiled Person, Interview, May 2022).

Ahmed's explanation of how controls occur without reference to the use of digital tools contrasts with how police power was imagined to be enacted through the development of POL-INTEL, as well as in relation to the new forms of governance materialized in relation to the platform. Rather than reshaping the police into a data-driven, analytical police, the analog enactment of police power described above is a continuation of the so-called standard model of policing (Braga and Weisburd, 2010).

Such continuity of the standard model of policing in the form of control of racialized populations also reflects politics in Denmark and the struggle over what is imagined as proper police power. As explained in chapter 5 on the historiography of POL-INTEL, this struggle in the Danish context is related on the one hand to the ideal of an Intelligence-Led, data-driven police, and on the other hand to the promotion of community policing where the discretionary element of police power would be strengthened. One

interviewee described these different ideas of what the police was, or should do, as part of the overall strife within policing as a system in relation to why officers profile racialized individuals:

> They think they are more criminal. I guess. But from my perspective it's not an individual problem. I think it starts when the Danish Prime Minister opens the Danish Government with a speech saying that all the guys with brown skin they are at the train station and we want them out of the train stations, and people are, other politicians are suggesting that 'yeah, then take their expensive jackets from them.' You know, this kind of discourse is saying to the police that you need to do something about it. And if people are unsafe about people with brown skin, then the police need to do something about it. And this is where ILP actually can do something about everybody's right in my perspective, because that's the most wrong conclusion on every society problem, that it is something to do with the skin. […] I don't think that the police guys are more ethnic profiling or racist than others. But I think they feel that it's some kind of part of their job to do something about the problems that are addressed by the politicians. – Interview, Senior Intelligence Analyst, May 2020

The quote above exemplifies policing as a site of struggle between different interests, visions (Balvig, 2015) and ways of imagining what is good police power in the digital era. The officer suggests that rather than being directed by the Prime Minister's speech and acting on the ideological connection between crime and immigrants that she articulated, that police power should be better enacted in and through Intelligence-Led, data-driven policing. As such, this quote expresses different interests and struggles within security ideology. That is, the question becomes one of how direct and intimate the connection between police and state (in the form of its highest elected representative, the Prime Minister) should be. This question corresponds to classical debates on discretionary police power (e.g. Bittner, 1990; Skolnick, 2011). But rather than discussing the degree to which individual officers should possess police power, the question in this case is to what degree the police *as an institution* should be able to enact police power through at their own discretion.

6.2.2. The Digital Police Gaze

Previously I have examined the lack of data-driven tools in use by police officers. This was related specifically to where and how police decide to make controls. When officers have stopped a given vehicle or individual, as I will show, they overwhelmingly turn to the use of systems or platforms such as POL-INTEL. A particularly pertinent example of the results of when police draw on previously gathered data can be drawn from an incident described by Nicholas, a man profiled by the police:

Like one time […] we're going out and I ask [my friends] 'hey, let's not stand in line for the coats, give me your coats, I throw 'em in the car, we take them when we leave' and then [I get checked by the police outside the night club]. One of the girls has a pepper spray in her pocket, in a pink keychain in a size X Small woman's jacket. They find it and then they charge me with possession of an illegal weapon. […] Yeah, and then it changed my pulled over game, it went from one car and two officers to one car just sitting there waiting till another car could get there, and then it's hands on weapons, it's like up the side of the car looking through my back window while one, you know, slowly 'show me your hands, drop the keys out the window, blah blah blah' that kind of.. […] And that went on for six months. Actually I have a meeting in a hotel in Copenhagen where they followed me in one of their vans with six cops in helmets and […] and then they searched me in front of the hotel, while my client was standing smoking outside and I had never met him before and it's kind of tough selling stuff to people when you just, you know, you just been treated like you were Hannibal Lector and… it's tough […] – Interview, Nicholas, Profiled Person, October 2021

In this quote, Nicholas exemplifies how a police control which is performed due to bias is then entered into police systems. From these systems the data moves into POL-INTEL and in subsequent controls by law enforcement the way this data is classified exacerbates the consequences Nicholas faces in said controls. Nicholas specifies that the pepper spray is in a "Size X Small" woman's jacket. His own gender and height, of two meters, make it difficult to see that it would be his jacket and thus his pepper spray. This example underlines the role and impact of discretionary police power, as the officer is empowered by the state through law to decide who, what, where and when to conduct a control and subsequently an arrest (Manning, 1977; Skolnick, 2011). More importantly for this section, Nicholas described above how subsequent police stops by other officers' change character after this event to officers having a more aggressive approach. He himself elaborated how this relates to the materiality of how police data is presented to officers:

It's not a lot of information and the screen in the police car is this big [makes a gesture showing 10–20 cm] and it will just say "suspicion of narcotics." It wouldn't say, like, "went to jail eight years for narcotics." So it's just suspicion so when a police officer looks up the car, it will just say 'suspicion of firearms, suspicion of drugs, suspicion of stolen car' and nothing more than that. And it would actually help me if it said "tall, black, handsome." – Interview, Nicholas, Profiled Person, October 2021

What Nicholas portrays here is how POL-INTEL and its associated subsystems that police utilize, such as the police case handling system POLSAS, display information in a particular way to police in the streets. Similarly to the Dispatch Center Chief's example of relaying information about a family who were "not known for anything special" (my translation, Interview, Dispatch Center Chief, October 2022), POL-INTEL is part of framing how events, persons and relations are understood by police officers in the field.

Police databases and platforms like POL-INTEL are therefore entangled with the foreclosure of the multiplicity of different factors and complexities (McCulloch and Wilson, 2015; Scannell, 2019; Egbert and Krasmann, 2020) during a control or arrest. POL-INTEL does not detail information such as the specificities of Nicholas' arrest. Instead, for the officer reading from POL-INTEL Finder or connected source systems of POL-INTEL, possession of weapons can be interpreted as an individual such as Nicholas being a criminal in possession of firearms that might pose a lethal threat. As such, subsequent police responses – described above with a call for backup and an aggressive posture with officers ready to fire – are logical from the perspective of an officer facing a potentially deadly threat. Previous research on feedback loops have generally characterized these as quantitative, as in police action that harvests data, generating further police stops of the same kind (Ferguson, 2017; Brayne, 2021). However, Nicholas' example suggests that previous police data can produce a qualitative change. In this example, police intervention does not merely lead to further police checks and stops, but to these controls being aggravated through the threat of lethal violence. When Kaufmann *et al*. (2020, see also Kaufmann, 2023) write that researchers can follow data, it is also important to specify that police data is not just an execution of code and production of knowledge. Data instead follows specific individuals such as profiled people whose lives are affected in very real, even potentially lethal, ways as data designates them as subjects of interest to the police. Thus, when following the data, it is important to follow how this data is entangled with how police power is enacted onto specific bodies and social groups. Then by extension how police practice reproduces the specific social order that policing is designated to uphold.

One such example of data-driven policing in practice is related to when Nicholas jokes that the system does not say "tall, black and handsome" (Interview, Nicholas, Profiled Person, October 2021). In so doing, he exemplifies how POL-INTEL obscures the multiplicity of social relationships. In the platform, all other forms of social life disappear, such as being tall, black, and handsome or, perhaps more pertinently, the specifics of the case against Nicholas. POL-INTEL instead interpellates (Althusser, 2008) individuals into different subject positions, such as a dangerous suspect in the case of Nicholas, and as a police officer dedicated to upholding security in the other. In this sense, the platform functions as an ideology machine (Chun, 2011) where some societal relations are obscured and foreclosed (Scannell, 2019; Andrejevic, Dencik and Treré,

2020; Egbert and Krasmann, 2020) and only those related to security ideology are performed. This ideological nature of POL-INTEL is what produces the contradiction that while POL-INTEL was supposed to catalyze police knowledge, it might also black box information and produce feedback loops.

Moving on, law enforcement personnel also navigate data strategically to justify the enactment of police power:

> So it depends I think, like, who the policeman is [chuckles], if it's one that had a bad day he can tell you to get out of the car and check out all the car, maybe make a check on you. […] So I think they have a database because they always say that they can see that you have been stopped before because of the weed or because of something and "you have anything on you? Or have you smoked before?" that kind of stuff. - Interview, Suleiyman, Profiled Person, January 2022

In this quote, Suleiman explains how police officers search systems like POL-INTEL for signs of anything suspicious if they "have a bad day." In this manner, platforms such as POL-INTEL become tools for the police to justify their own controls and, by extension, legitimize their enactment of police power. Data-driven policing connects more and more data. And since POL-INTEL functions as a "dragnet" (Brayne, 2021) through how it merges different databases together, a potentially wider range of data can be used to justify police controls. This means that in the digital era, the discretionary police power to draw on an individual's historical data and then use this data to strategically legalize their actions to control citizens increases. The liberty of citizens is correspondingly compromised. Such issues are related to the quantitative amount of previously registered police controls on an individual:

> And if you ask a guy who has been stopped by the police 25 times, and he has brown color skin and he has never been charged with anything […], then the police can say "yeah, yeah, but look at the system, he has been stopped 25 times, nobody gets stopped 25 times without this reasonable [suspicion]" - Interview, Senior Police Intelligence Analyst, May 2022

Here, the analyst refers to how the quantitative amounts of previous controls strengthen the degree of suspicion an officer in the field possesses when conducting controls of individuals and consulting their data through platforms like POL-INTEL. Much like Nicholas' example of being stopped 3500 times without being convicted, the very fact of having been stopped is grounds for further stops. Data-driven policing is a scientification (Ericson and Shearing, 1986) effort imagined as functioning to enhance police power through institutionalizing not just new digital tools but also new analytical capacities and workflows such as

integrating hypothesis testing into law enforcement (Rigspolitiet, 2018a). Yet, this example shows something vastly different. In any scientific or analytical framework, whether positivist science or qualitative ethnography, repeated attempts at proving something and failing should lead to abandoning a notion. However, this example instead articulates how each control – even if it does not lead to any form of arrest or conviction in court – instead engenders more controls. In turn, this leads to further POLSAS entries, which in turn produce more suspicion and justification and thus produce an increased risk of further stops. The result reveals how POL-INTEL is entangled (Kaufmann, 2023) with a continuous feedback loop of police controls, police interpretation and police legitimation of said controls based on how quantifications produce suspicion. In a further extension of police suspicion, police controls based on biased data also relate to how complaints about police abuse are entered into police systems:

> […] I had a case where the police stopped, pulled someone over, and claimed they did
> that because they had a lot of information on the police computer. And what I found
> interesting in that case is that he had never been charged with anything, doesn't have a
> criminal record. He has a clean slate. Even though they stop him, and apparently they do
> that because every time he files a complaint about them that's also registered in the
> National Police computer, or at least in POLSAS […] it is either, I would say it is either
> harassment because 'okay though, he complains a lot, we better give him some more
> hassle' […] the other reason could be that the computer doesn't inform the police
> officers. - Interview, Lawyer, October 2022.

In this quote, a lawyer specializing on Human Rights cases (including cases of discrimination) against the Danish police explains how one of his clients, a profiled person, is repeatedly stopped by police due to previously existing data. Unlike other cases I have presented in this thesis, this person is not stopped due to the police associating him with criminal data. Instead, the data generated in police systems is data produced because this individual has lodged official complaints against the police themselves. As the lawyer explains, the police thus either stop him because they can see that he has complained and they utilize police power to punish him, or their systems (including POL-INTEL) only show that data is registered on him, which they interpret as suspicious. Regardless, it is notable that the complaint system, which is a form of governance materialized to control how police enact their powers, produces suspicion, feedback loops and controls.

Finstad (2003) suggests that the "police gaze" is one of fundamental suspicion, and this appears to be true also for the digitalized police gaze where any form of entry in police systems is by nature suspicious. The

digitalized police gaze forms another kind of feedback loop (Brayne, 2021), which functions on the micro

level in police stops of specific individuals, as opposed to how feedback loops are generally understood on a

meso- or macro level.

6.2.3 SmartSpot

Thus far, I have shown how police power is enacted in multiple sites at micro level. In this subsection, I

follow these singular data points to show how they are aggregated in the mapping tool SmartSpot, which is

an "electronic planning tool which gives the Dispatch Center an overview of the police districts current

safety [*trygheds*] and crime challenges." (my translation, Rigspolitiet Kommunikation, 2019) As such:

"SmartSpot serves a very specific purpose. It's basically, 'I want to see on a map recent cases' and that's it."

(Interview, Senior Palantir Engineer, March 2022). The manner in which it allows the police to map recent

events is through visualizing recent entries into POLSAS as pins on a map.

The interface of SmartSpot is that of a map with pins marking recent crimes. Which crimes are visualized

can be changed through a variety of filters. These filters also allow users to change the search parameters,

for instance by changing the time of day when a crime must have been reported for it to be visualized.

Most importantly, SmartSpot only visualizes crimes belonging to a specific range of crime codes. These

crime codes detail how the application functions differently to the suggestion that it shows "recent cases"

(Interview, Senior Palantir Engineer, March 2022). In other words, SmartSpot does not visualize all acts that

are criminalized. Rather, it visualizes crimes reported and classified as "arson," "burglaries," "assault,"

"unrest and disorder" (my translation, Rigspolitiet Kommunikation, 2020) and other similar crimes. Thus,

SmartSpot makes visual, and legible, only a specific range of crimes. These are crimes that threaten private

property, social order or the monopoly of violence of the state. Other crimes, such as tax evasion, or

environmental crimes, remain invisible.

These classifications reflect political perspectives: the crime codes that can be visualized in SmartSpot

describe a specific range of crimes that threaten social order by undermining private property or

challenging the monopoly of violence of the state. These crimes are also overwhelmingly crimes committed

by the working classes and other subaltern groups (Chambliss, 1975; Correia and Wall, 2018; Wang, 2018).

As such, SmartSpot codes into the very architecture of the application – what Palantir calls the "ontology"

of its platform (which I analyze this at length in the next chapter) - the police function of upholding a

specific social order rather than acting as generalized crime fighters (c.f. Hall *et al.*, 1978; Neocleous, 2021).

Even within the list of crime categories that SmartSpot visualizes, the application does not objectively and

simply visualize all crimes. Police data is notoriously fraught as crime is unevenly reported and classified

(Sarnecki, 2010; Bettex, 2024). Or, for example, the sort of spurious police charges that I describe in the rest of this chapter have interred profiled people in police databases and would be visualized in SmartSpot as real instances of crime. Accordingly, the social background highlighted by the controls of profiled people and others are black boxed. The platform is therefore liable to produce feedback loops where biased stops lead to further police deployment in a given place, which then leads to more controls (Brayne, 2021; Ferguson, 2017).

Maps can be designed for various purposes, including suggesting the shortest route to a destination, or, like some crime maps, detailing historical crimes for use in academic articles, etc. SmartSpot is different. It was made for police users of POL-INTEL and is accessible to them only. Thus, when SmartSpot visualizes "assault" or "unrest and disorder" (my translation, Rigspolitiet Kommunikation, 2020), it does not just describe the world but interpellates (Althusser, 2008) the user (c.f Chun, 2011): it does not just visualize past crimes but subjectivizes an individual as a police officer whose task in society is to pre-empt future crime and social disorder.

Moreover, SmartSpot is legible only because of the implicit assumption that the police as an institution is capable of pre-empting crime and that this is a legitimate and socially necessary endeavor. It is in this sense that SmartSpot is a materialization of ideology as the program reproduces security ideology which produces a range of subject positions and associated assumptions and beliefs.

Furthermore, as SmartSpot is produced to be an "*electronic planning tool*" (Rigspolitiet Kommunikation, 2019) in police efforts to use POL-INTEL for "analytical patrolling" (my translation, Folketinget, 2017, p. 3) the purpose of the application is predictive. Rather than being solely aimed at clearing historical crimes, SmartSpot is meant to pre-empt future crimes through directing police patrols to sites where crime has historically occurred. In contrast to automated predictive platforms such as PredPol (Sanders, Weston and Schott, 2015; Brayne, 2021; Lally, 2022), SmartSpot does not produce quantified mathematical risk scores that suggest where crimes might occur and, as explained earlier in this chapter, an entirely automated predictive platform has never been implemented. Human discretion has always played a part in predictions, and the very use of a historical crime map to suggest where future crimes will occur is a predictive technique. Thus, while the Danish police claim that POL-INTEL is not a predictive policing platform, the case of SmartSpot underlines how prediction is a central part of all policing (Dubber and Valverde, 2006) even though the specific techniques and technologies used differ historically and in different cases. For instance, there is a distinction between the police use of SmartSpot, and the predictions I analyzed earlier which were made through data being routed through the Dsipatch Center.

Having explored how police discretion guides law enforcement officers when on patrol and conducting stops, I will now turn to what Skolnick ([1966]) already in 1960's understood as a central part of police discretion: that data entry entails a power to classify and define individuals, and a concomitant power to choose not to classify.

6.3 Data Entry

6.3.1 Data Entry: The Discretionary Police Power of Input

> And [the police wrote in the police report that they told] my brother to get out of the car but he didn't get out of the car, and they noticed that he put his hand under the seat and some of them yelled 'Guns! Guns!' and they broke the window. But what they don't know is that there are cameras inside the car which records everything and nobody is yelling 'guns' or anything. And they are very stupid at this police station, they didn't know that my brother's phone even that you lock it, it can still record you know, so like the phone is inside the police station and they are saying everything like very bad words about us [...] – Interview, Yaqub, Profiled Person October 2022

In this quote, the power of data entry as a discretionary police power is exemplified by how police officers can define and control events in police data systems to *ex post facto* legalize their own actions. It is the discrepancy between the police account of events compared with the video and audio material recorded by Yaqub's brother that makes this event possible to unravel. That is, changing situated perspectives about people profiled by the police reveals crucial information about how police power is enacted in the digital era.

In this case, power is enacted through fictionalizing a potential lethal danger in the form of claiming that Yaqub's brother might have possessed firearms. That is, police power is formally a legal power, but since police officers in the field possess the discretionary power of defining events in and through bureaucratic systems, the police also control the means of defining events in ways that justify their own actions (Davis, 1970; Bittner, 1990; Skolnick, 2011).

What police data entry performs is the translation (Callon, 1984) of events from the multiplicity of the social, flesh-and-blood world into criminal classifications (Bowker and Star, 2000) in digital, binary systems where the police account of events dominates. One profiled person continued to explain how law enforcement enacts police power through data entry:

[Imitating police officer] "…we suspect that [you have committed a crime] and for that reason by 12.40.51 as is now, you are arrested," and when they arrest me, they are allowed to make the search in the car and in my belongings. They are even able to take my shoes off and my socks and look underneath my underwear with lights and they do that on a daily, or, like, well… of course maybe they take you into the corner, but they will do that and then when they can't find anything, they will just drop the charges and let you go. And since I grew up, I am 29 years old, all my childhood, all my friends, we are always used to encounter this kind of situation. It was kind of normal for us because we didn't know about the law, we did not know that this was illegal until I studied the law." – Interview, Amir, Profiled Person, April 2022

In this quote, Amir explains, by mimicking police parlance, how police officers have the power of foreclosing the multiplicity of the social world through a process of interpellation (Althusser, 2008) to hail into being a set range of subject positions such as criminal, witness, bystander or victim. This is not to say that Amir is successfully interpellated as a criminal in the sense that he takes on a criminal subject position. Rather, he resists this interpellation, but these acts of police interpellation still cause social and psychological consequences for him. While the quote mentions how the police in these cases drop the charges, such controls and stops typically lead to police data entries, as detailed earlier in the case of Nicholas' entries into POLSAS. Thus, the purpose of the police charging someone with a crime might be to gain access to specific legal rights such as searching a car or performing acts of social domination, with the by-product of these acts being data entry.

As the above quotes suggest, police systems and legal classifications are something police officers learn to navigate. In part, this phenomena reflects how officers attempt to resist the increasing amounts of data entry required of them as part of the goal of police management to materialize New Public Management as a form of governance in Danish law enforcement (Olesen, Gylling and Vaaben, 2023). However, it also reveals how officers learn in their daily work to "cover their asses" (c.f. Manning, 1977; Bayley, 1996; Granér and Kronkvist, 2016; Verma and Dombrowski, 2018). While officially, as the curriculum of the police school's basic education states, police officers learn during their training how to write "linguistically correct police reports with a quality that lives up to current demands" (my translation, Rigspolitiet, 2021, p. 22) they also learn the informal skills of how to navigate the complexities of data, bureaucratic legal systems and the art of writing reports. Shedding light on this process, a former police officer explained how law enforcement personnel learn how to strategically manage data entry:

And within that sentence there could be a huge beating, but you can't see it and even though they have bruises all over, you will always say "that was necessary. He fought against us." So that is one thing, but again you know, there are all different laws that tell about, and regulate [...] the boundaries you need to work within or that set boundaries for your work so in the police you are taught "if you write this, our ass is covered for not having any complaints, so we just make sure that this sentence says it all, that we have done everything within the law." So, yeah, you are taught that very early on, these standard sentences you can write in your reports that in just very few words say a lot of things but at the same time don't make you vulnerable to critique. – Interview, Former Police Officer, May 2022

Police officers thus learn how to skillfully utilize data entry to classify (Bowker and Star, 2000) events in a manner whereby police power is legalized. In the digital era, this takes on specific significance, since police reports, including crime codes, are the building blocks of data-driven policing (Egbert and Leese, 2020). On the level of the individual officer, bureaucratic-digital systems and laws are used strategically to legalize and legitimize their discretionary police powers. On the level of the police organization, this means that spurious or fictional data is also inputted into POL-INTEL. This populates POL-INTEL with unreliable data which undermines how the platform was imagined to enact a new, analytical, scientific, and more powerful police power through leveraging more and better data.

This fictional, biased data then moves onwards into POL-INTEL, where it produces feedback loops into police systems that police officers on patrol use and which I detailed earlier. The data also moves out of the police into sites such as state governance bodies, police intelligence and prediction work and to the Independent Police Complaints Authority (see chapter 8). Before following the data onwards from this moment into the black box of POL-INTEL in the next chapter, I will emphasize that the effects of police deciding not to enter data are equally important.

6.3.2 Does Non-Input Have Politics?

In this sub-section, I delve into non-entry of police stops by drawing on interview and auxiliary material from profiled people who have been stopped by police officers without the stop being registered in POLSAS. In the case of the small-town family described earlier, multiple such incidents have occurred:

And as you see [in the police response to a Freedom of Information Act Request], okay "I can inform you that there is nothing registered on the 27th of May in the police's [case handling system, POLSAS]" – Interview, Yaqub, October 2022

This quote on how a profiled person requests data on an event where he was stopped, and the police respond that they have no record of such a stop, highlights the power of non-entry into police systems. Since legal classifications performs certain effects, including both the loss of rights (such as the right to personal liberty during arrest) as well as gaining new rights (such as the right to make official complaints), non-classification also means the loss of this latter category of powers. This phenomenon has been discussed as a major part of police discretionary power since police research conducted in the 1960s and 70s (Davis, 1970; Skolnick, 2011). Since no data is entered into POLSAS, any right to complain to institutions such as The Independent Police Complaints Authority is lost. It might appear contradictory for individuals who are profiled to want to have their data classified into police systems. However, as Star (1990) explains, the non-definition of an event or a category of people can also cause vital consequences such as by making subaltern groups invisible in official statistics.

Non-entry generates other consequences in terms of data aggregation, when turned into statistics. If data is a life cycle that moves through POL-INTEL, the life cycle can never begin. Thus, data that is lacking cannot be used for intelligence purposes, which also affects the sort of quantitative data that the Institute for Human Rights in Denmark utilized to analyze ethnic discrimination by Danish police in a study based on the difference between arrests and sentences involving non-Western Danes, the children of non-Western Danes and ethnic Danes (Institut for menneskerettigheder, 2022).

Such consequences relate beyond absolute non-entry where an entire event is ignored but refer also to the strategic exclusion of aspects of an event. This is important in relation to how scholars on data-driven policing have typically attempted to show differences between police data as reported, and between other forms of data. Such studies are supposed to show a more complete picture, such as in Lum and Isaac's (2016) highly cited comparison of public health data in Oakland versus police arrest data. Such attempts are crucial contributions to the study of data-driven policing. However, once the specifics of how data is generated are analyzed, the binary between entry and non-entry becomes muddled. For instance, take the story of Ahmed, who was attacked by the police after arguing with officers who had stopped a 13-year-old boy and were stripping him nude on the street (Interview, Ahmed, Profiled Person, May 2022). Ahmed went on to explain the process after the control had occurred:

> It's not fair, and the funny part of that story is that when we made a complaint, they
> couldn't find out which the officer it was, even though one of them had identification,
> and the rest of them didn't have it, and they said "No, we can't identify him." But he
> arrested him, there must be something, there must be some record that says "This guy

In this case, the police claim that it is impossible to identify a specific officer, which in turn makes it impossible to raise a complaint. In this sense, strategic non-entry is a form of "non-performativity" (Ahmed, 2006) where the police preclude action in order to cause data to not be generated and thus not be able to move to different institutions that govern the police. Police power is thus also enacted in relation to the power to define parts of an activity, and to ignore other parts with significant consequences for how governance over the police can be materialized in terms of complaints.

6.4 Conclusions

The concept of non-entry as a police power exemplifies some of the conclusions of the chapter as a whole. That is, I have shown how POL-INTE is related to new forms of governance such as the institutionalization of intelligence units and their associated workflows imagined to enact a new, powerful, Intelligence-Led and data-driven police power. However, during each sub-moment of translation (Callon, 1984) within the broader moment of translation that is the Input phase, a number of contradictions, failures of translation and processes of black boxing develop. Some of these contradictions reflect the incomplete materialization of governance over officers, as law enforcement personnel retain discretionary power and relate in a variety of ways to POL-INTEL and its associated source systems. Since officers cannot be perfectly surveilled or controlled, these police officers can utilize police platforms and systems to enhance their own, individual police power. In doing so, however, police officers input spurious, biased or fictionalized data into POL-INTEL, which in turn produces several unexpected effects and consequences such as the production of a variety of feedback loops. Thus, although the Danish police's leadership imagined that POL-INTEL and its associated data-driven, Intelligence-Led enactment of police power would produce feedback that would improve policing (Rigspolitiet, 2018a), a range of other sorts of feedback loops are produced.

Moving on, from the input stage, the next chapter follows the data (Kaufmann, 2023) into POL-INTEL proper.

7.0 Into the Black Box

This chapter follows the data (Kaufmann *et al.*, 2020) as it moves from the Input phase, into the source systems of POL-INTEL and from there into the platform itself. Similarly to the Input phase, this chapter also traces several sub-moments of translation (Callon, 1984) in the data life cycle, visualized in Figure 4 below. This figure is, like Figure 3 in Input, a more specified version of the data life cycle figure I presented originally. As such, this image both aids in understanding the movement of data in POL-INTEL but also describes the order and content of the chapter in general, which begins with an analysis of source systems, and then progresses into "ontology." Finally, this chapter also investigates access controls and auditing within the platform.
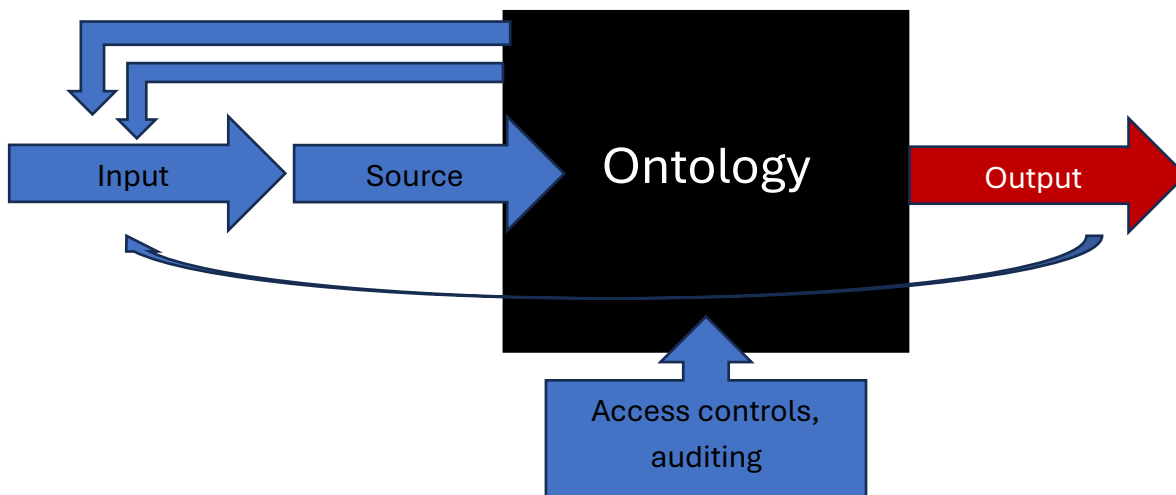
Figure 4: The Sub-Moments of Translation Phase of the Black Box Stage of the Data Life Cycle of Data-Driven Policing

7.1 Mirror, Mirror on the Screen – State, Policing and Data

The source systems of POL-INTEL, which are listed and detailed in the introductory chapter, are crucial for understanding how the platform functions. The majority of these source systems are created and maintained outside the Danish police for purposes such as governance of vehicles or taxation. Several systems, e.g. the Schengen Information System, have a complex governance that involves other actors such as the Danish Data Protection Agency (Datatilsynet, 2024) and the European Union (The European Commission, 2024). Yet, the governance mechanisms for administering these databases are regulated by the Danish state through Danish law (Datatilsynet, 2024).

The content of these databases includes vast amounts of data, as the Danish welfare state has historically distinguished itself compared with other nations in terms of the amount of data it has produced on its citizens (Krogness, 2011; Andersen and Motzfeldt, 2019). This ability has only been accelerated in the digital era where Denmark ranks among the most digitalized nations in the world (Schou and Hjelholt, 2018). The Danish police had access to the same data and databases that it has now also prior to the implementation of the platform. However, what POL-INTEL accomplishes is the materialization of new forms of governance in relation to both changes in regulation and laws, as well as in respect to the new technical capacities the platform produces. Later, I will specifically discuss how such data can be utilized for surveillance purposes, but in this section, I aim to underline the relation between the state, data and policing as it relates to how governance is materialized, and what this entails for police power. To this end, the following quote illuminates the relation between governance in terms of law and the structure of the state – and the specific way the Danish police force is consequently structured:

> […] the Danish Police is I think different from many other police forces in the EU, in we only have one police force. We don't have a Santa Marie, or border police, or traffic police, or criminal police, we have one police force, and one set of databases, and 12 police districts, under one national police commissioner. That's a very big advantage. And that police carry out law enforcement tasks, so investigation and prevention of crime, it also does administrative tasks, so it gives you a gun permit, it gives you a driver's license, it gives you a passport, but the legislation allows to take data from anywhere in the police systems and use it for these analyses. – Interview, Former DPO, March 2021

This quote highlights how different systems for governing the police affect which data police forces in different states possess. By extension, this relates to how police power can be enacted in the digital era by different police forces. In the case of Denmark, as the former DPO points out, the historical trajectory of the Danish police constitutes the police force as organized into one unified entity for close to a century (Stevnsborg, 2010) where the police is governed directly by the state through the Ministry of Justice (Henricson, 2012). Accordingly, the police as an institution have been able to gather vast amounts of data from the administrative tasks they perform – as well as from standard law enforcement activities – into centralized databases. In the digital era, this means that the range of data that the police can draw on, including the massive amounts of data available to the Nordic welfare state (Bauer, 2014), differentiates it from other police forces and the data-driven police platforms that they utilize. The specific way this works in POL-INTEL was explained by the former DPO:

> What POL-INTEL does is that in the bottom of the platform, they have what is called the base realm, which is a continuous mirroring of the relevant content of all the associated data sources. - Interview, Former DPO, March 2021

When POL-INTEL "mirrors" (ibid) the content of its associated databases, it not only describes how data moves into the platform but also exemplifies and reproduces the relation between state and police. As "the Danish police is the *state's* police." (my translation, emphasis in original, Diderichsen, 2018, p. 204) the mirroring of state databases into the police systems specifies how state and police correspond through how state databases that constitute a form of state power can be translated (Callon, 1984) into police power. That is, as the DPO argued in relation to the specificities of the Danish police as a united, centralized police, the ways in which the Danish state governs police and data differentiates law enforcement in Denmark from other police forces. Essentially, the ways of materializing governance differ, thereby affecting what forms of data these forces can draw on when enacting police power in the digital era.

The significance of the above analysis is that the relation between state and policing in the digital era has generally been unclear. While classical, and earlier, analyses of policing often produced rich studies on how policing is connected to the state and its accompanying social order (e.g. Manning, 1977; Ericson and Shearing, 1986; Bittner, 1990; Ericson, 1994; Bowling, Reiner and Sheptycki, 2010), this link has generally been opaque in studies on data-driven policing. While there are a number of general reflections on data, police and state (e.g. Joh, 2016; Sanders and Sheptycki, 2017; Barabas, 2019; Grill, 2022) these are typically relatively abstract studies that do not produce granular perspectives on how policing is performed in the digital era. More ethnographically oriented studies, typically hailing from what I have referred to as the STS-ethnographic paradigm, have produced more complex accounts of policing (e.g. Egbert and Leese, 2020; Brayne, 2021; Duarte, 2021; Kaufmann and Leese, 2021), but these have focused on the police institution itself as the site of investigation. Consequently, the relations between state and policing have been circumscribed in these studies. That is, in these studies, the data which has been investigated has generally been data produced by the police themselves. Building on my argument about the necessity of expanding the analytical site to be investigated to include the state, I will therefore in the next subsection move to examine the interrelation between the state and the POLSAS case handling system of POL-INTEL.

7.1.1 …tell me, who is the most criminal of them all? POLSAS as a Source System

Building on the previous discussion, this subsection analyzes how police data itself is dependent upon the state. This underlines how police power is enacted in complex ways in relation to state power in and through and how data materializes governance of the police. The specific source system that forms the foundation for my analysis is the police case handling system POLSAS. POLSAS data, mirrored into POL-

INTEL, appeared extensively in the previous chapter on Input. There, I related POLSAS to police discretion in how police perform data entry and to the "digital police gaze" when police officers interpreted POLSAS data entries. Specifically, I noted how data that was black boxed, obscuring social relations, in turn performed a variety of feedback loops. The emphasis in the Input chapter was on how *content* was translated and categorized into POLSAS and then POL-INTEL. Here, I shift perspective to consider how the *structure* of POLSAS in terms of legal, bureaucratic, and ideological classifications is transferred into POL-INTEL. The first perspective highlights POLSAS as it is used by officers, whereas the perspective in this chapter highlights how POLSAS gives form to data.

As Egbert & Leese (2020) and Brayne (2021) explain, bureaucratic forms are building blocks of data-driven policing. In the Danish case, the production of such building blocks is mirrored into POL-INTEL through POLSAS. POLSAS itself is a product of legal categories, bureaucratic classifications inside the police and it has its own concrete materiality. In turn, these classifications are materialized as bureaucratic forms that structure POLSAS. Such forms specifies and identifies the who, where and what of the crime by detailing the place, time, personal identification number of perpetrators, type of crime, etc. (Field notes, October 2022). For instance, one specific kind of POLSAS form which police officers are expected to fill out POLSAS concerns encounters with "mentally aberrant" (*mentalt afvigende*) individuals which contain also a request for a mental evaluation of the arrestee to be sent, with the form enclosed, to relevant mental health institutions (Rigsadvokaten, 2022).

Forms are necessary for bureaucratic organizations to structure the world (Bowker & Star, 2000). This also applies in policing, as forms make social events legible for police organizations to act upon (Skolnick, 2011; Egbert and Leese, 2020). Such classifications are required to produce the elementary forms of data to make the world legible by making social events coherent, scalable, and suitable for aggregation. One of the most important results of this is to produce data that can move into the state to ensure that the state can materialize governance over the police:

> So [politicians] have their measuring points and for the police [this is] of course response
> time, how many charges are brought against, and how many convictions [are made]
> when it comes to rape, there are some things we have to do as police, that are very
> detailed […] the same with break ins, burglaries. So, I mean… they also control what we
> need to do, we have to send a patrol to a burglary […] we have to interview the parties.
> When it's a rape, there is a whole list of things we need to do. […] so this is turned into
> data when people update in the POLSAS system like different codes, like "0082, we send

The analyst here explains how classifications for crime codes form an obligatory passage point (Callon, 1984) in the interaction of state, data and police. This passage point must be passed through both in the movement of macro governance which changes scales to micro events (Latour, 1983), and vice versa. In the sense of macro controls, the state sets quantified goals and regulations for how officers should act in specific situations. These quantifications are only possible through classifications by crime codes. At micro level, these crime codes materialize governance in that they state how officers should act in specific situations and what crimes officers should prioritize through setting quantified goals (Degnegaard, 2010).

Forms connect these different levels. Without forms, information cannot enter POLSAS and then be mirrored into POL-INTEL and be turned into output that can then be fed back into new police work. Forms are also the foundation for how crime can be recorded and aggregated into statistics. In turn, statistics are "the state's knowledge of the state" (Foucault, 2009, p. 411) and serve to make governance possible. By allowing the state to quantify, measure and control the police organization, forms are one of Callon and Latour's (1981) micro actors who make the constitution of the Leviathan possible. Moreover, forms shape how governance is materialized in relation to data-driven platforms and perform three distinct effects.

First, forms are part of translating (Callon, 1984) the multiplicity of the world of flesh and blood and the binary of a digital system. I have detailed this process extensively in the Input chapter with a focus on police practice, so in this section I build on this analysis by analyzing the specific materiality of forms. As bureaucratic classification systems (Bowker & Star, 2000) forms by necessity conflate and foreclose heterogeneity and multiplicity (Sanders, Weston and Schott, 2015; Scannell, 2019; Andrejevic, Dencik and Treré, 2020) to make them legible for bureaucratic organizations such as the police. Therefore, when officers conduct data entry, they do so not at their leisure but in relation to POLSAS as a system that regulates how the world can be described and which, in turn, is mirrored into POL-INTEL. With my examples from the previous chapter in mind, this process disregards an individual being "'tall, black and handsome'" (Interview, Nicholas, Profiled Person, October 2021) or obscures the complexities of events and how police fictionalize cases, as in the case of Yaqub's brother, who the police claimed might possess a gun, or the spurious charges brought against Amir. The bureaucratic system, and the specific ways in which it is materialized in forms, is thus a part of a process of black boxing social events and relations. By completing the form, a police officer obscures, forecloses, and translates a complicated event into a standardized, defined point of data.

Second, forms are entangled with the enactment of police power. For instance, the form above relies upon police discretion to make an assessment of the mental health of a perpetrator, and – as Foucault (2003) notes – such classifications have immense social repercussions. That is, individuals who end up classified as being "mentally aberrant" (Rigsadvokaten, 2022) as the form specifies, can in some instances be subject to a variety of coercive and legally sanctioned forms of violence and/or have their freedoms and liberties curtailed or controlled. Moreover, the act of classification itself can produce the deviant subjectivity the classifications purport to only describe (Cohen, 1985). Similar processes of how classification produces criminal subjectivities rather than just allowing crime or criminals to be counted or processed have been underlined by classical studies on labelling (Cohen, 2009; Bowling, Reiner and Sheptycki, 2010).

Third, as Egbert & Leese (2020) argue, crime only becomes – and is performed as – crime when it is set down in police bureaucratic systems. What is criminal is not a transcendent category but rather produced and performed in the interplay of police discretion, legal classifications and the materiality of police registries and forms (Leese, 2023). In the cases of the profiled individuals from the last chapter, all these elements were in play to classify them or their actions as criminal. For instance, in the case of Amir, the police strategically utilized bureaucratic and legal classifications and regulations stating that a suspect of a crime can have his vehicle legally searched by the police to gain this power. Nicholas, who was charged with possession of an illegal weapon, was the subject of a range of unexpected consequences when he faced a potentially lethal situation resulting from the controls he faced after his arrest. This was due to how classification in forms is entangled with police practice, the materiality of police devices and platforms such as POL-INTEL, which black boxed and ideologized the social background of the arrest and made officers interpret him as a potentially lethal danger.

These findings of how data moves from a street event and then translates into policing systems (and then back out again) is not new in and out of itself. However, the role of the state in producing the classifications used by the state is generally not clear in academic work on data-driven policing. The categorizations that form the elementary pieces of police data do not originate in the police. Rather, these are produced by the state and the legal classifications produced by it. Althusser (2020) explains that the field of law itself is a form of ideology, relating individuals to different imaginary relationships to the state and its accompanying social order. Police forms materialize this ideology. In turn, this ideology is mirrored into data-driven platforms like POL-INTEL through the digitalization of source databases and the forms that feed into these.

In the previous subsection, I argued that the governance forms of the state are mirrored into the police force and that this effects how police power can be enacted in the digital era. Through my above investigation of how the state itself is a producer of even the elementary structure of police data I thus

extend and develop this argument and exemplify a shift in analytical perspective from the site of policing to state-and-police. That is to say, many analyses on data-driven policing fixes their points on critique on the police institution itself (Lum and Isaac, 2016; Ensign *et al.*, 2018; Oosterloo and van Schie, 2018) and or platform providers such as Palantir (e.g. Munn, 2017; Iliadis and Acker, 2022). However, when investigating how police power is enacted in the digital era focusing the analysis solely on these sites risks making "the action of individual actors and the system as a whole." (Chun, 2011, p. 71) invisible. At a fundamental level, the state and its production of ideology is what materializes the forms of governances that legitimizes, legalizes, and produces policing and private enterprises (Althusser, 2020) such as Palantir. The police and platform vendors are entangled with the state in every moment of translation (Callon, 1984), from how legal categories influence a stop in the street to the structure of data that is" mirrored" (Interview, Former DPO, March 2021) into POL-INTEL. Consequently, to understand police power in the digital era necessitates an engagement with the state in general and how the state materializes forms of governance in relation to data-driven platforms in particular. With these remarks complete, this section on how data moves into POL-INTEL is finalized, and the chapter now continues by following the data into the structure of POL-INTEL itself.

7.2 On Ontology

When unraveling POL-INTEL, it is necessary to consider that the platform is not unique but is a customization of Palantir's Gotham platform (Interview, Former DPO, March 2021). Consequently, "From a user's perspective everything [the Danish police] are seeing, touching on their monitor is the same thing that Hessen police are using, that all our customers are using. […]" (Interview, Palantir Scandinavia Manager, September 2021). POL-INTEL can therefore be compared with other customizations of Gotham such as in Los Angeles (Brayne, 2021) or in Germany (Egbert & Leese 2020). Specifically, the similarities between these different platforms are articulated through the fundamental structure of the Gotham platform, which Palantir calls the "ontology" (Palantir, 2024). Ontology in the Palantirian sense differs from its classical philosophical definition as the study of being and existence and originates instead in Computer Science (Poli and Obrst, 2010). To differentiate the classical philosophical use of ontology from how it is used in Computer Sciences, I will denote the latter as "CS-ontology" and the former as simply ontology.

POL-INTEL was developed to break down data silos and integrate different source databases (Rigspolitiet, 2018b). To this end, Palantir explains that in its platform "The Ontology unites and activates these fragmented pools of data, and surfaces them in the language of the enterprise." (Palantir, 2024). When the enterprise in question is the police, this language is reflected in the structure of the CS-ontology:

> [...] When we start talking about the ontology with a customer, we, like 'we want to describe your world, how do you see your world?' Well, it depends, right? A bank, their world will be accounts, transactions, customers, amounts, and so on. Maybe a law enforcement organization will be more about, well, crimes [...] – Interview, Palantir Senior Engineer, March 2022

Thus, the CS-ontology of Palantir Gotham is about coding a system of classification (Bowker & Star 2000) based on a world seen from the perspective of the police. This system of classification in the CS-ontology is what allows POL-INTEL to draw together data from source databases and make them legible for the police. By extension, as police data work is produced for the purposes of police interventions, such legibility is produced to allow the police to enact police power.

Contrary to how ontology usually refers to the structure of the world, CS-ontology is concerned more with epistemic issues than classical ontological ones. For instance, one academic article on Palantir's CS-ontology authored by, among others, The Product Lead for Palantir's Ontology System, explained that: "When the implementation of a concept resembles a thing that users are already familiar with, it's easier for users to reason about its affordances. At Palantir, for example, our ontology system was designed as a skeuomorphic parallel to the classic 'detective's pinboard'" (Wilczynski, Gregoire-Wright and Jackson, 2023), Similarly, the Palantir Scandinavia Manager explained how the Palantir platform is concerned with how "we just want to make sure that the interface makes intuitive sense to humans. And especially to humans who don't have a particular skill set that they have been educated on data or computer science." (Interview, Palantir Scandinavia Manager, September 2021). These ways of expressing how Palantir's products should aid in producing knowledge depends on a form of empiricist epistemology where true knowledge is accomplished by the subject through unmediated, intuitive sense data.

However, how things "make intuitive sense" (ibid) is not an innocent fact. In empiricism – whether Palantir's or otherwise – "there is no representation, no signifier" (Spivak, 1988, p. 74). As such, the way in which these technologies, and the intuitions that are mediated through them, are given meaning by being connected to a larger ideological field, is made invisible. As Stuart Hall (1985) explains, "As you enter an ideological field and pick out any one nodal representation or idea, you immediately trigger a whole chain of connotative associations" (p 104). That is, what appears as intuitive is a product of ideology that is "always-already" (Althusser, 2008, p, 50) present in a given social formation and that makes the world legible. Palantir builds a product based on the idea that policing is intuitive. However, what is accomplished is not a straightforward relaying of knowledge but rather the triggering, enrollment and mobilization

(Callon, 1984) of the wider ideological associations required to produce the very conditions for a phenomenon to seem intuitive.

POL-INTEL therefore functions as an ideology machine (Chun 2011) by transforming previously disconnected data from its source systems into a coherent form retrievable in one platform. Specifically, ideology in the Althusserian-Chunian sense produces different possible subject positions through code. A senior engineer in Palantir specified how this was articulated in POL-INTEL by noting that in the CS-ontology "[…] you define a person, a case, a crime, your plan, how you define a murder, an arrest" (Interview with Palantir Senior Engineer, March 2022). That is to say, the ideology that is materialized in POL-INTEL code is one where possible subject positions are defined through security ideology. For example, an individual such as Nicholas is turned from a being with a multiplicity of traits – as a man with a specific career, who likes designer shoes, who did this or that well in school and who is a good son or a bad listener or any of the other things that might make up a human – and instead, becomes a suspect, or a non-suspect, a witness or a bystander. POL-INTEL purports to reveal the world to the police, but the world that it presents is an ideological world where only some sort of social relations and subject positions are materialized in the program and others are foreclosed.

The effect of producing subject positions and taking part in interpellation also refers to the performative (Butler, 2006) aspect of POL-INTEL as an ideology machine (Chun, 2011). Police platforms are part of bringing into being the criminal phenomena that they purport to describe (Egbert & Leese 2020). In the previous parts of this thesis, I have exemplified these effects, for instance through how SmartSpot produces feedback loops. POL-INTEL's CS-ontology thus not only names and classifies, but also interpellates subjects into being. From POL-INTEL describing the world of the police – an epistemic process – the platform shifts to being entangled with ontologically performing (Butler, 2006) this world.

The characterization of POL-INTEL as an ideology machine that black boxes social relations, forecloses multiplicity and performs specific effects specifies the need for ideology critique in the study of data-driven policing platforms. That is to say, the critique I have developed on Palantir's empiricism in its coding of the CS-ontology of POL-INTEL is also relevant when considering scholarly accounts of data-driven policing platforms. I have shown how not just policing in general is ideological but how code in policing platforms itself materializes ideology. Even the supposedly most simple descriptions, such as criminal or suspect depend on wider ideological fields that give them meaning and allow them to be articulated. This perspective challenges popular empiricist notions within STS, encapsulated by Latour's suggestion that it is possible to set aside ideology critique and instead "follow the actors" (Latour, 1993a). On the contrary, I argue that actors cannot simply be followed as the way in which human actors go "all by themselves"

(Althusser, 2014, p. 139) is part of the very operation of ideology when constituting subjects that appear free. Thus, rather than taking actors for granted, I argue that it is necessary to unravel the very machinery, the apparatuses, technologies, and institutions, such as POL-INTEL, that materialize ideology and serve to interpellate subjects (Althusser, 2020).

Moving on from these remarks, I will now turn to analyzing a specific way that POL-INTEL as a platform is entangled with enacting police power in the digital era through how it intensifies surveillance.

7.2.1 Aggregation and Surveillance

One of the main capacities developed in and by data-driven policing is how the integration of Big Data increases the police's ability to surveil the population (Amoore, 2013; Andrejevic, 2017; Brayne, 2017; Ferguson, 2017). In POL-INTEL, surveillance relates to how the platform can integrate disparate data and visualize it, see examples images above. While other systems such as POLSAS are used to produce a variety of different statistics (Interview, Police Employee, November 2022), POL-INTEL is unique to the Danish police for its capacity to aggregate disparate sources together as well as its capacity to smoothly switch between different functionalities.

This capacity for surveillance is related to how POL-INTEL allows the user to change scales (Latour, 1983) within the platform itself. To exemplify this point, during one observation of the platform, officers produced a map visualizing different robberies in a specific area. They then "zoomed in" on different data points by clicking on them, which opened the POLSAS reports on the specific incident. From there, akin to how a social media page allows a person to click ever onwards to different profiles, a suspect could be identified whose "profile" – to continue the social media analogy – in turn detailed vehicles this person owned which could then be clicked on. Subsequently, these vehicles could be compared with cars mentioned in the POLSAS reports detailing the aforementioned robberies. (Field notes, September 2021).

This capacity to specify, identify, change scales, connect, and surveil depends upon the kind of data the Danish police possess. In the previous section, I explained how the governance that the Nordic welfare state materializes in relation to how it governs the police and how it gathers Big Data sets it apart from other states. When this data is integrated into POL-INTEL for the purposes of policing, state data can be translated (Callon, 1984) into police power by providing law enforcement with data that can be used for surveillance. The capacity that the Danish police possess due to their data was best expressed by a senior intelligence analyst who, when comparing the situation with that of their German counterparts, stated that "We know where 99% of all people live […] no-one knows where anyone in Berlin lives" (Interview, Senior

Police Intelligence Analyst, October 2022). That is to say, the capacity to access data as seemingly mundane as a registry of where all citizens reside means greater potential for the enactment of police power by the police in this Nordic welfare state in comparison to other states worldwide.

The relationship between state classification systems and police power is intimately linked with Foucault's (2009) analysis of the development of the modern state. While Foucault (ibid) noted the close connection between police, science, classification and state, his historical analysis of policing specifies how the police differ from its earlier incarnation as a system of generalized governance and has become the more specific and specialized institution it is today. One of the associated historical developments during this process was the demarcation of different systems of welfare or governance from policing. This entailed an associated growth of non-police statistics (c.f. Scott, 2020), which would later be digitalized and become state data and state databases. What POL-INTEL accomplishes is the historical reintegration of such more generalized state databases back into the police. That is, while police had access to these databases prior to POL-INTEL, the platform's capacity for integrating state source systems marks a historical turning point where data for generalized, and mundane, state governance is integrated at an accelerated rate into the police.

Specifying how Big Data surveillance functions in action in POL-INTEL required an extended observation of the platform in use (Fieldnotes, October 2022). During this observation, an officer opened POL-INTEL to present a person of interest. Said person was surrounded by hundreds of icons that detailed everything from cars owned past and present, historical addresses, criminal cases, POLSAS entries and family relations. The officer wanted to show a relation of the suspect and first dragged the suspect's icon to the side of the digital workspace to make it easier to see the links to his social relations. These were visualized by black connecting lines that were originally difficult to spot among the many different icons and lines. He then clicked on one of the icons, and a moment later, realizing his mistake, said: "Oh no, it is the mother." (ibid) Rather than showing a female accomplice, he had accidentally clicked on the suspect's mother, whose data and family relation had been mirrored from a civilian system into POL-INTEL. The mother, in turn, had fewer icons surrounding her central profile. However, data on her addresses, vehicles and so on was readily available to click on. The officer immediately backtracked and, after utilizing a filter, clicked on the suspected accomplice instead.

At this point, a brief historical sojourn is helpful for underlining the shift, and acceleration, in how platforms like POL-INTEL perform surveillance. The sort of tools used to map social networks for the police are described by Hannah Arendt (1968) as originating from the Czarist secret police. Describing the incarnation of these tools in the 1950s (the time of her writing), Arendt stated that: "Now the police dreams that one

look at the gigantic map on the office wall should suffice at any given moment to establish who is related to whom and in what degree of intimacy; and, theoretically, this dream is not unrealizable although its technical execution is bound to be somewhat difficult" (p, 146). As the description above suggests, what POL-INTEL accomplishes is the total overcoming of any difficulties of the "technical execution" of police mapping. Instead, the very function of POL-INTEL's mapping of the social relations of all citizens is the core element of the platform, which it accomplishes as a simple operation. In this sense, POL-INTEL functions as a "dragnet" (Brayne, 2021) that pulls increasing amounts of citizens' data into it.

POL-INTEL does not constitute a form of proactive surveillance by algorithmically producing mathematical predictive calculations such as those accomplished by PredPol (Brantingham, 2017) or HunchLab (Calhoun, 2023). However, it functions based on a more passive social sorting (Lyon, 2003) in relation to how data is collected and structured in the platform. For instance, through an individual being considered a suspect because cases in POLSAS relate to them (as shown in the chapter on Input). As Brayne (2021) argues, there is a qualitative shift in the character of surveillance when Big Data that previously existed in siloes is put into a policing platform that allows for cross-database searches and collection of data. Whereas at a pre-POL-INTEL stage, the police would have had to open a variety of registries to connect data on the mother of a suspect, they can now accidentally assemble all this data with a single click and accidentally have an officer stumble into a surveillance situation.

7.2.2 Welcome to the Black Box

I have already signified the black-boxing effects of POL-INTEL and its associated source systems regarding how the ideological character of the platform shrouds social relations. Yet black boxing entails another element related to political economy. Several scholars have noted how the insertion of Palantir's software into the state complicates transparency (Taylor, 2021) and actualizes profit motives into governance (Amoore, 2021). To this end, the proprietary character of data-driven policing platforms has been understood as a reason why black boxing occurs as private enterprises keep their platforms inaccessible in order to not divulge trade secrets that might be used by competitors (Ferguson, 2017; Pinard *et al.*, 2021). What is novel in the Danish example is the link that is made by some police officers between CS-ontology and the issue of political economy:

> I mean if you build a company, what is your aim? Your aim is not to help the world, I
> know that Palantir is saying that "we are like, we are the good guys." No […] their main
> [aim] is to earn money. And my aim is to serve the citizen. So this stuff can actually be
> quite problematic at some point. But the next thing is what if I next year say that "ok

Palantir, you did it, but you didn't do great enough, so I just want to do it with another

company?" "Yeah you can do that but we have arranged all the data in this quite funny

way that nobody can understand, so good luck, here is the data, bye bye." So that's a

problem, we don't, I mean there's lot of solutions, of course we are into a lot of the data

structure and all that, but at some point, they are structuring the data for us. Because

the data needs to be structured in a way that that system can manage. And if I, for

example, say that I would like to do it in another way, it can't be possible because the

system is built on a specific ontology. – Interview, Senior Intelligence Officer, May 2022

When relating the different interests of police and Palantir, the analyst above touches on one of the

fundamental shifts in the materiality of policing technologies and how these are governed in relation to

how technologies are owned. That is, the police have always relied on private vendors when purchasing

vehicles, weapons, etc. (Stevnsborg, 2010). Specifically, police produced data by relying on the purchase of

technologies such as manilla folders, index cards and filing cabinets. However, when comparing these

technologies with POL-INTEL, the differences are stark. In the former, the technologies have a physical

existence and are owned after the purchase. Such analog items can be manipulated, opened, changed,

discarded, or destroyed. By comparison, POL-INTEL is licensed, and a digital product has another form of

materiality that cannot be accessed in the same manner as a filing cabinet. Accordingly, POL-INTEL is not a

machine that produces perfect data on citizens. Rather, the black boxing of data in POL-INTEL produces a

contradiction. On the one hand, the platform is meant to produce knowledge. On the other hand, it

obscures its own limitations. In this sense, POL-INTEL does not necessarily and straightforwardly enact a

greater police power but instead, at some junctures, obscures the data the police rely upon in data-driven

policing. In the next section, such issues of data are further concretized through an analysis of how auditing

is accomplished within POL-INTEL.

7.3 Those Who Must Not Know Everything – Materializing Governance in Code

The issue of data silos within and between police systems (Egbert and Leese, 2020; Wilson, 2021) has been

imagined by police forces as a limiting factor when enacting data-driven, analytical and efficient police

power in the digital era. The Danish case echoed this idea, as one reason for implementing POL-INTEL was

to "break the silo structure that currently limits the sharing of information across IT systems and makes

cross-checking of data a cumbersome process." (my translation, Rigspolitiet, 2018b).

However, when silos are abolished, this presents new problems for the police. That is, when de-siloed data

enters a platform such as POL-INTEL, potentially any police employee can access all the Big Data on the

platform. In relation to this issue, one Dispatch Center Chief explained that "there are some of the other co-workers who must not know everything" (my translation, Interview, Dispatch Center Chief, October 2022).

This non-knowledge is ensured by how Palantir has coded the Gotham platform to create "very granular, you know, datapoint by datapoint access control" (Interview, Palantir Privacy and Civil Liberties Representative, January 2022). The technical design philosophy that Palantir has adopted to ensure such access controls is referred to as "Privacy by Design" (Bowman *et al.*, 2015). This function was explained by the head of a police anti-gang unit:

> But I also have access to PED. And PED is, for example, where you can see who is a gang member. So if I look a guy up in Finder I can see that he is a gang member but if a police officer working in the street who does not have access to PED looks him up in Finder, he will see all the stuff you can see about a person only where is born, when he is born, which criminal cases he has had but he won't see anything about his status as being a gang member. – Interview, September 2021, Anti-Gang Unit Leader

The officer thus explains that what can be accessed in the system depends upon rank and the specific task of an officer, which, in this quote, relates to the gang register, PED. The imposition of such access controls contradicts how "the credo of [POL-INTEL] was that the police should know what the police know" (Interview, Former DPO, March 2021). That is, POL-INTEL is an attempt to socialize police knowledge through integrating data silos and – as I analyze in the next chapter at length – data held by individual officers is entered into police systems at an increasing rate. But rather than accomplish a generalized increase of data and knowledge for all police officers, the platform more specifically attempts to ensure access of all the data in POL-INTEL only to a small group of officers who typically work high up in management of the police and/or in intelligence units (Interview, Senior Police Intelligence Analyst, May 2022).

The ideal of how POL-INTEL should function is thus one where each officer has their own set role and place as part of what Hobbes referred to as the "artificall Joynts" (p. 48) of the state, the Leviathan. That is, lower ranking law enforcement personnel are set to patrol, to enter data into POLSAS (that is then mirrored into POL-INTEL) but, at the same time, are algorithmically prohibited from retrieving all the data that is integrated into POL-INTEL. The law enforcement officers comprising this group are the ones "who must not know everything" (Interview, Dispatch Center Chief, October 2022). The means for accomplishing this non-knowledge is algorithmically regulating (Yeung, 2018) the police, to attempt to make the police function as

a machine that outputs precisely the sort of police power that police management imagines is most efficient or socially desirable, and nothing else.

By extension, as the police are connected intimately to the state (Althusser, 2008; Foucault, 2009; Bowling, Reiner and Sheptycki, 2010; Neocleous, 2021) the machinic police body is also a part of the Leviathan. The relations between access controls, police and state are clarified in the Project Completion Report (Rigspolitiet, 2018b) of POL-INTEL, which states that: "POL-INTEL, through a unified role/rights model and automated controls, aims to optimize work with data security and reduce the resources needed to ensure the lawful storage of confidential and classified information." The control of the police force for the state is thus not an abstraction but materialized within the code of POL-INTEL. It is therefore a contemporary example of how "[…] the Soveraignty is an Artificiall Soul, […] giving life and motion to the whole body; The Magistrates, and other Officers of Judicature and Execution, artificiall Joynts […]" (Hobbes, 2002, p. 48) To specify, access controls concern how the state requires police officers and "other Officers of Judicature and Execution" (ibid) to function according to the role specified by the state to uphold social order.

However, humans are not pieces of machinery, and data is wont to produce unexpected consequences (Kaufmann and Leese, 2021). One police employee exemplified this issue by explaining how he incidentally accessed sensitive data through the POLSAS case handling system:

> One particular case where I was like "OK, do we just have access to that?" was in regards to youth crime, people aged ten to 17 where I had to pull some numbers for a report, and I went into the report and I looked at the data […] I just tried to get the data I wanted, like how many of X… and then I realized, wait a minute. This is all CPR [Danish personal identification] numbers, names, specific addresses. […] I had a complete like 'this and this person did this and this and threatened that and that person with a knife' or whatever I was like, 'how do we just, can I just look that up as someone who wanted to produce some data on the rate of yeah, youth crime in a certain municipality. Why? Why do I have access to that?' And again, I've applied for access because I needed the data and was approved. But… I was just surprised by the level of detail that was in that report. – Interview, Police Employee, November 2022

This quote concerns how police data leaks and overflows (c.f. Callon, 1998; Soneryd and Sundqvist, 2022). In this case, the police employee had requested a set of data but received far more data than he was requesting. In the above example, the data is not related to POL-INTEL itself but to the case handling system POLSAS. As explained in the start of this chapter, POLSAS is a source system and POL-INTEL data is mirrored

into the platform. The same data thus co-exists in both POLSAS and POL-INTEL. However, the access controls differ, as the POLSAS system has other restrictions, less granular access controls and other auditing functions than POL-INTEL (Interview, Current DPO, April 2022). Thus, data that enters POL-INTEL can leak and overflow from source systems as well as from the platform itself. Like water, the Big Data that is mirrored into POL-INTEL finds different ways around access controls.

Issues of leaks and overflows also exist in POL-INTEL itself. The earlier example in "Aggregation and Surveillance" featuring the police officer who accidentally clicked on the relative of a suspect, is also pertinent here. That is, the very function of POL-INTEL is to map social relations and to integrate citizen data into it, which the platform performs through, for instance, allowing the swift movement between the data of different citizens that resembles navigating a social media page. But this very function, how it produces surveillance power, undermines the governance function materialized in the access controls. That is to say, the POL-INTEL access controls cannot be so strict that they invalidate the purposes of the platform. However, the interface enables the simple accessing of data outside a direct job function – such as by clicking on a suspect's mother. Access controls themselves thus do not automatically hinder data leaking and overflowing as officers navigate through POL-INTEL's interface or access its subsystems. Governance is consequently not perfectly materialized in the platform.

Moving on in this investigation of how governance is materialized in POL-INTEL, I will turn to a specific case of access as related to the distinction between POL-INTEL Finder and POL-INTEL Analyse.

7.3.1 Digitalizing Hierarchy, Coding Governance

Access to POL-INTEL relates not only to the kinds of data a user can access but also the form this data can be visualized in and what freedom the user has in utilizing the platform. In POL-INTEL, this relates to the two main interfaces that the platform is divided into, POL-INTEL Finder and POL-INTEL Analyse.

Finder is typically explained by police officers and Palantir officials as a "Google" search solution (Interview, Former DPO, March 2021; Interview, Palantir Senior Engineer, March 2022). Analyse, on the other hand, is explained as "[…] where the analytical tools are available, the map, the graph, the ability to drill down to datasets and see connections graphically exhibited" (Interview, Former DPO, March 2021). Thus, Analyse offers a far more open space for discretionary freedom for the user, while Finder lacks these features.

The two different versions correspond to the police division of labor and the hierarchy within the police in relation to which groups can access the platforms. Analyse has about 1,200 users, mainly intelligence analysts and members of management, while the rest of the 10,000 or so officers in Denmark can only

access Finder (Rigspolitiet, 2021a). Thus, these two different versions of POL-INTEL materialize governance through algorithmically regulating (Yeung, 2019) two different forms of access that allow very different activities according to work function.

Previous literature has underlined how data-driven systems are part of inhibiting police discretion (Wilson, 2019; Vepřek *et al.*, 2020; Gundhus *et al.*, 2021), and on the basis of my explication above, this is also true in POL-INTEL for the majority of officers. Similarly, Brayne (2021) states that "Data does not and cannot eliminate discretion. Rather, its use displaces discretionary power to earlier, less visible (and therefore potentially less accountable parts of the policing process." (p. 162) What I add to this account is that the displacement of discretionary power relates not only to displacement within *processes* but also to displacement of discretionary power within the police hierarchy. In other words, the differentiation between Analyse and Finder relates to how data-driven policing attempts to impose a top-down police hierarchy. This is materialized in what capacities, freedoms and creativity is accessible for users of Analyse in comparison to users of Finder. In this sense, POL-INTEL is part of a displacement of discretionary powers from rank-and-file officers to management and intelligence workers.

7.3.2 Munin and the Police as a One-Eyed God

Previously, I have argued that access controls or levels of access in code is not sufficient to govern the police. These issues are known to the police themselves, who therefore materialize a range of other forms of governance within the algorithmic structure of POL-INTEL. One vital measure is the auditing system Munin:

> We call our auditing system Munin from Nordic mythology about the two ravens, where Hugin is the thought and Munin is memory or mind. – Interview, Present DPO, September 2021

In this quote, the present DPO of the Danish police explains the background of the auditing system inside of POL-INTEL, Munin, by referring to a Nordic myth. Larkin (2013) argues that infrastructures cannot be disassociated from societal poetics in order to understand them, and the same is also true for software it would appear. In this case, the poetics are related to what is omitted from the quote. In Norse mythology, Munin is not an independent being but a servant of the god of knowledge, Odin. Every morning, Munin goes out into the world of men and then reports his findings back to Odin, who, in this sense, is an almost all-seeing god. The use of the name then suggests that the police are Odin, and the program is their faithful scout in the world of the police. By extension, this is suggestive of how the police imagine themselves and their police power. The way police utilize Munin was described by the current Data Protection Officer:

> "[...] as another more systematic part of our work, we have processes where our
> ambition is to look at every police district once a year, so a certain number of users are
> drawn like, by a list that is Excel generated [...] we, for example, look at people who have
> searched for themselves [...] we also look for users who look for family members, or
> neighbors, for example, that could be something. So, it's a mix of automated and manual
> searches. – Interview, Current DPO, April 2022

Here, the current DPO of POL-INTEL exemplifies a few ways in which auditing functions through focusing on patterns and irregularities. Typically, data-driven policing is predicated upon utilizing patterns, which can be analyzed by policing platforms and police analysts, in order to predict crime (Kaufmann, Egbert and Leese, 2019). In the case of Munin, this process is inverted from police using data-driven platforms to find criminals. Instead, the police themselves are the potential perpetrators. The patterns that are searched for are not the patterns of criminals, but rather patterns produced by officers, such as searches featuring family members.

The current DPO later explained how their auditing functions through Munin by searching for aberrations in patterns – such as searches made in one district while "the user sitting in a district on the other side of Denmark [...]" (Interview, Current DPO, April 2022). As Munin logs every minute action inside of POL-INTEL, its control of what occurs inside the program is much more granular than, ironically, what police can surveil outside the program. In total, 22 million logs are generated every week (Interview, Current DPO, September 2021). Munin is thus a fine-toothed system of algorithmic regulation (Yeung 2018) related to materializing the efficient governance of the police organization.

Yet, Munin is not a perfect system of surveillance and governance. In Nordic mythology, the god Odin is blind on one eye. The analogy for this blindness in POL-INTEL is how Munin is only capable of auditing actions within the platform itself and is therefore blind to the moments of translation that I have showcased in the chapter on Input. As the system only audits what goes on inside the system, it cannot investigate the politics of data entry, and even less for non-entry. Munin's blind spots (Waardenburg, Huysman and Sergeeva, 2022) highlight one of the main findings of this chapter, which is the pervasive black boxing that occurs within POL-INTEL.

7.4 Conclusions

In this chapter, I have explained how black boxing and its accompanying ideologizing of data are performed differently at different sites and different moments of translation (Callon, 1984). By following the data from state source systems and how it moves into POL-INTEL, I have underlined the crucial impact of how the

state materializes governance in the specific case of Denmark. This shapes how police power can be enacted in the digital era. This insight contributes to the field of data-driven policing, which has generally treated the state and police either abstractly, or isolated itself to the site of the police, thereby making the state's impact invisible.

Similarly, my use of the concept of ideology (Althusser, 2020) has contrasted with how ideology has been understood in parts of STS as a top-down abstraction (e.g., Latour, 1993). I have instead considered code as a materialization of ideology, and investigated how ideology is materialized not just in algorithmic systems, but also in specific sites, apparatuses, and technologies. I have therefore attempted to produce an account of ideology as an immanent concept, embedded and articulated in and from materiality, that is necessary to deploy to study and analyze policing. In this way, I have attempted to revive ideology critique and to highlight the basic idea within Althusserian theory (2020), which was later expressed in STS as the slogan that "artifacts have politics" (Winner, 1980). Reflecting this line of thought, this chapter has continued to underline the ongoing struggle within policing that can most accurately be described as a form of internal class struggle, materialized in, through and by POL-INTEL's governance functions. In the next chapter on Output, I will continue explicating these points by detailing how the complexity of data moves from POL-INTEL into various other sites.

Chapter 8: Output

This chapter follows data as it moves out of POL-INTEL and its associated subsystems and as it is translated (Callon, 1984) into the three overarching sites detailed in figure 5 below. Two of these sites are outside the police itself: state governance and the Independent Police Complaints Authority (marked in red in the figure below). The third, intelligence work (in blue), is situated within the police itself. From there, these sites re-input data into the police force, constituting a variety of feedback loops that I trace throughout the chapter and for which the figure below is a helpful guide.
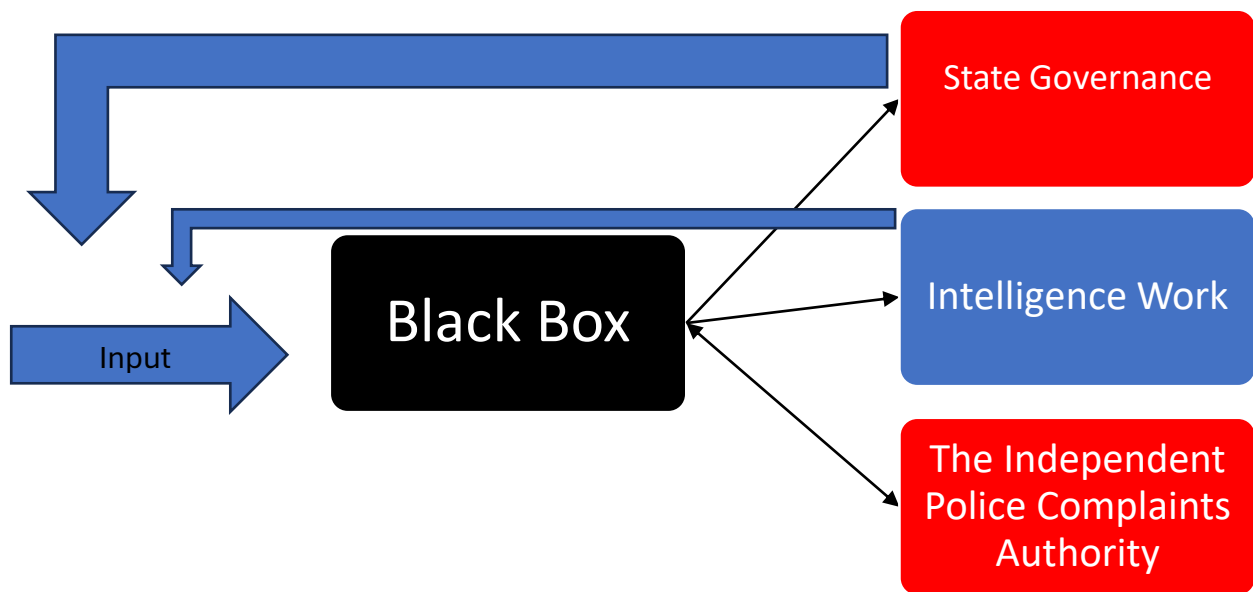

Figure 5: The Sub-Moments of Translation of the Output Stage of the Data Life Cycle of Data-Driven Policing

8.1 State Governance: The Politics of Police Data

8.1.1 A Powerful Place to Be: Outputting Police Data to the State

This section concerns a variety of data outputs that are entangled (Kaufmann, 2023) with POL-INTEL in complex ways. One kind of data is directly outputted from POL-INTEL, for instance, one former senior civil servant within the Ministry of Justice explained that the police "use POL-INTEL […] from a more sort of national strategic point of view to get easier access to statistical data" (Interview, Former Senior Ministry of Justice Official, February 22). Another kind of data comes through source systems of POL-INTEL. For example, one civilian employee's main work function is to produce statistics for output to state governance functions. He explained that he utilizes a statistics program to produce data from the POLSAS case handling system (Interview, Civilian Employee, November 2022). However, this data is also related to POL-INTEL

through the platform's role in interacting with police discretion and who, what, when and where police enter data into POLSAS. I investigated this phenomenon in previous chapters, see also figure 5 at the beginning of this chapter.

This complex data is then outputted from the police into various different state governance institutions. For instance, the same civilian employee at the Danish police exemplified how their "data products […] might be a project about safety in traffic and we might produce something about people driving under the influence" as well as "products we produce regularly. So that might be monthly meetings in municipalities, and they have to have a certain product […]" (Interview, Civilian Employee, November 2022). Data is thus used across different levels of the state. Thereby, police data output serves as a central part of the "state's knowledge of the state" (Foucault, 2009, p. 411), which informs state actors on what appears to be the state of affairs in the territory they govern themselves and through law enforcement.

Perhaps the most significant site of data output to the state, in that it materializes governance over the police institution as a whole, can be found in the multi-year agreements that set the frameworks for how the state finances and governs the police (c.f. Holmberg, 2019; Diderichsen, 2020; Olesen, Gylling and Vaaben, 2023). To exemplify how data output functions at this level, I turn to the 2020 proposal for a new multi-year agreement. In this proposal, one section explains that "The case handling time within the police and the prosecutor's office has risen in the last few years (excluding traffic crimes)" (my translation, Justitsministeriet, 2020b, p. 23). Supporting this claim is a graph visualizing how long it takes for a criminal case to move "From police report to criminal charge" (my translation, ibid, p. 23). The graph shows that in 2014 it took 45 days for a report to become a criminal charge while, while in the first half of 2020 this period between report and charge totaled 110 days. The same graph also shows that the length of time "From criminal charge to indictment decision" (my translation, ibid, p. 23) had increased from 125 days in 2014 to 145 days in the first half of 2020. This background exemplifies how "[police] data serve as a point of reference, the equivalent of a 'set of books' permitting outsiders to rate the department" (Skolnick, 2011, p. 149). That is, police data output does not just allow the state to gain knowledge over its territories, but it also materializes governance over law enforcement by making its activities measurable and thereby auditable, legible and controllable by different institutions, in this case other state agencies.

Notably, in the various quotes from the multi-year agreements, police data is treated as a neutral representation of Danish society. That is, when police data is outputted to the state, general issues of statistical validity and reliability in police data (Bettex, 2024) are absent. Similarly, the concrete problems related to how the Danish police input, classify and structure data in processes entangled (Kaufmann, 2023) with POL-INTEL which I have described earlier, are also omitted. Instead, police data output is black boxed,

and its social and contingent history are shrouded and ideologized. Before drawing the full conclusions from this, I will deepen and specify what this black boxing of data output to the state means for the police.

Where Do These Numbers Come From? Police Power and Government Power

During an explanation of the significance of police data for the Danish state, one senior intelligence analyst explained that:

> I think its OK that the government is saying, ok you need to like, you just, it's not only what you feel that you should do. But the big [question] is how do they find out these kinds of numbers? Where should these numbers come from? And in [Intelligence-Led Policing] it's my responsibility to actually be sure that the decision makers are making the right decisions. So you know, you can hear that this is like going to visit these self-fulfilling promises. It's like saying, OK, the system is confirming the system. And its closed, nobody can come [from the outside] and say something, we don't have any researchers from outside coming inside, and it makes a very powerful place to be, and the politicians know that, and they know that because crime can change government power. So, that's the fun part of being in it but it's also where you are wary when you are doing the analysis as a police employee. – Interview, Senior Intelligence Analyst, May 2022.

As the quote explains, individuals in state governance institutions are situated (Haraway, 1988) at the end of the data life cycle, which is not conducive to opening the black box of police data. That is to say, the entanglement, complexity, fiction, bias and ideologization of how police data has been produced in and through POL-INTEL is invisible from this situated perspective. It is on this background that the analyst argues that controlling the output of police data is a "powerful place to be" (Interview, Senior Intelligence Analyst, May 2022). Partly, this is because crime data in general allows the state to measure potential threats to social order (Foucault, 2009) but also because of the specificity of Danish politics where crime has in recent decades become a top priority (Balvig, 2005; Lappi-Seppälä and Tonry, 2011; Klement, 2020).

As the analyst explains, due to their control of crime data, the police are able to translate (Callon, 1984) police power into "government power" (Interview, Senior Intelligence Analyst, May 2022). Crucially, this reverses the model for how police power has classically been understood by political philosophers across different traditions, as a power subordinate to, or in service of, the state (Weber, 1919; Althusser, 2008; Foucault, 2009; Hegel, 2012; Nozick, 2013; Ratcliffe, 2016; Neocleous, 2021). Instead, if data output

functions as the crucial "state's knowledge of the state" (Foucault, 2009, p. 411) and the police can control this knowledge, the police are not just governed by the state but also capable of governing it. It is a notable contradiction that the very ways that governance is materialized over the police – by auditing it through data – is also what puts law enforcement in a position of significant power.

However, this is not a straightforward and immediate power, but one that requires translation (Callon, 1984). This involves how data output is re-inputted into the police by state governance institutions – a phenomenon I will elaborate on next.

Reports Go Both Ways: Re-Inputting Data, Reproducing Feedback Loops

A good place to begin is to return to the previously mentioned proposal for a multi-year agreement from 2020. After the review of police data, including the response times I detailed earlier, the proposal continued by arguing that:

> The processing time and case backlogs have increased in the police and the prosecution services in recent years. This means that far too many Danes who have been victims of a crime are stuck in the system and do not receive the justice they need and are entitled to in order to move on with their lives. The long processing times affect both the victims and the accused/defendants – but also the general sense of justice among citizens and the ability to solve crimes. It is the government's objective that there should be a noticeable reduction in processing times for criminal cases in both the police and the prosecution services. - my translation, Justitsministeriet (2020b, p. 22).

Thereby, previously existing police data was used in the proposal as evidence for which reforms were necessary. This data then moved onwards from the proposal to the finalized multi-year agreement, which was also enacted (in a legal sense) by a parliamentary majority. In this agreement, a variety of goals were specified aimed at reducing these statistics, such as: "The inventory of reports without charges should be reduced by 20% in 2023 compared to the end of 2019. The inventory of charges without indictment should be reduced by 30% in 2023 compared to the end of 2019" (my translation, Justitsministeriet, 2020a, p. 20). These goals materialized governance over the police in relation to data-driven policing by mandating the police organization to accomplish certain quotas. While in the previous part of this section I emphasized the power the police have in controlling the means of data production, when the state re-inputs data, law enforcement instead appears powerless. The following quote exemplifies this:

When I began as a police officer, then we had 64 police stations in Denmark. Now there are twelve. And that is because politicians have decided that there should only be twelve and it is also politicians who say "Now we are going to focus on gang crime, now it is going to be burglaries." So, we are going to focus on whatever it may be, and they control it completely. And then the police directors sit and push it down to [Senior Intelligence Analyst in District] and so he says how we deliver some good numbers back to the Danish National Police, and we do that by giving him some numbers and so we make some operations, report it back and tell [Senior Intelligence Analyst in District] in the system what happens. So… reports go both ways. – my translation, Interview, Dispatch Center Chief, October 2022.

This quote, expressed in a tone of some exasperation by the Dispatch Center Chief, underlines how the state materializes governance of the Danish police by setting quotas that are measured in and through data (for more on this, see Holmberg, 2003; Degnegaard, 2010; Stevnsborg, 2016; Diderichsen, 2020; Olesen, Gylling and Vaaben, 2023). By noting how "reports go both ways" (my translation, Interview, Dispatch Center Chief, October 2022), the Dispatch Center Chief relates how data production functions as an obligatory passage point (Callon, 1984) that makes the multiplicity of the world scalable, measurable and legible for the state. In turn, this process allows the state to govern the police through a feedback loop where output produces new input, which is mediated through police systems and platforms like POL-INTEL.

8.1.2 Controversies of Blue Data

Ferguson (2017) argues that the development of data-driven policing allows for the possibility to control the police by auditing what he calls "blue data" (ibid), which is the data produced on the police themselves in relation to data-driven platforms which, he suggests, "can now map and track police patterns to better understand police practices and predict future personnel problems that is [sic!] produced by police action" (p. 150). As such, Ferguson highlights what I have termed the police reformist paradigm of data-driven policing studies, which call for materializing forms of governance aimed at producing better, more democratic or less biased policing (c.f. Fantin and Vogiatzoglou, 2020; Musgrove, 2024).

But to what extent can this claim be tested? One opportunity appeared in the case of POL-INTEL where, in 2022, the Danish Institute for Human Rights published a report featuring blue data that suggested the Danish police were ethnically discriminating. That this caused a controversy is important since controversies have been found to reveal the otherwise hidden, underlying values and politics in

sociotechnical systems (Gieryn, 1983; Latour, 1987; Scott, Richards and Martin, 1990; Barthe, Meyer and Sundqvist, 2022). The report summarized its findings on discrimination by stating that:

> "Our analysis shows that minority ethnic citizens are much more likely to be charged and arrested for offenses they are not guilty of, compared to individuals of Danish origin. During the period 2009-2019, the probability that a defendant of Danish origin did not receive a conviction was 11 percent, while for an immigrant or descendant, it was 14 and 16 percent, respectively" - my translation, Institut for menneskerettigheder, (2022).

The Institute thus revealed a difference in conviction rates between the social groups stopped by the police that correlated with their ethnic background. The explanation for this, the Institute suggests, is due to police discrimination (ibid). As such, the report mirrors the findings in this thesis of how Danish police reproduce bias in and through their use of platforms such as POL-INTEL, consequently making this controversy a relevant case to consider in relation to data-driven policing.

In the previous section, I underlined how police data was taken for granted as the "hard, incontrovertible soil of numbers" (Hall *et al.*, 1978 , p. 9). However, in this case, where the report suggested that the police were racially discriminatory, police data instead was contested. This is evident in how the question of ethnic discrimination in the Danish police was debated in a special open session (samråd) in the Danish parliament. The open session was requested by a representative of the left-wing party Red-Green Alliance (*Enhedslisten*) and marks where the controversy moved into the governance structures of the state. The Minister of Justice in 2022, the Social Democrat Mathias Tesfaye, wrote in the notes for his speech which was then read in the session that:

> Discrimination in the police force is naturally just as unacceptable as if it occurs elsewhere in society. However, it is <u>not</u> my perception that there is a <u>general</u> problem with discrimination in the police. And should there be cases where the police fall short, it is my clear impression that action is taken to address it" – my translation, emphasis in original, Minister of Justice Mathias Tesfaye, ('Udkast til tale til brug for besvarelsen af samrådsspørgsmål AI fra Folketingets Retsudvalg den 7. juni 2022', 2022).

The Minister then went on to state that "it is important to nuance" (my translation, ibid) the report from the Institute for Human Rights and offered three explanations for the data:

> A supplementary explanation could, for example, be that the police have a greater presence in areas with high crime rates, and statistically, there is a higher concentration

of individuals with a different ethnic background in several of these areas. Another contributory explanation could be that individuals with an ethnic minority background are more frequently reported to the police. In both cases, this means that individuals with an ethnic minority background are, in reality, subject to increased scrutiny and are therefore more likely to be charged—not due to ethnic profiling but because they appear in contexts where the police, for various reasons, naturally focus.

There could also be other explanations. For instance, there may be differences in the level of trust in authorities in different environments. If there is mistrust and a lack of willingness to cooperate with the police – from both the accused and the side of victims and witnesses – it can be challenging to meet the burden of proof for a conviction. Consequently, it may be more difficult to transition from a charge to a conviction. - my translation (ibid).

The explanations put forth by the Minister in the quote above shifted police data from being the matters of fact that the state materializes to govern law enforcement, to becoming a contestable matter of concern (Latour, 2004). Notably, the Minister related such matters of fact in the first sentence of the quote to how police feedback loops function by concentrating police attention on specific areas and delegating (Callon, 2003) the responsibility for the data to those who are subject to policing. Through so doing, the Minister drew on and naturalized black boxed data and thereby reproduced the ideological notions that said data represents higher crime and that police deployment to such areas is not only legitimate but a logical conclusion of places the police "naturally focus" on. By extension, this process also touches upon POL-INTEL as a platform that is part of reproducing said feedback loops. That is, the data that also feeds POL-INTEL and takes part in its reproduction of feedback loops, does not seem discriminatory but appears to be the neutral representation of hot spot crime. Instead, when such data is outputted to the state, and moving further onwards to the Minister, said data appears objective and factual. Subsequently, that data can be drawn on by the Minister to suggest that everything is indeed in order, that policing is neutral and that feedback loops are produced because police are concentrated on where crime occurs. It is in this sense that police data is ideological, appearing and consecutively being reproduced as an a-political representation of police power.

Of course, what the Minister also accomplishes by his quote is to navigate police data strategically. That is, while the previous subsection underlined how police data was taken for granted for governance purposes, in this controversy at least, a part of the police data is now turned from a matter of fact to being a matter of

concern (Latour, 2004). In the first quote, the Minister not only delegates (Callon, 2003) responsibility to those who are policed, but also delegates any responsibility from his own office to the police by arguing that "it is my clear impression that action is taken to address it" (my translation, 'Udkast til tale til brug for besvarelsen af samrådsspørgsmål AI fra Folketingets Retsudvalg den 7. juni 2022', 2022). In the second part of the quote, the Minister carefully deploys quantitative methodological reflection on crime data, by suggesting that discrepancies in police data are either natural (through reference to police presence in specific areas) or that individuals in these areas are less cooperative with the police. Together, these two quotes above describe a rhetorical strategy produced for the purposes of defending policing as a legitimate matter of fact that blue data threatened to upend.

The controversy on ethnic discrimination also became a matter for the police organization itself. On October 30, 2023, The Danish Institute for Human Rights organized an event on ethnic discrimination that brought together politicians, activists, civil society groups, police officers and others. During the event, a police director, the leader of a police district, was confronted with the experiences of people profiled by the police. The director explained that the local district had taken action: "We have discussed [the report] at a seminar for police leaders […] We look continuously at data. […] We're looking at searches without cause [sag] when we stop people" (my translation, Police Director #2, Field notes, 2023/11/30). Similarly to the Minister of Justice, the police director calls for a methodological review of blue data through additional data. This line of argument is predicated upon the notion that conclusive blue data is available that can determine if police are discriminatory or not, and that said data can then be used to create police reform. However, as the Minister's deft methodological review of police data at the start of this section suggests, data does not speak for itself but is rather entangled with ideological ways of imagining police power.

However, with that said, unlike the Minister, the police director stated that he put into motion a new governance process in the Danish police (Police Director #2, Field notes, 2023/11/30), albeit one whose effects have not been materialized by the time of writing. As the quote from the director above reveals, this process is inputted into a variety of police practices such as planning patrols, examining workflows and producing and auditing data. Since POL-INTEL is deeply wound up with these practices, it connects the platform closely to the controversy on blue data and how the output of blue data can be re-inputted into the police and change the conditions for how policing is performed in the digital era.

This investigation of blue data thus specifies the ideological notions that cause actors within the Danish state to assess police data by very different standards. In turn, this affects the non-materialization of governance over the police as well as a de facto sanctioning of how police have enacted their police power, which the Institute's report challenged. These findings seem to undermine the suggestion that blue data

can solve police discrimination, which has been raised by scholars such as Ferguson (2017). Moving on, I will engage further with the issue of how police data is outputted to the state in relation to ethnicity through the example of the Danish ghetto laws.

8.1.3 "It's Just Another Day in the Ghetto" – Police Data and the Danish Ghetto Laws

A dramatic example of the effects performed by the output of police data involves police data for the so-called "ghetto laws." Due to the stigma evoked by the term "ghetto", these areas and the law defining them were later renamed "parallel societies" (Risager, 2023). However, as the content of the law has remained the same, the term "ghetto laws" has remained a preferred term to use for critics of the law to maintain the ghetto law as a matter of concern for the public. This thesis will therefore refer to the laws on parallel societies as the ghetto laws.

An area can be classified as a parallel society by the state if it fulfills certain precise criteria: if, in an area with at least 1000 inhabitants, more than 50% originate from "non-Western" countries and if two out of four of the following are true:

> 1. if the number of people convicted of the criminal code, possession of weapons or use of narcotics is more than three times the national average.

> 2. If the number of inhabitants aged 30-59 years who only have a primary education is more than 60%.

> 3. If those who are 18-64 years old and who have no connection to employment or education are over 40% over the national average.

> 4. If the average income for ages 15-64 years is less than 55% of the mean average for the same group in the region. – my translation, Ministry of Interior and Housing (*Indenrigs- og boligministeriet*) (2022).

The ghetto laws thus rely on a system of classifications (Bowker and Star, 2000) whereby police data constitutes one of the main elements. Yet, not all police data is accepted into this classification system. The politics of classification (Star, 1990) in the ghetto laws are underlined by the exclusion of some crimes and integration of other crimes into the classification system in a way similar to my analysis of SmartSpot in Chapter 6. That is, the specific crimes included in the ghetto law are crimes such as those related to narcotics, which are historically linked to the criminalization of social groups like the working class or racialized minorities (Chambliss, 1975; Bowling, Reiner and Sheptycki, 2010; Wang, 2018). The exclusion of

crimes in the classification system such as tax evasion or environmental crimes, which would focus attention on other social groups such as the upper classes, stress how the politics of classification in the ghetto laws has both a class and racialized character. Moreover, the way the law correlates crime, ethnicity and class suggests that the criminal is a "crimmigrant other" (Franko, 2019) which is a migrant subject demarcated from the subject position of law-abiding Danes. That is, as Chun (2021) explains, "Ideology here is correlational – it operates through and as correlations that reproduce and reinforce inequalities" (p.191). Here, the correlations ideologize the world through spuriously linking income, ethnicity, education, geographical area and crime (with crime being itself a complex, ideological concept, see Neocleous (2021)).

As I showed earlier in the thesis, police data is often biased, fraught and/or ideological. Specifically, I have related this to the discretionary police power of how law enforcement decides who to control and arrest. In the case of the ghetto laws, biased police data is outputted to become a mechanism to classify areas. This means that these biases and the ideological character of data is accordingly translated (Callon, 1984) into how ghettos are defined, classified and calculated. I will now advance the argument to underline how ghettos also attract more police attention in a feedback loop.

The Ghetto as Feedback Loop in the Enactment of Police Power

As I showed in Chapters 6 and 7, POL-INTEL is entangled with biased feedback loops. The input of discriminatory stops relates also specifically to the ghettos. As one profiled person who had been stopped throughout his life explained: "in all my life I've been living in all the, what you can say, all the ghetto areas" (Interview, Amir, Profiled Person, April 2022). Even more clearly, in the words of another resident who refers in the quote to his home in Mjølnerparken in Copenhagen, which is one of the most famous ghetto areas in Denmark: "'You get criminalized because it says Mjølnerparken on your national security card and not because you have done something wrong'" (quoted in Blankholm *et al.*, 2024, p. 176). Thereby, the same input that reproduces feedback loops in POL-INTEL in general also helps to drive crime data that is outputted to the state to classify ghetto areas.

Specifically, Blankholm *et al*. (2024) explain that residents in Danish ghettos become stuck in a "feedback loop of ghettoization" (ibid, p. 176) caused by how ghetto classifications are re-inputted into police work. That is, as the quotes from profiled people in the previous paragraph describe, police also use the ghetto classifications to decide where and whom to police. In turn, said re-input produces new data input that moves through police source systems, which are entangled with POL-INTEL (through, for instance, SmartSpot – see chapter 6). New output is then produced that moves into ghetto classifications and

performs (Butler, 2010) the ghetto itself. This constitutes another form of feedback loop, but one that is routed through the state and its classification system rather than only moving through the police institution.

Ghetto classifications do not just reproduce feedback loops quantitatively, but also legitimize the enactment of police powers in ways that might be exceptional elsewhere. For instance, in Chapter 6, I related the story of Ahmed, who was arrested after intervening during particularly brutal and degrading police control of a 13-year-old. In relation to that event, Ahmed concluded his story by stating that "And I think the sad thing is one of [the police officers] told me, just like 'It's just another day in the ghetto.'" (Interview, Ahmed, Profiled Person, May 2022). Through this statement, the police officer interpellated and reproduced ideological (Althusser, 2008) conceptions of the ghetto and its residents as subjects of police powers that would be exceptional in other territories (see, Foucault, 2009, for a historical discussion on security territory and police). Picking up the idea that there is something exceptional in the ghetto laws, I will next follow how police data in the ghetto classifications move on to being used in the state to force demographic change in ghetto areas by the privatization or destruction of public housing, in turn necessitating the enactment of police powers.

Data-Driven Policing and the State: Following Police Data into Urban Governance of the Ghetto

The ghetto classification was explicitly created by the Danish state to "break down parallel societies and lift the task of integration" (my translation, Regeringen, 2018, p. 6). The measures for enforcing demographic change involve the construction of more privately owned properties or the sale or destruction of publicly owned housing properties (ibid). One of the most important examples of how this occurred can be seen in relation to the aforementioned Mjølnerparken area in Copenhagen. The classification of Mjølnerparken as a ghetto resulted in the sale in early 2020 of 260 publicly owned apartments whose tenants were evicted. The plan was to relocate these tenants to other apartments in other areas (News Øresund, 2020) which meant that the Danish state institutionalized a form of displacement of its subjects. In the same area, a community center (*beboerhus*) was designated to be demolished as part of changing the composition of Mjølnerparken. After a group of activists squatted at the community center, the Copenhagen police entered, evicted and arrested the activists in order to make it possible to demolish the building (Andersen & Ahlefeldt Simonsen, 2022). In this sense, police data, which is entangled (Kaufmann, 2023) with POL-INTEL, is performative (Mackenzie, 2005) as the ghetto classifications take part in performing the ghetto itself and setting into motion the resistances, conflicts and subsequent enactments of police power designed to uphold social order.

While earlier in this section I connected police power to the state and social order in general terms, the case of the Danish ghetto laws allows me to follow the data into an unusually extreme expression of how police power in the digital era is enacted in relation to territory, ethnicity and politics. As such, the ghetto law case shows how "Successful case studies look at extremes, unusual circumstances and analytically clear examples, all of which are important not because they are representative but because they show a process or a problem in particularly clear relief" (Zussman, cited in Brayne, 2021, p. 29). That is, while STS-ethnographic work on data-driven policing platforms has successfully identified the politics of classification in these platforms (e.g. Kaufmann, Egbert and Leese, 2019; Egbert and Leese, 2020; Brayne, 2021; Gundhus, Skjevrak and Wathne, 2023), I here follow these classification further to connect social order and the enactment of police power in the digital era. This is important also in relation to work in the police efficiency improvement paradigm, that treats policing as a matter of quantitative and measurable efficiency where police power is invisible (e.g. Mohler, 2014; Goodson and Hoyer-Leitzel, 2021; Ratcliffe *et al.*, 2021). Instead, the ghetto laws specify how data-driven policing is not just a phenomenon that can be understood through mathematical formulas but is instead related to, in the last instance (c.f. Althusser, 2008), the use of legally sanctioned force on behalf of the state. That is, data from police systems and platforms such as POL-INTEL can move into the state at leisure but without the enactment of police power through the use of force, the ghetto laws would not be actualized as the Danish state would not be able to evict squatters and successfully reproduce and enforce social order. With this analysis of state governance and the politics of police data complete, this chapter will now proceed to discuss the site of the police itself.

8.2 Prediction in Action: Intelligence-Led Policing in Practice

8.2.1 Validation – The Hermeneutics of Criminal Suspicion

In Intelligence-Led Policing (c.f. Ratcliffe, 2016), which is the official doctrine of the Danish police, data is supposed to move through police intelligence units through different steps as part of the so-called intelligence cycle (Rigspolitiet, 2018). In relation to how data is outputted, the intelligence cycle mandates that data that exits police platforms and systems must go through a step referred to as "processing" (my translation, ibid, p 23). Within processing, as a sub-moment of translation (Callon, 1984), another step must be taken that is referred to as validation. Validation is supposed to ensure that in police data "[…] it is clear what is fact, and what is the analysts or the collectors [*indhenterens*] opinion [*vurdering*]" (my translation, Rigspolitiet 2018, p. 32).

Validation is thus concerned with the quality of police data, a kind of data that is notoriously fraught with issues (Bettex, 2024). As I have shown throughout the thesis, these issues of crime data are actualized and, in many cases, accelerated in POL-INTEL specifically. However, police officers are not automatons who

simply take code or data for granted. Rather, police analysts are concerned precisely with the black boxing of data:

> There are many solutions, of course. We are into a lot of data structure and all that, but at some point, they are structuring the data for us. Because the data needs to be structured in a way that that system can manage. And if I, for example, say that I would like to do it in another way, it is not possible because the system is built on a specific ontology. - Interview with Senior Intelligence Analyst (May 2022).

In this quote, reproduced in part from earlier, the analyst points out the interlinked issues of Palantir's CS ontology and the black boxing of data that I investigated in Chapter 7. Since Palantir is a private company, its code is a trade secret (Pinard *et al.*, 2021), meaning that the way the data is structured is principally unknowable to the police organization itself. This means that the black boxing of data which moves out of POL-INTEL is thus not merely a theoretical issue posed in this dissertation but a concrete problem for the police analyst. Suggestively for the scope of the problem, this has meant the abandonment of the wide-scale use of POL-INTEL by said analyst's unit in favor of open-source solutions (ibid) whose code is public.

Classification and Its Criminal Consequences

Another aspect of validation concerns the interlinked issues of the quantity of data and the input practices of police officers in relation to classification systems:

> Every kind of crime has a code to it, like a five-digit code […] So, this is a murder, this is a burglary, but I mean, every category is subdivided [in]to many, right? And so, let's say a large machine is stolen at a building site, that can be registered as different things. It can be like thievery from a building site, it can be a stolen vehicle, or an unregistered vehicle because it doesn't have a license plate on it so it can fall into like maybe three different categories mainly. And so, depending on the person taking the report […] you can't say […] which code they are going to use. And so, what we try to do [is that we] look at them and say okay, we want to find out who has stolen this truck from a building site. So, then what you look at is, you say 'so what are the relevant codes for me here?' I know that it can be any of these three codes, so I want to search in this area for the last six months for similar incidents. […] let's say you have five hundred incidents, you go through them, […] and then you do a more qualitative analysis of it. – Interview, Senior Intelligence Analyst in District, May 2022

Crime codes are used by police forces internationally where such codes serve as the fundamental classification system that allows activities to be made legible for police intelligence (Egbert and Leese, 2020; Leese, 2023). In turn, crime codes constitute the building blocks for data output that can be used to trace patterns in crime and thereby perform predictions (Kaufmann, Egbert and Leese, 2019). In this quote, the analyst underlines how the wealth of crime codes that exist also complicates this process. Some scholars have claimed that predictive systems produce certainties among police officers by reifying data (e.g. Sanders & Sheptycki 2017). However, the complexities of how input functions in relation to legal classifications and police discretion that I have described earlier in this thesis are thus posited by the police analysts situated in the output stage as requiring meticulous work to overcome. This contradiction means that the more fine-tuned and granularly that police can classify, the greater the chance of mistakes and problems in data occurring that then move through the police and platforms like POL-INTEL. Moving on, I will explore these issues further in the context of Big Data.

Enrichment - From (Big) Data to Intelligence

An often cited reason for implementing POL-INTEL was to give the police the chance to leverage the Big Data they possessed in siloed source systems (e.g. Regeringen, 2015; Rigspolitiet, 2015). It was imagined that this would make the enactment of police power more efficient. Paradoxically, it is precisely the sheer volume of data the police have at hand through data-driven systems like POL-INTEL that produces new challenges for police knowledge production:

> I mean, you name it, there is data everywhere. [...] Big Data, it isn't interesting just to look at it 'oh yeah there is a lot of data.' You need to pile it up, look at it, put it into different perspectives and then we have to combine it with hypothesis [...] it becomes intelligence when you enrich the information. And the enrichment is the analysis work [...] – Interview, Senior Intelligence Analyst, May 2022.

In this quote, the analyst relates to how Big Data is not enough in and of itself. To this end, the Intelligence and Analysis Doctrine explains that: "Intelligence as a type of information is characterized by being validated and interpreted information, and by having a higher degree of uncertainty and subjective interpretation than traditional POLSAS information" (my translation, Rigspolitiet, 2018, p. 31). The process through which data becomes intelligence occurs through an epistemic process the police refer to as "enrichment" (Interview, Senior Intelligence Analyst, May 2022), whereby validation moves into analysis. This process is so central that the police doctrine explains that: "Without actual analysis, an analysis or intelligence unit is nothing more

than an information catalog [*informationskartotek*] or a provider [*formidlere*] of unprocessed data" (my translation, Rigspolitiet, 2018, p. 33). Thereby, producing intelligence requires grappling with epistemological definitions of what constitutes proper and true knowledge. That is, due to how the mass amount of data which POL-INTEL is entangled (Kaufmann, 2023) with producing, and due to the issues in police input practices, police data itself becomes suspect. Thereby, the implementation and acquisition of POL-INTEL as a Big Data platform has produced a police force which must take a step into philosophy of knowledge to parse the data that it gathers. Thus, POL-INTEL has not produced certain knowledge, but instead only actualized questions of knowledge. As Horn (2003) emphasizes, in intelligence work, "The questions that arise here are those of a philosophy seminar" (p. 3). In this sense, the many issues with the validity of police data discussed in this section are approached by police analysts through an almost hermeneutic approach, which underlines the need for interpretation, "enrichment" and critique. Police analysts must therefore take on the role of becoming a kind of ideology critic and set out to unravel how police data "Is a 'Representation' of the Imaginary Relationships Between Individuals to their Real Conditions of Existence" (Althusser, 2008, p. 36). That is to say, police data does not speak for itself, but instead requires the application of methodological doubt which, as Horn (2003) relates, is eerily similar to philosophical critique.

But police are distinct from philosophers of science and technology in that their critique of data and knowledge is not made for academic purposes but is aimed at enacting police power. I will now shed light on this process by dealing with how police predictions are reached.

8.2.2 Overview->Insight->Understanding->Prediction

As I showed in the last subsection, outputted police data is supposed to be developed into intelligence through a process of enrichment (Rigspolitiet, 2018a). This epistemic process is specified in the Danish police's Intelligence and Analysis Doctrine (ibid), which presents a flowchart with the headline "From overview to prediction" (ibid). This flowchart details four epistemic levels that develop from the lowest to the highest. The lowest level is "overview" (ibid), which moves to "insight" (ibid), to "understanding" (ibid) and finally to "prediction" (ibid). This epistemic hierarchy is further detailed in the Doctrine:

> **From overview to understanding to prediction**
>
> The development of understanding starts with an overview of a situation or a problem (<u>what</u> is the problem, what has happened, etc.). Based on this, an insight into the content (contexts) and context of the problem is developed, which supports the development of insight (knowing <u>why</u> something has happened or is about to happen)

and prediction (being able to identify and anticipate what <u>may</u> happen). – my

translation, emphases in original, Rigspolitiet (2018, p. 17-18).

This quote expresses how prediction necessitates an "overview" (ibid) of a situation. This overview is produced by reviewing data that is outputted from systems like POL-INTEL (Interview, Senior Intelligence Analyst in District, May 2022). In turn, this data is then validated and processed (Rigspolitiet, 2018) to be turned into predictions. As the quote relates, the police underline that the data outputted from their systems is not enough for their purposes. Something must happen with the data.

As related in the previous subsection, what must happen to data is a process of "enrichment" (Interview, Senior Intelligence Analyst, May 2022). This fundamentally hermeneutic exercise is underlined by how the Doctrine argues that knowledge is produced through attending to context, insight and "understanding" (my translation, Rigspolitiet, 2018, p. 17). The associations with hermeneutics are further deepened by the use in the Doctrine of the word *forståelse* which is translated into 'understanding' in English. However, a more relevant etymological connection to *forståelse* lies in the German *verstehen*. *Verstehen* is a central term in hermeneutics, whose linguistic associations more closely than the term understanding signify the epistemic level hermeneutics aspires to, which is when a multi-faceted, qualitative understanding of a phenomenon has been achieved (Gadamer, 1998). The goal for police intelligence differs from this classical hermeneutical goal of achieving *verstehen*. As the initial quote shows, rather than merely understanding, the police insert a new level in the epistemic hierarchy – prediction. But how are predictions made and how do they relate to how police power is imagined and enacted, and how governance is materialized in relation to data-driven policing?

How do Police Predict the Future?

While predictions have been analyzed by a wide variety of scholars in predictive policing (Perry, 2013; Ferguson, 2017; Egbert and Leese, 2020; Duarte, 2021; Ratcliffe *et al.*, 2021; Brayne, 2021), the specific way imagination operates in prediction has been relatively unexplored. To elaborate on this argument, I draw on an example by an analyst of how predictions are made in the context of planning for a protest with a well-known Danish far-right provocateur and how to predict disturbances during football matches.

> What kind of crime was recorded during his visit here? How about in Copenhagen? Has
> [the provocateur] burned the Quran in Copenhagen before? Yes, he has. So, look at the, I
> mean even though it is not our district we can still look at what happened at that time,
> same thing with… let's say a football match. So when you have to assess what will likely

go down after the match, you look at the teams, and you look at the last ten times that

these actual teams played at that actual stadium and you say 'so, when you look at the

last ten times this happened, last ten times [the provocateur] burnt the Quran, the last

ten times these two teams met, what we saw was this kind of reaction or this kind of

crime was recorded after, so this is in all likelihood what's going to happen now.' Then

adding, do we have any additional information? […] So, using the systems is looking at

what has happened before. – Interview, Senior Intelligence Officer in District, May 2022.

The analyst expresses how predictions are made based on past events, relayed through data that is outputted from POL-INTEL and other police systems. However, as Hume's (1894) induction problem states, past events cannot be used to logically infer predictions of the future. The void between past events and predicting future events from these is bridged by humans who "unite them in our imagination." (ibid, p. 53). Imagination, in turn, forms a core part of how ideology operates in Althusserian theory as it fills the void between subject and the conditions of social life (Flisfeder, 2018). In the quote above, ideology fills the void between past, present and futures where historical events of disorder are utilized to imagine the future. This is not only related to planning for events, a corresponding move also occurs when police plan patrols where past crimes are utilized to predict and thereby imagine futures (an activity I have discussed at the beginning of Chapter 6 and will return to later).

The quote above also specifies that police do not imagine through any ideology, but specifically through security ideology which imagines futures through risks to social order and security. By imagining the future through security ideology, prediction also forecloses (Sanders, Weston and Schott, 2015; Scannell, 2019; Andrejevic, Dencik and Treré, 2020) the multiplicity of the social world. The analyst does not, after all, attempt to predict all possible futures, for instance the result of the football match, or the rise of racism in Denmark. Ergo, much of the data outputted and available the police must be ignored while other data, selected through ideology, is projected into a future populated by a range of risky subjects, with a police force situated as the thin blue line to maintain social order and security. Thereby, how the police predict futures through how they imagine them relates to how police power is enacted. This in turn connects, through the case of POL-INTEL, the role of policing to state and social order in a concrete way.

This background is also significant for the definition of predictive policing. As explained, the Danish police refuse the label of predictive policing by demarcating (Gieryn, 1983) precise mathematical predictions made by algorithmic systems from their own qualitative predictive practices (see Chapter 5). However, the use of historical crime data for the purposes of planning police patrols to deter future crimes is a central part of the predictive analytics associated with predictive policing (Walt L Perry, 2013). Also, there was

never a truly fully automated form of predictive policing as all predictive platforms have required police officers to conduct patrols (Egbert and Leese, 2020; Brayne, 2021). There is then little that distinguishes the patrol planning of the Danish police from other forms of predictive policing in action.

But predictions themselves do not perform (Butler, 2010) any effects. To translate (Callon, 1984) these into the enactment of police power, the Danish police go through a step in the intelligence cycle that is referred to as dissemination (c.f. Ratcliffe, 2016), which is the next logical step in this subsection.

8.2.3 Dissemination

As explained, dissemination is the process of outputting the intelligence and predictions made by analysts to the police organization more widely. But what issues are involved in this process? The Intelligence and Analysis Doctrine of the Danish police explains that:

> The crucial elements for being able to work intelligence-based are:
>
> 1. being able to interpret the criminal environment, i.e., to prepare analyses based on information and intelligence that gather or produce knowledge, which
>
> 2. can influence decision-makers, who
>
> 3. will affect the criminal environment" – my translation, emphasis in original, Rigspolitiet (2018).

As the quote specifies, several moments of translation (Callon, 1984) must be passed through to turn data output into the actual enactment of police power. This reflects the division of labor within the police. Earlier, I quoted an analyst in a police district who explained that intelligence workers "can't order" (Interview, Senior Intelligence Analyst in District, May 2022) patrol officers. That is to say, how governance of the police is materialized regarding the division of labor of the police concerns a central part of how data-driven policing can be enacted as digitalized platforms like POL-INTEL are inserted into law enforcement. As Waardenburg et al. (2022) argue, the analyst has a tenuous role within the police organization. On the one hand, they hold immense amounts of interpretative power, which they can leverage to become an obligatory passage point (Latour, 1993a) in the sense that they can control the data used by the police to decide where and how to enact police power. Yet, at the same time, they are typically not the ones who can command "street cops" (Reuss-Ianni and Ianni, 1983) to enact said orders. Data-driven policing is then not immediately and smoothly translated into operations. Instead, analysts must

develop different means of convincing officers. It is in this manner that the Intelligence and Analysis Doctrine of the Danish police (Rigspolitiet, 2018) notes that:

> The operational use of intelligence and analysis products depends on the message being delivered clearly and distinctly. An easily understandable text combined with a transparent process of preparation leads to high credibility of the intelligence and analysis product. High credibility leads to a high likelihood that the recommendations will also be operationalized. – my translation, Rigspolitiet (2018).

This quote echoes that of other handbooks of ILP (e.g. James, 2013; Ratcliffe, 2016) in underlining the importance for police analysts to effect policing by actively intervening in how data is presented. The complexities of data that platforms such as POL-INTEL is entangled with must thus be simplified, the data must be turned from being uncertain, unclear and messy into an output that is not just clear but immediately convincing. A specific way this is accomplished is in relation to how crime maps produced in and by POL-INTEL are used in daily operations, as described below.

Enrollment Attempts of Street Cops

In many Danish police districts, crime maps, which are produced in POL-INTEL, are utilized in daily briefings for police officers going on patrol (Interview, Senior Intelligence Analyst in District, May 2022). When asked why and how intelligence analysts utilized maps and visualizations, the Dispatch Center chief explained that:

> Sometimes I think it is just easier for people to understand that if you are looking at something at some table, some chart or some images, it is much easier to understand "aha, now I know full well why I should drive out because the area is completely red" – my translation, Interview, Dispatch Center Chief, October 2022.

In this quote, the Dispatch Center Chief explains how visualizations are a good tool because they are immediately convincing. That the "area is completely red" refers to colors utilized in POL-INTEL to mark specific geographical territories with coloring ranging from the non-existent through a gradient of color with red marking the highest level of crime. This is not an innocent description of the world, but rather, has a certain politics (Winner, 1980). That is, crime maps obscure as much as they show, particularly in relation to police bias (Ensign *et al.*, 2018; Jefferson, 2018; Brayne, 2021; for a further discussion on POL-INTEL and visualization, see Galis and Karlsson, 2024). However, crime mapping is also a managerial tool that has not been touched upon to any great extent in previous literature. When the Dispatch Center Chief remarks that

an area being entirely red immediately convinces a patrol officer, he refers to how visualizations such as crime maps turn the multiplicity of the world and complexities of data into "conscription devices" (Henderson, 1991, p. 452; see also Daston and Galison, 1992; Kennedy and Engebretsen, 2020; Perret and Aradau, 2024) which present the world and subjects within it as given. In this case, the crime map as conscription device is used to enroll (Callon, 1984) police officers to follow the predictions made by intelligence analysts. Crime maps, therefore, must become simplified if they are to successfully materialize governance over street cops.

The managerial power of the map also functions as a crucial step to translate (Callon, 1984) predictive analyses into the actual enactment of police power. The map is not just a statement about what has been, but a prediction of future crimes which forms a vital link to disseminate the output of data from platforms like POL-INTEL back into policing itself. This is a form of feedback loop in the sense of how police attempt to input, structure, analyze and disseminate data to enact police power through enrolling patrol officers to pre-empt future crime.

A crucial function for how and why the crime map is so convincing is that crime maps materialize security ideology, specified in-depth in my analysis of the SmartSpot mapping features in the Input chapter. The ideological character of the crime map used for briefings curiously inverts Althusser's (2008) example of interpellation where an officer yells "Hey, you there!" (p. 48) at an individual who in that moment is hailed into being as a subject of policing. In the crime map, the individual is not a subject of policing, but a police subject. The map purports to reveal the world as immediate to this subject, mapping out where subjects to be policed congregate. The map also encompasses other ideological assumptions, such as police patrolling as being an effective remedy for crime (Bowling, Reiner and Sheptycki, 2010).

 It is on this background that the map is another step in reproducing feedback loops that obscure and black box police power, but in this case for the police themselves, reproducing the wider field of ideology within the briefing room. In contrast to previous literature of both the critical theoretical variety (e.g. Reigeluth, 2014; Joh, 2016; Andrejevic, 2017) and that which aims to improve police efficiency (e.g. Wang, Gerber and Brown, 2012; Inayatullah, 2013; Lin, Chen and Yu, 2017; Mohler and Brantingham, 2018), this finding suggests that data-driven policing does not just improve the enactment of police power but actually threatens to undermine it by obscuring and black boxing the social world the police aim to patrol.

Dissemination of finished intelligence products does not just go to crime maps and briefings for patrol workers but is also used by management - a topic I will now explore.

The following quote on digitalization of the police in relation to ILP and efficiency serves as a good starting point for further investigating dissemination:

> What is the whole idea of ILP in a nutshell? [ILP is implemented] because of downsizing all the time and also having to live up to a lot of measure points, like response time for one and how many charges do we bring, I mean, everything is measured which is also like a consequence of us being able to get out the data from different platforms. I mean, digitalization also gives a way to measure effectiveness. – Interview, Senior Intelligence Analyst in District, May 2022.

The context of this quote was reflected how the analyst connects the implementation of POL-INTEL to the doctrine of Intelligence-Led Policing to datafication, political economy and New Public Management. In this sense, POL-INTEL is part of a wider digitalization effort to materialize governance over the police for the purposes of creating a more efficient police power. This perspective is aligned with how data-driven policing platforms have been understood as managerial platforms that are materialized to more strictly govern rank and file officers (Wilson, 2019; Brayne, 2021; Gundhus, Skjevrak and Wathne, 2023). However, when turning to at least some parts of the higher levels in the Danish police, the suggestion that the police must "do more with less" (Wilson, 2021, p. 71) by implementing data-driven and Intelligence-Led Policing has also produced effects other than rigidity and chasing quantified goals:

> But if we, for example, have two ships coming into the harbor of Copenhagen, they are both loaded with the same amount of cocaine and we only have like ten employees […] we need to choose either ship one, or ship two, how should we choose, which ship do we need to take out, because we can't fight every crime? […] Yeah, we need to look at what are the strategic aims here. The one ship could be filled with cocaine that could be making the common economical foundation for like a street gang, or this is like a corporate company that does money laundering. So, and that is a political question. But we still need to do the prioritizing. We need to prioritize which, so that's why ILP structure, or the process of trying to make it transparent choosing between those kind of ships. […] the police isn't a corporate organization, but that's where ILP […] [can say that], "what is the alternative"? Right now, the alternative to, is that we are trying to do both ships. And maybe then we will lose both cases […] So, we should do, we should use

What the analyst refers to here is how police management decides which individuals and spaces to target. This development relates to the incompleteness of police power since, as the analyst explains in the quote above, the resources at hand in the police are not adequate for policing all criminals. Concretely, this relates to POL-INTEL as a system that makes such targets legible for the police. During one observation of POL-INTEL, I noted a folder with the title *Måludpegelse* which translates to "Targeting." The purpose of this folder was to organize and structure data on specific subjects of policing which the police were to target (Field notes, October 2022). In this way, POL-INTEL functioned to make certain subjects legible for the police organization to act upon, to single out for the enactment of police power.

What is important in targeting is that it is a choice made from, in and by police data output: a choice related, according to the analyst in the quote above, to moral or political philosophical reflections. That is, the analyst does not pose the question of how to govern the police through the quantitative objectives typically associated in previous research with New Public Management in general (Bayley, 1996; Høigård, 2011; Granér and Kronkvist, 2016; Olesen, Gylling and Vaaben, 2023) and with data-driven policing in particular (Sanders, Weston and Schott, 2015; Benbouzid, 2019; Gundhus, Talberg and Wathne, 2021). Instead, the analyst enters the field of political or moral philosophy by explaining how improved data output actualizes value judgements in how police designate targets for the enactment of police power. Is a ship loaded with cocaine more important than one used for money laundering and by what moral and political standards can this be concluded? To answer such questions, the analyst becomes a sort of lay philosopher who prioritizes and decides upon moral-political criteria for what makes good police action or not.

This quote also signifies the displacement of discretion (Brayne, 2021) within the police organization itself. As the analyst explains by referencing that his choices will be what directs his subordinates, philosophical reflection has a managerial character. Thereby, while platforms like POL-INTEL materialize governance to constrain the discretionary police power of the rank and file officer (Wilson, 2019b; Gundhus, Talberg and Wathne, 2021) what the quote above accentuates is how the same process also increases discretionary freedom for the manager and the intelligence analyst. Thereby, increased quantified goals at the bottom can co-exist with increased freedoms for qualitative reflection at the top.

The displacement of discretionary police power through how governance is materialized over the police also relates to how issues of discretion are displaced to the top of the police organization. That is, classical

studies of policing were concerned with how policing was unevenly distributed in society, primarily by how street cops chose who, what, how, where and when to police (e.g. Manning, 1977; Bittner, 1990; Skolnick, 2011). These classical critiques were also concerned with how police practice was differentiated from the ideal of liberal statehood that police officers were to investigate crime in a disinterested, generalized manner across all of society. In the case of choosing which ship to police, the potential impact of police discretionary power is displaced in a way that corresponds to the change in impact a police leader has comparison a patrol officer. That is, a police manager has greater ability to direct and impact a greater amount of individuals, sites and phenomena than the "street cop" (Reuss-Ianni and Ianni, 1983) and thereby the impact of greater discretion for managers takes on particular importance. As this process develops in relation to how governance is materialized through ILP and POL-INTEL, data-driven policing thereby accelerates the uneven enactment of police power in society to a new level.

With these remarks on the contradictory development of how police data is outputted into the police organization finalized, I will now move on to the third site that police data is outputted to in the form of criminal cases in the court system.

8.3 The Independent Police Complaints Authority

The Independent Police Complaints Authority (*Den uafhængige politiklagemyndigheden*) was set up in 2012 to allow citizens and others to complain about illegal or unjust police behavior. This was prompted by extensive criticism of the Danish state for its lack of neutral oversight over the police (Stevnsborg, 2010). The system by which the Authority functions relies upon data outputted from police systems and/or data that is filed by a citizen (Al-Sami, 2023). In relation to POL-INTEL, the Authority is designated by the police as an important actor whose existence and activity materializes the independent, transparent and democratic governance of the police:

> [...] it is important that [the Authority] is not internal affairs. This is an external oversight body completely independent of the police. So they will then carry out their own investigation and also every citizen is able to go to [the Authority] and say that they have suspicion of someone abusing data and then [the Authority] will start their own investigation and just ask our unit and the police to provide the logs and then we will have nothing to do with that. So the police, we don't carry out investigations on our own employees so that is external oversight. So just for 2018 [...] we had more than 1500 users who were subjects to log controls and out of those we only found 19 audit or 19

controls or users who had behavior that we found didn't fit into what we see as normal
behaviour... In these cases, there were eight cases of use that ended up in criminal
procedure with fines and disciplinary actions, so we find that our results are actually
quite good. – Current DPO, Interview, September 2021.

The current DPO thus explains that the Authority functions by drawing on police data output to audit if there is misuse of POL-INTEL. Furthermore, through referencing the low level of misuse found by the Authority, she legitimizes the police institution by delegating (Callon, 2003) expertise to the Authority and, since the Authority has found little misuse, argues that there are few issues in the police. However, the above quote concerns unjustified searches in POL-INTEL. But there are also other issues in police data, beyond searches. One lawyer specializing in Human Rights cases against the Danish police explained that in a recent case of his:

In this case, we have sixteen minutes of video surveillance. A witness stood nearby and she recorded it all, you know, on her mobile phone. That became a part of the case and [The Independent Police Complaints Authority] they showed that video to the police officers before they were interviewed as opposed to the British equivalent. Over there, they have guidelines that says, you show the video after the police officer is interviewed for very obvious reasons and... so what happened here, exactly very predictable, when the police officers they were interviewed in this case they said "Oh, yeah, what happened its true on the video we do not see the citizen do anything wrong but we've got before the video was turned on he would.. he was really a troublemaker and that's the reason why we arrested him" - Interview, Lawyer, October 2022.

As the lawyer specifies, the Authority inverts the legal procedure that police officers use in their investigations. That is, in regular police proceedings, suspects are questioned before being fully aware of any evidence that might contradict their interrogation. In the case of the Authority, all evidence submitted to the Authority is relayed first to the officer via email with all the facts, testimonies, video material, etc. Only then is the officer is questioned. As the lawyer explains, this system allows officers to strategically navigate complaints data outputted from the Authority to them.

A linked issue with the Authority is that the data outputted to it comes from the police themselves and is thereby related to the black boxing and ideologizing through practices entangled (Kaufmann, 2023) with POL-INTEL. This involves partly how the Authority functions as a legitimizing factor for the police, as exemplified by the earlier quote from the current DPO of POL-INTEL. That is to say, to focus on the

Authority's capacity to audit outputted data from searches in the platform obscures the processes of input and black boxing covered in the two previous chapters, particularly as related to how individuals are profiled by the police:

> It was in the beginning every time I felt violated I made a complaint. And every time I got a letter back from DUPen [the Independent Police Complaint Authority] that 'we're sorry, we couldn't help you', either 'we do not know who [the officer is], do you have any kind of names, do you have license plates for the police cars and stuff?' and you don't have anything. And you ask them, they become very agitated, you know "This is police business, shut up, shut up! Answer the questions! It's not you asking the questions" – Interview, Nicholas, Profiled Person, October 2021.

This quote relates to how the Authority demands specific identification for the officers in question in order to complain. Without such identification, there can be no complaint. Nicholas explains that a strategy to avoid such identification is by the threat of utilizing police power to deny identificatory data to citizens that they might use to complain to the Authority. As Brayne (2021) succinctly points out, police are often unwilling to submit to the same surveillance practices that they demand from the rest of society. In this quote, this also extends to identification of police by citizens.

Lastly, the output of the Authority itself performs (Butler, 2010) new effects. For instance, as explained in Chapter 6, complaints to the Authority also produce POLSAS entries that can attract police suspicion. This marks a central contradiction in that attempts to use the Authority to govern the police instead produce more police controls. Furthermore, harkening back to the controversies of blue data I detailed earlier, the Minister of Justice referred to the Authority's data in the special open session on ethnic discrimination in the police that:

> The Independent Police Complaints Authority has stated in this regard that, based on the cases of racism, discrimination, and prejudice it has dealt with, the authority has not observed any general issues prompting it to address the matter with the National Police – my translation, Minister of Justice Mathias Tesfaye, 'Udkast til tale til brug for besvarelsen af samrådsspørgsmål AI fra Folketingets Retsudvalg den 7. juni 2022' (2022).

Thus, the Minister refers and delegates (Gieryn, 1983) to the Authority and its data when claiming that police are not ethnically discriminatory. However, as I have shown, the data politics of the Authority means that its capacity to materialize independent reviews of police power are slim. This relates specifically to the entanglement of POL-INTEL and its source systems with police discretionary powers, which produces black

boxing. Thereby, even as the Authority was institutionalized in order to conduct independent checks and controls on misuse of police powers (Stevnsborg, 2010), the data output of the Authority is used to *avoid* governing the police. The Authority can thus be more accurately described as a materialization of non-governance over police power through both its inability to produce efficient controls over the police and the manner by which it is used to legitimize the enactment of police power.

8.4 Conclusions

This chapter detailed how the police are able to translate (Callon, 1984) their power into a variety of different sites due to the black boxed and ideological character of police data that appears authoritative, neutral and expert. A part of this enactment of power is how the police can avoid being surveilled, sanctioned or controlled by the institutions materialized to govern them. In fact, the police are able to not merely be governed, but in some cases also translate their power into actively *governing*. While these developments have been studied earlier, the case of POL-INTEL in the digital era is suggestive of how such developments accelerate and broaden. At the same time, this chapter has shown how these developments are interlaced with frictions, failures of translation and contradictions, most significantly in the case of how massive volumes of police data risks undermining how police make predictions in action.

Chapter 9: Conclusions

In this final chapter, I unite and develop some of the most important conclusions to be drawn from this thesis with two objectives in mind. Firstly, to highlight the contributions this thesis makes to the international literature on data-driven policing, and secondly, to suggest potential areas for further research.

9.1 What Does 'Knowing' Mean? Epistemology, Ideology, Police and Data

The case of POL-INTEL has underlined how issues of epistemology are core elements of data-driven policing. While the platform was imagined by the police as improving police power through better data, and thereby better knowledge, its introduction has also generated new issues of black boxing and 'knowing' that threaten to undermine the enactment of police power. These issues are also methodological problems for those researching the police who face black boxing, issues that accelerate the necessity for grappling with broader epistemic issues on theoretical and analytical levels.

Specifically, issues of knowing in data-driven policing are actualized through ideology regarding how it masks, rationalizes, universalizes, legitimizes and naturalizes police power (Eagleton, 1994). In detail, this process involves how one of the most basic examples of ideology lies in how the police interpellates, and thereby subjectivizes, an individual as a subject of the police (Althusser, 2014), a subject within security ideology. In the modern, data-driven era of police power, such interpellations are produced in and through platforms like POL-INTEL, which take part in, materialize and reproduce, ideology itself. It is this very basic, material operation, in and through code, which also connects police data to the role of police as reproducers of social order. This is important to designate, because ideology is a notion almost entirely absent from studies on data-driven or predictive policing, with a few rare and brief references that do not specify how police platforms interpellate or materialize ideology and reproduce social order (Sanders and Sheptycki, 2017; Barabas, 2019; Sarah Brayne, 2021). The case of POL-INTEL underlines how ideology and ideology critique, concern not just ideology as a system of thinking, but also in terms of material, *materialist*, practices and apparatuses ranging from code to police visualizations.

In particular, the notion of ideology underlines the relation between police, social order and the state at large as mediated and enacted in and through science, technology and data. This link has unfortunately been invisible in most scholarly work on predictive or data-driven policing. The case of POL-INTEL has shown how imagining police power, whether through scientific theories and/or technological apparatuses,

is suffused with notions of Leviathan, social order and security. Furthermore, this thesis underlines the deep intertwinement between the state and the enactment of police power in the three moments of translation (Callon, 1984) of input, the black box of POL-INTEL and output. Simply put, epistemic issues of how police power is imagined and enacted requires grappling with ideological concerns and connecting law enforcement to statehood. This has been achieved extensively in earlier scholarly work (c.f. Manning, 1977; Reiner, 1978; Skolnick, 2011), and this thesis has argued strongly in favor of infusing the study of data-driven policing with perspectives from classical police scholarship. To explore this general argument in more detail, I will move into detailing the implications and issues of ideology within three of the main paradigms of data-driven policing, beginning with the police efficiency improvement paradigm.

9.1.1 The Police Efficiency Improvement Paradigm

The police efficiency improvement paradigm has treated predictive policing as a matter of quantifiable input and output (c.f. Mohler *et al.*, 2015; Lin, Chen and Yu, 2017; Rummens, Hardyns and Pauwels, 2017; Nair *et al.*, 2019; Goodson and Hoyer-Leitzel, 2021). This thesis' engagement with input, black-boxing, and output, and knowledge of police power, cannot be meaningfully inferred from quantitative police data. Instead, to do so is to reproduce ideology by obscuring the enactments, the practices, the violence and the politics of what is happening beneath the surface of data.

Another ideological issue within the police efficiency improvement paradigm which I have touched on throughout the thesis is its role in producing the specific imaginary of predictive policing as a scientific, analytical catalyst of efficient police power. Through the veneer of objective, scientific, quantitative modelling, predictive policing became the latest version of the historical, ideological dream of police power. In this imaginary, platforms such as POL-INTEL create the capacity for minute, specific, real-time surveillance that allows law enforcement to know and enact police power to counter threats of social order before they occur (c.f. Arendt, 1968; Pasquino, 2006; Foucault, 2009). In this way, the police efficiency improvement paradigm should be understood as the latest scientification effort (Ericson and Shearing, 1986) in and of law enforcement.

The case of POL-INTEL underlines how data-driven policing platforms are cast through the ideological veneer of objectivity, neutrality and efficiency. Through so doing, the politics of the police, and the specific manner in which they enact their power, is obscured and ideologized. Consequently, the police, politicians and data-driven policing companies such as Palantir can delegate (Callon, 2003) problems, scandals or issues to other actors while black boxing the politics that are interlaced with data-driven police platforms.

Furthermore, this scientification effort means that issues of data-driven policing can be cast as issues of a lack of implementation, particularly as it relates to the enactment of discretionary police power by the unenlightened rank-and-file of law enforcement. As Kuhn (1970) explains, such ad hoc explanations are deployed to save the scientific paradigm from falsification. In the case of data-driven policing, these efforts can be traced back to the Kansas City Patrol Experiment (Kelling *et al.*, 1974) and into the modern, predictive policing era. The issue at hand in the paradigm is thus the underlying ideological premise that police power is efficient (Bowling, Reiner and Sheptycki, 2010), and thereby failures to produce this efficiency are explained by ad hoc premises. The case of POL-INTEL is significant as it underlines one instance of this failure, captured in the transformation of POL-INTEL from a predictive super weapon into a mundane tool. This change speaks to a far wider development in predictive policing as a specific notion, one I will pick up and discuss in the last section of this chapter. For now, discussing how ideology and epistemology pertains to the police reformist paradigm is more pertinent at this point.

9.1.2 Police Reformers and Ideology

In the genealogy of predictive policing in Chapter 2, I characterized police reformers as desiring to materialize stricter forms of governance over discretionary police power. The case of POL-INTEL has been particularly pertinent for investigating if this belief is warranted or not. For instance, in Chapter 8, I detailed controversies around "blue data" (Ferguson, 2017) and found that even when data suggested police were discriminatory, that data was never treated as conclusive. Similarly, later in the same chapter I showed that the Independent Police Complaints Authority was unable to materialize any meaningful governance over the police. In all these cases, ideological issues are engaged and actualized regarding how politicians avoid critiquing the police and how data itself is black boxed and ideologized in and through platforms like POL-INTEL.

However, the main point within this thesis versus police reformers is that the issue is police power itself, not specific instances of how it is governed or enacted. POL-INTEL itself is an example of – in a global comparison – a highly governed and regimented platform, produced in one of allegedly the most transparent and democratic nations on earth (c.f. Rønn *et al.*, 2024). The issue with the platform in an instance such as the ghetto laws, which are areas classified by the Danish state as places at odds with Danish values and politics (see Chapter 8), is not their politics and legality per se, nor how they are governed more broadly. Instead, the issues are what effects, worlds, situations and social relations are performed in and through the police power to classify areas (and their populations) as ghettos. Through ghetto classifications, the police produce inclusions and exclusions, they demarcate hot spots, which are to

be patrolled, controlled and surveilled, from those of other territories. In the process, law enforcement legitimizes and legalizes the enactment of surveillance, control and force against specific populations and individuals. The ghetto laws might be an unusually extreme expression of police power in the service of the state, but all states rely upon police power to govern through such systems of classification, surveillance and monopoly of violence.

Essentially, the police reformist paradigm accepts the basic ideological premise that policing is necessary and legitimate, and brackets off what it poses as – for one reason or another – overreach or misuse of police power. The position of police reformers echoes that of earlier police reformer-scholars such as Skolnick (2011), whose issue with police power was its discretionary element, which he argued undermines transparency and the rule of law itself. However, as a range of other thinkers on police power maintain: police power itself is characterized by its own nebulousness, its capacity to enter into a multitude of situations and social relations to control, surveil and enact force to reproduce social order (c.f. Althusser, 2008; Benjamin, 2021; Neocleous, 2021). Reforming police power is both at odds with its basic character, but also means that police reformers become blind to how the mundane enactment of police power itself, such as during a traffic stop, performs certain ways of being and acting, and carries a kind of politics that should not be taken for granted. This issue has prompted police reformers to highlight some specific problems concerning the introduction of data-driven platforms as they relate to challenging legal rights or producing feedback loops (Ferguson, 2017; Oswald *et al.*, 2018; Grace, 2019; Van Brakel, 2020). However, rather than understanding data-driven platforms as bugs in what would otherwise be an unproblematic, technical application of law enforcement, it is important to follow how platforms like POL-INTEL are not aberrations that can be stymied or demarcated from good police power, but are a natural extension of police power itself. And, ultimately, police power is what should be the subject of critique *tout court*.

9.1.3 Ideology, Epistemology and Science and Technology Studies

The issue of ideology in relation to the STS-ethnographic chapter refers to debates within the field of Science and Technology Studies at large, with POL-INTEL contributing useful input. To frame the issue, in Chapter 3, Theorizing Data-Driven Policing, I drew on Söderberg's (2017) conceptualization of STS as divided into two camps, the post-structuralist empiricist camp and the political economy camp. Specifically, I denoted the concept of ideology as a main point of contention within the debate between these camps, with the post-structuralist empiricist camp referring to ideology as a top-down abstraction, which is at odds with the idea of the world as multiple and heterogeneous (e.g. Latour, 1993; Jasanoff, 2015). Here, I will revisit this debate by summarizing and elaborating on the critique of the post-structuralist empiricist camp.

The Althusserian (2008) perspective on ideology differs from the top-down abstractions attacked by Latour (1993) and other post-structuralist empiricists. In distinction, I have traced how ideology is materialized in specific practices, apparatuses and technologies across different sites. This is concretely related to the specific ideology materialized within POL-INTEL and the police in general: security ideology. This ideology casts the world into one of risks and threats to security where police are posited as the thin blue line necessary to ward off the "*Warre of Everyone Against Everyone*" (Hobbes, 2002, p. 206) that Hobbes predicted would erupt from the lack of a strong Leviathan state. Security ideology produces a field of subject positions that casts particular social groups –specifically, in terms of race and class – according to their potential risk to the state, as materialized within the very code of platforms such as POL-INTEL and the data entangled (cf. Kaufmann, 2023) with it.

Security ideology within code speaks to events such as when someone is classified into subject positions e.g. a criminal. This is itself an enactment of police power, a power that obscures, black boxes, ideologizes and forecloses the multiplicity of the social world. No longer is a person tall, black and handsome, as one of the people profiled in Chapter 6 joked he was. Instead, he is now a police subject, interpellated and interred into platforms such as POL-INTEL which then aggregate and output this data into statistics and mapping features. The power to materialize this ideology in data, police action and when individuals are subjectivized in the street through police interpellation, means that the empiricist position that true knowledge is gained from sense data is undermined. Instead, to borrow an argument from police intelligence analysts and how they relate to data: empirical data must be put through a process of enrichment, of ideology critique, of a constant move beyond what appears before it can become meaningful.

This perspective fundamentally differs from empiricist accounts, which attempt to follow actors (c.f. Latour, 1993) and relay their actions (Spivak, 1988). In such perspectives, the relationship between the whole and the part – which characterizes the epistemic approach in ideology critique (Eagleton, 1994; Chun, 2011) – is occluded. Similarly, how these actors/subjects are constituted in and through interpellation is obscured in such accounts. Instead, in many such studies of policing, law enforcement appears as any other knowledge work (e.g. Hald, 2011; Waardenburg, Huysman and Sergeeva, 2022). This makes invisible how police power is enacted in and through interpellation, social order and the potential for state-sanctioned violence.

In this sense, ideology is a bottom-up, specific, material relation that can be followed, specified and analyzed in detail. Police identification and control of individual racialized individuals is not just a singular case, but is intrinsic to how data-driven platforms help to reproduce a class-based, racialized social order where social issues are ideologized as security issues. Through this capacity of moving between the part and the whole (Eagleton, 1994; Chun, 2011), it is possible to not just retain the strength of STS ethnography in its capacity

to follow complex systems in detail, but to enrich it through connection to critical analyses of societal power. This critique of post-structuralist STS also concerns those in the camp that do not engage with epistemology. Some strands of this camp, notably some scholars in the post-Actor-Network Theory tradition such as Mol (2003), have argued that it is possible, even desirable, to set aside epistemic issues in favor of ontology. However, my thesis accentuates the analytical importance of revisiting questions of knowledge when considering which different states of affairs are realized, and which are not. That is, in Mol's ontological politics, epistemology is explicitly set aside and instead she champions the notion that the world is directly enacted by different actors. In this perspective, there is no reference to how subjects, institutions or other phenomena are connected to systems of power (c.f. Galis and Summerton, 2020). By extension, that enactment then appears to be agnostic and voluntarist, and the reasons why specific states of affairs and not others tend to be brought about are difficult to explain.

In distinction, the Butlerian (2006, 2010) concept of performativity, which I have drawn on in this thesis and which is inspired by Althusser's notion of interpellation (Youdell, 2006; Bunch, 2013; Söderberg, 2017; Maze, 2020), specifies the imaginary, and thereby epistemic, element of how and what is performed (i.e. enacted). That is, in the Butlerian-Althusserian account, what is performed is reproduced from what is ideologically imagined. It is no accident that Althusser's example of interpellation is the police hail in the street, and that the term "subject" in his theorization both draws on the colloquial sense of a subject and of being a subject to law (c.f. Althusser, 2014). This way of thinking does not conflate what ontologically exists into enactment, but instead connects what is performed to ideology. In this thesis, I have shown how the performative police power to hail into being is updated, digitalized and modernized through the implementation of platforms such as POL-INTEL, as they take part in subjectivizing individuals in both the sense of producing a concrete subject and putting that subject in a hierarchical relation to the state and police.

To conclude, in my argumentation, POL-INTEL is particularly instructive as a counter to some of the central tenets within the post-structuralist empiricist camp of STS. That is, rather than analyzing police power as a dispersed set of enactments across different sites by actors without internal hierarchies or asymmetries, I have shown the necessity of utilizing concepts such as ideology, state and social order to specify and analyze police power. In a sense, this returns to the origins of STS in political economy, Althusserian theory and Marxism (Söderberg, 2017). This perspective also shifts the politics of STS from a critique of expertise and technological systems (ibid) to a critique of present-day social order as a whole.

9.1.4 Methodology and Epistemology

This epistemic discussion on ideology, STS and epistemology also concerns methodological issues in data-driven policing. Moving between the part and the whole has been used in this thesis through drawing on the data of profiled people and contrasting this with how police power has been officially imagined. This methodological changing of situated perspectives (Haraway, 1988) is an attempt to go beyond what appears given – an actor, an action, a policed society – and to unravel what effects and subjectivities are performed or resisted in and through police power. This thesis is built upon this methodological reorientation that attempts to follow the data (Kaufmann, 2023) into sites outside the police to connect the subjects of policing to the enactment of data-driven policing itself, alongside how different institutions materialize governance over the police.

The methodological part of this thesis is thereby an important contribution to the field, which has generally not discussed methodology at length. This refers to each of the paradigms within the field. In the police efficiency improvement paradigm, quantitative police data is taken as a representation of police action. In the critical theory (e.g. Behrndt and Wagner, 2015; Monica, Molteni and Quassoli, 2015) and reflexive paradigms (e.g. Cohen and Graver, 2017; Oswald *et al.*, 2018; Sheehey, 2019) the use of public data, including media stories and statements by predictive policing companies or police institutions, is too often handled as an accurate representation of the world. The case of POL-INTEL has actualized the importance of moving from analyzing quantitative data to qualitatively detailing enactment by reaching those sites and subjects where police power is enacted, where data is produced and from there following that data into a variety of sites, performances and effects.

This methodological strategy was originally developed in the STS-ethnographic paradigm. The methodological issue within this paradigm is its focus within the site of the police itself (e.g. Gundhus *et al.*, 2021; Sandhu and Fussey, 2021; Lally, 2022; Waardenburg, Huysman and Sergeeva, 2022; Gundhus, Skjevrak and Wathne, 2023), which means that the enactment of police power typically happens outside the observations of the analysts (c.f. Coleman, 2016).

Continuing from the previous part, this methodological issue relates back to the empiricism inherited into the paradigm from its parent field in Science and Technology Studies and specifically the post-structuralist empiricist camp within the STS field. The methodological principle in this thesis is to follow the data into further sites than the police, and to dialectically connect the parts and the whole (Eagleton, 1994; Chun, 2011). It is thereby an attempt at making a corresponding methodological break alongside the theoretical critique of post-structuralist empiricist STS detailed above. Rather than focusing on one specific site, or even moving across several (like Egbert and Leese, 2020; Brayne, 2021), I have not just followed the data into other sites (i.e. the state) and social groups (i.e. the subjects of police profiling) but have also made other

knowledge claims that extend beyond relaying practice and phenomena. This key step forward in producing accounts of police power denotes how police perform societal relations in general but also specifically how the capacity of violence is a central tenet of law enforcement that scholars must develop methodological strategies to identify and follow.

This methodological discussion concludes this section as I move on to explore the notion of feedback loops – a central term in this thesis.

9.2 Materializing Feedback Loops of State, Police, Data and Social Order

Throughout the thesis, I have traced a variety of feedback loops. These include the "classical", quantitative kind of feedback loop where biased police data enters a data-driven policing system that then suggests increased police attention on specific social groups (Ensign *et al.*, 2018; Sarah Brayne, 2021). I have also specified a range of different varieties of this feedback loop in POL-INTEL. For instance, feedback loops that change the qualitative character of how police relate to an individual, as well as feedback loops produced from the ghetto laws in Denmark.

Another kind of feedback loop featured in this thesis resembles that used in cybernetics to describe a self-optimizing system of input, black-box and output (Wiener, [1948]). In the case of the Danish police, their institutionalization of Intelligence-Led Policing's intelligence cycle (Ratcliffe, 2016), as it constantly attempts to re-input more refined data and working methods into the police, is an attempt to produce such a feedback loop. Another example is how the Danish state attempts to input new goals into the police organization, based on examination of quantitative data outputted by the police. This perspective on feedback loops harks back to Hobbes' Leviathan state, which he imagined as a cybernetic creature composed of an amalgam of both human and non-human actors (Hobbes, 2002). The objective of a platform such as POL-INTEL is to digitalize the law enforcement part of this Leviathan machine, to make it function with greater efficiency. These sorts of cybernetic feedback loops are part of the concrete, different ways to materialize governance over the police in relation to data-driven policing with the aim of increasing speed, efficiency, knowledge and ultimately the power of the police.

Finding and detailing these different kinds of feedback loops constitute a core contribution of this thesis to the field because they exemplify the internal contradictions and struggles within law enforcement. On the one hand, there are attempts to produce the cybernetic kinds of feedback loops that connect law enforcement to state and social order. On the other, there are the feedback loops that reproduce bias and black boxing within policing platforms. The co-existence of these various feedback loops produces a variety

of contradictions that move between different levels of the police, from the emphasis on fulfilling quantitative goals set by state governance, to the feeding of biased, black boxed or fictionalized data into the state by individual police officers.

Based on these contradictory feedback loops, a theoretical model of the digitalized Leviathan machine is produced, which is not a smoothly operating, perfect system of power that perfectly sees, classifies and targets. To exemplify, the Danish police imagined POL-INTEL, and the associated doctrine of ILP, as enabling (in economic terms) more efficient police power. However, continuously stopping the same individuals hundreds, if not thousands, of times and never finding reasons to charge them with a crime, corresponds to an enormous waste of resources (from the point of view of Intelligence-Led Policing). What can be concluded is that governance is then imperfectly materialized in relation to data-driven policing, with many of the counterintuitive, or even counterproductive effects of law enforcement being produced by the very platforms created to improve police power.

In particular, these contradictions refer to internal conflicts and struggles within different levels of the police. The genealogical explorations in this thesis have clarified how imagining good police power through data-driven, scientific or Intelligence-Led approaches is not a universal police dream equally distributed across all parts of the police organization. Instead, the attempts to produce cybernetic feedback loops have a managerial character. In managerial ways of imagining police power through these feedback loops, the aim is for the police to become a unified machine where each cog or piece of code moves in perfect unison according to the plans and desires of management. As I have shown, this is an old dream that has appeared throughout history in reference to technologies such as the telegraph (Tarr, 1992). However, this way of imagining is modernized and digitalized in and through platforms like POL-INTEL, where data becomes the ideological fetish (c.f. Bowling, Reiner and Sheptycki, 2010) through which dreams of an efficient police power are centered.

Yet, as the thesis has shown, these ways of imagining do not directly translate (Callon, 1984) into what police management, intelligence workers and police efficiency improvement theorists have imagined as an improved police power. In this sense, the dream of POL-INTEL as an efficient machine, a super weapon in the fight against crime, has failed to produce an immensely capable police organization. One of the main reasons for this is the internal struggle between "street cops and management cops" (Reuss-Ianni and Ianni, 1983). This conflict has returned throughout the thesis as one of the main issues for police leadership in enacting the police power they imagine is preferable.

This approach owes much to classic studies on policing, which has underlined how managerial governance of the police produces a range of contradictory effects in the enactment of police power (Banton, 1964; Bittner, 1967; Reiner, 1978; Skolnick, 2011). More specifically, my conceptualization builds on modern Danish police research, which has extensively explored the relation between discretion, governance through quantifications and managerial control (c.f. Holmberg, 2003; Balvig, Holmberg and Nielsen, 2011; Hald, 2011; Kirchhoff Hestehave, 2013; Diderichsen, 2020; Sausdal, 2022). However, little of the writing on the Danish police has focused on data in the same manner as I have. In this way, this thesis contributes to research into law enforcement in Denmark by tracing and specifying the role of new digital technologies and how these re-actualize older conflicts, contradictions and ways of enacting police power.

With these initial remarks on feedback loops finalized, it is time to specify their theoretical importance in terms of the critical theory paradigm.

9.2.1 Re-Articulating Critical Theory on Data-Driven Policing

Of all the four paradigms on data-driven policing, critical theory has been the most engaged with when linking the police, state and social order in the digital era. This thesis has been in constant critical dialogue with this paradigm, building on the theoretical perspectives that policing must be understood through recourse to the digitalization of the Leviathan state – a process deeply interlaced with the production of cybernetic feedback loops (c.f. Sadowski and Pasquale, 2015). At the same time, I have continuously critiqued the abstract character of this paradigm and how it has tended to exaggerate police and state power.

The case of POL-INTEL suggests that a more nuanced approach to the enactment of police power is more appropriate. Unlike some accounts in critical theory, this thesis' genealogical investigation underlines that if new data-driven tools produced a truly efficient, and all-encompassing police power, then there would be no need for innovations in law enforcement. Similarly, the ethnographic chapters of this thesis have shown the many issues involved in attempting to enact a data-driven police power. While POL-INTEL should be understood as an attempt to produce a digital Leviathan through imposing cybernetic feedback loops to govern the police, and thereby society, these functions are never complete, final or totalizing. Instead, this thesis underlines how contradiction is a central element of data-driven policing: contradiction between what is imagined and what is enacted, between discretionary and Intelligence-Led and data-driven police power, between different levels in the police and the state more widely. These contradictions open up the

potential for following the failures of enacting police power, and the different interests and conflicts within society more broadly.

To denote contradiction as a central characteristic of data-driven policing is important analytically. Much of the critical theory of predictive policing builds from the theories of Foucault (c.f. Foucault, 2009) and Deleuze (c.f. Deleuze, 2017) where power is likened to a Panopticon of immense police power, or as an ever-widening Society of Control (e.g. Reigeluth, 2014; Byfield, 2019; Scannell, 2019; Sheehey, 2019; Burrell and Fourcade, 2021). In contrast, the Althusserian theory, which this thesis has used to analyze POL-INTEL, marks contradiction as a central part of social order, underlining the imperfectness of systems of power (Althusser, 2014).

One main contradiction in the case of POL-INTEL is that it underlines not just police power, but also police powerlessness in the face of the inability of the police to produce clear efficiency. The police officers in this thesis express themselves constantly through worry and concern: they are uncertain if their data is accurate, what the future will hold for law enforcement, if POL-INTEL obscures and black boxes, and if other parts of the police misuse the platform. This is important because critical theory should also be extended to critique claims made by the powerful in the public, or parliament or even among members of their own police forces. This is essential to note, not just because claims of immense police power are not just theoretically problematic, they also have political and social importance. As prison and police abolitionists have long argued, the inefficiency of law enforcement and the criminal justice system in general for its stated aims is key to opening up for alternate political visions of society, beyond the security ideological imaginations of police power (Mathiesen, 1986; Vitale, 2021; Calhoun, 2023; Nafstad, 2024). The case of POL-INTEL is a vital reminder that feedback loops do not perform complete closures of the world, that police power is not complete, and that other possibilities exist outside of security ideology and the Leviathan machine.

9.3 Predictive Policing as a Concept and Field of Study

A major topic of this thesis has involved predictive policing both as a concept and a practice and the complexities between these. This thesis has underlined the historical red thread from the 17th century *polizeiwissenschaft*, which arose with the first police forces and the modern state where threats to social order would be predicted and pre-empted through the application of new sciences and technological innovations. POL-INTEL itself is one of the latest examples of these attempts. This is important in the face of how much of the historical literature on predictive policing begins in the 19th century with the professionalization of law enforcement in the UK or the US (e.g. Benbouzid, 2019; Wilson, 2019; Egbert and

Leese, 2020; Brayne, 2021). Instead, by revisiting the formation of the European state, it is possible to ground predictive policing as an integral part of modern (digital) statehood and policing itself.

Situating predictive policing historically is significant in terms of following the revisions and demarcations of predictive policing as a specific concept. POL-INTEL itself is an important example of this global trajectory, whereby platforms and practices that were once taken for granted as predictive policing are reconceptualized. That is, rather than being classed as predictive platforms, they are defined using a plethora of other concepts with unclear reasons why one classification or another is used. Some of these policing concepts are new, while others have existed earlier but gained increasing prominence. These include Smart Policing (Coldren, Huntoon and Medaris, 2013), Risk-Terrain Modelling (Drawve, Moak and Berthelot, 2016; Calhoun, 2023) and Intelligence-Led Policing (Ratcliffe, 2016). Of particular interest is Precision Policing (Bratton and Anderson, 2018), the 2018 invention of William Bratton, creator of the term 'predictive policing'. As Brayne (2021) shows, Precision Policing came about as a political response to the ban on using predictive policing in the Los Angeles Police Department. The case of POL-INTEL corresponds with Brayne's finding, detailing how reconceptualization and demarcations of predictive policing in the case of Denmark relate to political contestations.

Returning to the discussion of ad hoc (Kuhn, 1970) hypotheses in the police efficiency improvement paradigm, these revisions can therefore be read as part of the move to shed the critique posed against predictive policing by launching new concepts unburdened by the past. Much as new notions have appeared throughout history in the face of failures in producing demonstrable police efficiency, currently, a plethora of new policing concepts are being launched as part of a new scientification (Ericson and Shearing, 1986) process. Future research should thereby follow this wider genealogy and battle over definitions as it pertains to different national case studies, specific technologies, companies and the academic theories interlaced with these attempts.

This discussion leads us to a summary and discussion of the alternative notion of prediction in action.

9.3.2 Prediction in Action

In contrast to predictive policing as a demarcated concept, I have instead referred to police forecasting as prediction in action, retooling Latour's (Latour, 1987) science in action, whereby the analyst moves from the ideal of science (or, in this case, predictive policing) to its practice. This concept specifies how various different techniques and technologies are used across different sites to predict and pre-empt crime and

threats to social order. Prediction is thereby not something that can be demarcated from the police more widely, but instead practiced by every level of the institution.

As the case of POL-INTEL demonstrates, this approach allows the ethnographic specification of different predictive practices. For instance, for the police officer who calls the Dispatch Center to retrieve data on what to anticipate during a house call, for how police intelligence workers must balance their analytical sophistication to the need to enroll (Callon, 1984) officers on patrol, and in turn for weighing how they produce predictions in relation to epistemic and political philosophical reflection. These all highlight how prediction is not a simple practice but is shaped by many factors, such as ideology, how governance is materialized over the police and how specific technologies interrelate with prediction in action. Future research may further deepen how different practices and technologies in and across different sites produce distinct ways of predicting and the variety of effects and ways of performing futures that are enacted in and through this process.

Fixing prediction in action as a central element of police power emphasizes the open, contingent and imaginary element of police power in that law enforcement attempts to know an unknowable future while performing a range of effects that threaten to foreclose it. This traces back to the feedback loops that I detailed earlier, as police predictions occur in, through and as part of reproducing cybernetic feedback loops to enact police power in the present based on future threats. They are the temporal hinge between governing the past and governing the future (Dubber and Valverde, 2006; Foucault, 2009). Meanwhile, the historical data such attempts are built on is based on feedback loops as understood in predictive policing research. This continuously introduces biases and failures of correctly identifying threats to social order or law in a variety of ways. Future research could further detail, specify and produce taxonomies of different kinds of feedback loops and how these interact with police power and prediction.

Similarly, prediction in action signifies the ideological and imaginary element within prediction. In most of the field of predictive policing, little attention has been devoted to the role of the imagination. The closest investigation of the imaginary can be found in the STS-ethnographic paradigm, which has extensively detailed how knowledge is produced in and through predictive platforms and systems (e.g. Kaufmann, Egbert and Leese, 2019; Duarte, 2021; Gundhus, Skjevrak and Wathne, 2023). By drawing on Hume (1894), I have shown how the imaginary is a crucial part of prediction, which bridges the void between past, present and the unknowable future. Thereafter, I have argued that the character of the future as *un*predictable necessitates imagining it. In the case of POL-INTEL, I have shown how specific, ideological ways of imagining the future are what guide the police, which then results in police enacting their power to intervene in the security threats they project into the future. This is a major impetus for the innovation and implementation

of technologies and sciences to enhance police power, such as POL-INTEL, which becomes a never-ending desire for deeper surveillance and further police powers (c.f. Amoore, 2014).

Thereby, to make a prediction of my own, there will be new policing tools, predictive and otherwise, which will come under a variety of terms and concepts but that will re-imagine new, more advanced police power. By so doing, these scientific and technological apparatuses will potentially foreclose the social, political and intellectual world and reproduce ideological assumptions. This thesis has attempted to disrupt this process of black boxing and ideologizing predictive policing by unravelling the genealogy and practice of a specific technology: POL-INTEL. The central lesson to be learned is that policing and the present social order are not necessary, objective and eternal. Instead, as stated by Science and Technology Studies (c.f. Woolgar, 2014): *it could be otherwise*.

10. References

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