

THE MOBILITY OF  
POLICE-CITIZEN INTERACTIONS  
OPEN DATA

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By

BRENNAN BRIAN FIELD

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OR

Dean

College of Graduate and Postdoctoral Studies

University of Saskatchewan

116 Thorvaldson Building, 110 Science Place

Saskatoon, Saskatchewan S7N 5C9 Canada

## ABSTRACT

In 2014, as protests against police brutality spread throughout the United States, a new policy began to emerge that sought to address the public's declining trust in law enforcement through the release of previously withheld information on daily interactions between police and citizens. As part of a larger movement promoting government transparency, often called open data, this novel application of open data to policing was a dramatic change compared to the status quo concerning police data on these interactions in the United States. This dissertation examines the genesis, development, and spread of this policy, referred to as *police-citizen interactions open data* (PCI open data), focusing on the role played by the White House-led Police Data Initiative (PDI). This is achieved through developing an integrated analytical framework that combines insights from the assemblage/mobility approach with institutional perspectives on police agencies, which is then applied on original qualitative and quantitative data. This dissertation emphasizes the importance of informational infrastructure assemblages, such as the PDI, in facilitating policy mobility, and presents evidence of PCI open data adoption and mutation among data transparency policies utilized by American police.

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TABLE OF CONTENTS

|   |            |
|---|------------|
| <b>PERMISSION TO USE</b>  | <b>ii</b>  |
| <b>DISCLAIMER</b>   | <b>ii</b>  |
| <b>ABSTRACT</b>   | <b>iii</b> |
| <b>ACKNOWLEDGEMENTS</b>   | <b>iv</b>  |
| <b>TABLE OF CONTENTS</b>  | <b>v</b>   |
| <b>LIST OF TABLES</b>   | <b>x</b>   |
| <b>LIST OF FIGURES</b>  | <b>xi</b>  |
| <b>LIST OF ABBREVIATIONS</b>  | <b>xii</b> |
| <b>Chapter 1 Introduction</b>   | <b>1</b>   |
| 1.1 Introduction  | 1          |
| 1.2 Research Problem  | 3          |
| 1.2.1 Police Transparency and Open Data   | 3          |
| 1.2.2 American Policing, Decentralization and Local Control   | 5          |
| 1.2.3 Federal Government Influence in Policing: Federal Funding and Professionalization                 | 7          |
| 1.2.4 Federal Influence: Consent Decrees and Collaborative Reform                                       | 9          |
| 1.2.5 Global Policy   | 11         |
| 1.3 Knowledge Gap   | 12         |
| 1.3.1 Empirical and Theoretical Mobilities Gap  | 12         |
| 1.3.2 PCI Open Data Gap   | 16         |
| 1.4 Purpose and Objectives  | 17         |
| 1.5 Methodology   | 18         |
| 1.5.1 Assemblage as a Concept   | 18         |
| 1.5.2 Assemblage as Methodology   | 19         |
| 1.5.3 Methods   | 20         |
| 1.6 Dissertation structure  | 22         |
| 1.7 Chapter 1 Bibliography  | 25         |
| <b>Chapter 2 Integrating Mobility and Institutional Approaches to Understand Police Policy Transfer</b> | <b>37</b>  |
| 2.1 Introduction  | 37         |
| 2.2 Policy Mobilities Approach  | 39         |

|   |           |
|---|-----------|
| 2.2.1 Neo-liberalism  | 40        |
| 2.2.2 Assemblage  | 40        |
| 2.2.3 Mobility and Agency of Actors   | 41        |
| 3.2.4 Mutation  | 43        |
| 2.2.5 Mobilities, Mutations, Assemblage   | 44        |
| 2.3 Institutional Theory of Organizational Change and Institutional Isomorphism           | 44        |
| 2.3.1 Institutional Sovereigns, Legitimacy, and Institutional “Myths”                     | 45        |
| 2.3.2 Institutional Isomorphism   | 46        |
| 2.3.3 Institutional Theory and Policing   | 48        |
| 2.3.4 Diffusion of Innovation (DOI) Theory  | 48        |
| 2.4 Integrating Institutional Theory into Policy Mobilities                               | 49        |
| 2.4.1 Informational Infrastructure Assemblages facilitating Mimetic/Normative Isomorphism | 50        |
| 2.4.2 Narratives, Benchmarking, and Myths   | 51        |
| 2.4.3 Mutation/Mobility Enabled by Ceremony/Decoupling                                    | 52        |
| 2.4.4 Important of Relations in Isomorphism and Assemblage                                | 53        |
| 2.5 The Mobility of Body-Worn Cameras   | 53        |
| 2.5.1 Early use of body worn cameras in the United Kingdom                                | 54        |
| 2.5.2 Spread of body worn camera policy beyond the United Kingdom                         | 55        |
| 2.5.3 Department of Justice Funded Studies  | 56        |
| 2.5.4 Expansion of Informational Infrastructure Assemblage with News Media                | 58        |
| 2.5.5 American Civil Liberties Union and New York Police Department Consent Decree        | 59        |
| 2.5.6 High Profile Incidents of Police Use-of-Force and News Media                        | 60        |
| 2.5.7 Rapid adoption  | 61        |
| 2.6 Discussion  | 62        |
| 2.6.1 Informational infrastructure played important role enabling policy mobility of BWC  | 63        |
| 2.6.2 Use-of-Force Incident Benchmarks strengthened relevant Myths and enabled Mobility   | 64        |
| 2.6.3 Ceremony Mutation allowed for further Mobility                                      | 64        |
| 2.6.4 Assemblage and Isomorphic Relationality   | 65        |
| 2.7 Conclusion  | 66        |
| 2.8 Chapter 2 Bibliography  | 68        |
| <b>Chapter 3 Police Data Initiative and Police-Citizen Interactions Open Data</b>         | <b>80</b> |
| 3.1 Introduction  | 80        |
| 3.2 Context   | 81        |
| 3.2.1 Technocracy and Obama Administration  | 81        |

|   |            |
|---|------------|
| 3.2.2 Presidential Innovation Fellows   | 83         |
| 3.3.3 Open Data: Entrepreneurial and Open Governance  | 84         |
| 3.3.4 Government Technology Industry  | 85         |
| 3.3.5 The Influence of Federal Government in Local Policing and “Professionalization”                         | 85         |
| 3.3.6 Federal Influence in “Professionalization”: Research and Grants, Decrees and Collaborations, Taskforces | 87         |
| 3.3.7 Context Summary   | 89         |
| 3.4 Methods   | 89         |
| 3.5 Findings I - Foundations  | 91         |
| 3.5.1 Technocratic Foundations and Presidential Innovation Fellows  | 91         |
| 3.5.2 Wardell and Technical Reform Assistance Efforts   | 92         |
| 3.5.3 Ross and New Orleans, BlightStatus  | 92         |
| 3.5.4 BlightStatus, Entrepreneurial Tech  | 93         |
| 3.5.5 – Early Adopter Departments   | 96         |
| 3.6 Findings II – White House Police Data Initiative  | 97         |
| 3.6.1 Early Adopters and PDI territorialization   | 97         |
| 3.6.2 Quantifiability   | 98         |
| 3.6.3 Government Technology and Technocratic Actors   | 99         |
| 3.6.4 Fostering relations between PDI actors  | 100        |
| 3.6.5 Beyond “convening” to Policy “boosterism”   | 101        |
| 3.7 Findings III - Shift under Trump Administration and Deterritorialization                                  | 103        |
| 3.7.1 Federal Department of Justice: Consent Decree changes   | 103        |
| 3.7.2 Federal Department of Justice: Voluntary Reforms Ended  | 104        |
| 3.7.3 PDI at Police Foundation  | 105        |
| 3.7.4 Technocracy Deemphasized under Trump  | 106        |
| 3.8 Discussion  | 107        |
| 3.8.1 PDI as Informational Infrastructure Enabling Isomorphism  | 108        |
| 3.8.2 Benchmarking and Myths  | 110        |
| 3.8.3 Ceremony as Mutation Enabling Mobility  | 110        |
| 3.8.4 Police Policy as Assemblage, Relations through Isomorphism  | 112        |
| 3.9 Conclusion  | 113        |
| 3.10 Chapter 3 Bibliography   | 116        |
| <b>Chapter 4      Assessing PCI Open Data Mobility and Mutation</b>   | <b>127</b> |
| 4.1 Introduction  | 127        |
| 4.2 Theoretical Foundations   | 131        |

|   |            |
|---|------------|
| 4.2.1 Diffusion of “Innovations”  | 131        |
| 4.2.2 Institutional Theory  | 133        |
| 4.2.4 Policy Specific Adoption Models   | 136        |
| 4.3 Study: Phase 1  | 137        |
| 4.3.1 Vera Police Data Transparency Index   | 138        |
| 4.3.2 Primary Data Collection   | 139        |
| 4.3.3 Dependent Variables: Measuring PCI Open Data                                    | 142        |
| 4.3.4 Data Collection   | 143        |
| 4.4 Phase 1 Results: Assessing PCI Open Data Adoption by American Police Agencies     | 145        |
| 4.4.1 By Data Category Type as Ordinal Measurement                                    | 145        |
| 4.4.2 Correlations between Data Categories  | 146        |
| 4.4.3 Highest Data Sharing as Ordinal Measurement across Categories                   | 147        |
| 4.4.4 PCI Open Data by Department Strata and Type                                     | 148        |
| 4.4.5 PCI Open Data by State  | 149        |
| 4.4.6 Summary of Phase 1 Results: Observations on PCI Open Data Adoption and Mutation | 150        |
| 4.5 Study: Phase 2  | 152        |
| 4.5.1 PCI Open Data Policy Mobility Model   | 152        |
| 4.6 Supporting Elements of Logistic Regression  | 156        |
| 4.6.1 Sample Adjustment for Non-Responsive Departments                                | 156        |
| 4.6.2 Dependent Variable  | 158        |
| 4.6.3 Independent Variables   | 159        |
| 4.6.4 Hypotheses  | 161        |
| 4.7 Logistic Regression on Variables of Interest                                      | 162        |
| 4.7.1 Data Limitations  | 162        |
| 4.7.2 Results of Logistic Regression  | 163        |
| 4.8 Discussion  | 165        |
| 4.9 Conclusion  | 167        |
| 4.10 Chapter 4 Bibliography   | 170        |
| <b>Chapter 5      Conclusion</b>  | <b>178</b> |
| 5.1 Introduction  | 178        |
| 5.2 Knowledge Gaps, Research Goals, Manuscript Summaries                              | 178        |
| 5.3 Research Contributions: Empirical and Theoretical Knowledge Advances              | 181        |
| 5.3.1 Literature Gaps   | 181        |
| 5.3.2 Research Contributions  | 183        |



|                                     |     |
|-------------------------------------|-----|
| 5.4 Limitations and Future Research | 187 |
| 5.5 Conclusion: Key Messages        | 189 |
| 5.6 Chapter 5 Bibliography          | 194 |

## LIST OF TABLES

|   |     |
|---|-----|
| Table 2.1 Integration of Mobilities & Institutionalism Concepts .....                         | 49  |
| Table 2.2 Applying Integrated Mobility/Institutional Approach to BWCs.....                    | 62  |
| Table 4.1 LEMAS 2020 / Subsample Comparison.....  | 140 |
| Table 4.2 Data Category Specific Data Sharing Practice Non-Responsive Included.....           | 145 |
| Table 4.3 Kendall’s Tau-B Correlation Between Ordinal PCI Open Data by Data Category<br>..... | 146 |
| Table 4.4 Highest Data Sharing Level across all Interactions Data Categories .....            | 147 |
| Table 4.5 Highest Openness Levels by Department Strata (with Percentages).....                | 148 |
| Table 4.6 Change from dropping Non-Responsive LEMAS Departments .....                         | 156 |
| Table 4.7 Highest Data Sharing Practices across all Categories Non-Responsive Dropped.        | 157 |
| Table 4.8 Influence of dropping Non-Responsive Departments.....                               | 158 |
| Table 4.9 Descriptive Statistics for Variables.....   | 161 |
| Table 4.10 Logistic Regression on PCI Open Data Adoption .....                                | 163 |

LIST OF FIGURES

Figure 4.1 "S-Shaped" Adoption Curve .....132

Figure 5.1 Knowledge Gaps, Dissertation Goals, Manuscript Contributions.....179

## LIST OF ABBREVIATIONS

ACLU: American Civil Liberties Union  
BWC: Body-worn Cameras  
CCTV: Closed Circuit Television Video  
CNA: Center for Naval Analyses  
COMPSTAT: Compare Stats  
COPS: Office for Community Oriented Policing  
CRI-TA: Collaborative Reform Initiative for Technical Assistance  
CSV: Common Separated Values  
CTO: Chief Technology Officer  
DOI: Diffusion of Innovations  
EPV: Events per Variable  
ESRI: Environmental Systems Research Institute  
GIS: Global Information System  
IACP: International Association of the Chiefs of Police  
LEAA: Law Enforcement Assistant Agency  
LEMAS: Law Enforcement Management Administration Statistics  
NIBRS: National Incident Based Reporting System  
NIJ: National Institute of Justice  
NYPD: New York Police Department  
PCI Open Data: Police-Citizen Interactions Open Data  
PDF: Portable Document Format  
PDI: Police Data Initiative  
PERF: Police Executive Research Forum  
RCMP: Royal Canadian Mounted Police  
UCR: Uniform Crime Report  
WWC: What Works Cities

## Chapter 1 Introduction

### 1.1 Introduction

The video recording shows a man being wrestled to the ground by several police officers, eventually being restrained in a chokehold. The restrained man repeatedly shouts that he cannot breathe, but the officer does not release him. Eventually, the man falls silent. The officer releases him, but the man is unconscious. He does not regain consciousness as he is taken away by ambulance. Later, he would be pronounced dead in hospital. The man's name was Eric Garner. The police officer who choked him is named Daniel Pantaleo. The 2014 footage of Pantaleo killing Garner would prompt outrage and ignite protests against police brutality and racism suffered by Black Americans. Garner's repeated cries of "I can't breathe" would become a rallying cry for the Black Lives Matter movement (Katersky and Alfonseca 2021).

The interaction that ended in Pantaleo killing Garner was one example the daily interactions that police have with the public. Pantaleo accused Garner of selling loose cigarettes outside a storefront without proper tax stamps (Katersky and Alfonseca 2021). When confronted by Pantaleo, Garner protested that he was tired of being harassed by police and denied that he had been selling loose cigarettes. Pantaleo's intervention with an arrest on a non-violent violation of commerce regulation was the consequence of several interacting police policies that had been adopted by the New York Police department. Although Black Americans have long been subject to different treatment by police (Kahn et al. 2017), the role that police are expected to play in society, and the technology, procedures, and strategies that police employ towards those ends are not static, in the United States or elsewhere. Aggressively enforcing the law on minor infractions like selling loose cigarettes is an example of "incivilities reduction policing", sometimes called "broken windows policing" (Taylor 2019). Pantaleo initiating an arrest of Garner is an example of the real-world application of this policy. Furthermore, the accusation itself may have simply been a pretext for an arrest sparked by another highly influential police policy from New York, known as COMPSTAT. This is an organizational policy that utilizes GIS mapping, along with spatial and non-spatial data, to visualize reported crime incidents in regular organizational

meetings to direct policing (Silverman and Eterno 2019). During a COMPSTAT meeting shortly preceding the fatal encounter, one of these maps had displayed crime incidents in the surrounding area, and area specific policing action was likely ordered to rectify it (Taibbi 2017). Garner's death would follow thereafter. In short, beyond the obvious racial implications that reside prominently within criticism of American policing, several different policing tactics were at play during the interaction where Pantaleo took Garner's life. Clearly, these policies are important.

This was not an isolated incident. The cascading series of public protests continued to spread and gain momentum with each new case of a Black American being killed by police. Protesters argued that these cases were endemic to policing in America, while police denied that they represented policing generally (Cunningham 2020). It was during this time a new policy began to emerge that sought to address this problem and the public's declining trust in law enforcement, through the release of previously withheld information on daily interactions between police and citizens. Although the spark for protests came from individual instances of the misuse of force, these incidents were merely highly visible examples of a larger problem. American police have long been criticized as using too much force against citizens, as well as policing disproportionately targeting Black Americans. Yet the extent of the problem that exists, or indeed if there is even a problem of police behaviour rather than "anti-police" sentiment has been a matter of active political contestation (Cunningham 2020). Specific incident level data regarding use of force, traffic stops, arrests, or other types of interactions between police and citizens is not uniformly available (Wood 2018). Such information could help establish a more definitive and general accounting of policing in the United States. Although existing research into other instances of open government data indicate mixed findings, information transparency through open data has some support for improving government reputation and perceptions of accountability (Ruijter and Martinius 2017). If all police released this information consistently, it might help establish a shared public understanding of the reality of policing and guide political action for structural reforms. This, combined with the increased level of transparency from police, might be able to re-establish tattered police legitimacy, and correct long-standing patterns of inequity in who is subject to policing.

This is the stated promise of a policy referred to as *police-citizen interactions open data*, as consolidated by the federal Police Data Initiative (Smith and Austin 2015), an Obama White-house led federal initiative that was created in the spring of 2015 during the ongoing protests. As

part of a larger movement promoting government transparency, often called open data, *police-citizen interactions open data* is a novel application of open data to police data in the hopes that it could “[improve] the relationship between citizens and police through uses of data that increase transparency, build community trust, and strengthen accountability” (The White House 2015). Widespread adoption of this policy would represent a dramatic change the status quo concerning public availability and use of police data in the United States.

## 1.2 Research Problem

The advent of PCI open data calls for greater research for three interrelated reasons. First, police-citizen interactions open data (referred to hereafter as PCI open data) is a significant change to existing American police data policies that do not proactively release information on these interactions. Second, the decentralized nature of American policing means policy spreads in ways that are not immediately clear, frustrating efforts to promote policies that may improve transparency. Third, like other forms of policy, police policy is becoming global, meaning that PCI open data may continue to spread beyond police agencies within the United States to other countries. These elements of the research problem are now explained in more detail.

### 1.2.1 Police Transparency and Open Data

*Police-citizen interactions open data* is an extension of an existing idea regarding data called *open data*. *Open data* is a movement to make both government and private data available to the public in freely accessible, machine-readable formats (Vetrò et al. 2016). The motivation behind this movement is based on the idea that doing so will bring increased efficiency, transparency, and even economic activity to a society (Barns 2016; Ubaldi 2013; Janssen, Charalabidis, and Zuiderwijk 2012). Government open data advocacy is focused on the enactment of policies at all levels of government to facilitate the opening of both existing and future government collected information. In the United States, this movement had a significant victory with the Obama administration’s Open Government Directive, which required US government agencies to enact policies to implement the three key principles of open government: transparency, participation, and collaboration (Orszag 2009).

The summer officer Pantaleo killed Eric Garner saw increasing numbers of protests against police brutality and demands for political action. In response, the Obama administration announced a special task force meant to address the eroding relationship between the police and public trust

(Smith and Austin 2015). One of the related efforts from the Obama administration that would emerge during this time was the Police Data Initiative. This initiative sought to have police departments upgrade their data technology to allow for increased efficiency but also to make previously unreleased datasets detailing interactions between police officers and citizens available to the public, in order to further one of the key principles of the Open Government Directive: transparency. M. Smith and Austin (2015) write:

... police departments have committed to release ... data sets that have not been released to the public. The types of data include uses of force, police pedestrian and vehicle stops, officer involved shootings and more, helping the communities gain visibility into key information on police/citizen encounters.

Such a policy is a significant departure from existing transparency practices from American police departments. Although departments often release information to the public regarding crime incidents, information detailing the behaviour of police officers is rarely released (Wood 2018). Moreover, the information has tended to be released in aggregate, or as part of year end reports, not suitable for independent analysis to identify potential patterns of disproportionate or discriminatory practices. The descriptive information concerning American police use-of-force is not subject to any standardized requirements regarding its form or release (Wood 2018). This meant it was not possible to determine how many people had been killed by police in the United States while massive protests were occurring in practically every large city, sparking efforts by activists and journalists to collect and publish this data themselves (Tate, Jenkins, and Rich 2015). If *PCI open data* were to be broadly adopted by police agencies, it would fundamentally alter the nature of police transparency in the United States. Such a change could potentially have a significant impact on police/citizen relations, as increased transparency may influence trust in police.

Individual trust in police is largely based on the personal interactions that occur with police (Myhill and Bradford 2012). Although there are differences between individuals in different racial groups regarding the importance placed on certain aspects of their interactions with police (Murphy and Cherney 2011; Sargeant et al. 2014), there is evidence that the primary reasons that determine whether an individual will find an interaction with a police officer to be legitimate are broadly similar, regardless of their specific identity characteristics of the individual (Donner et al.



2015; Sunshine and Tyler 2003; Tyler 2001; Wolfe et al. 2016). Yet given that much of society has very few direct interactions with the police, public relations are an important factor in determining public confidence in police (Hohl, Bradford, and Stanko 2010). Releasing data on police-citizen interactions as open data may influence public trust in police by allowing all individuals, even those without direct contact with police, access to information potentially relevant for determining whether a police officers from that department are broadly acting in a way consistent with public expectations. Utilizing data transparency in this manner, to foster public trust and legitimacy, was an explicit part of the reasoning present within the final report from the special taskforce on policing (President's Task Force on 21st Century Policing 2015).

### 1.2.2 American Policing, Decentralization and Local Control

It is important to contextualize instances of police killing citizens, such as the case of Eric Garner, against the broader historical context of American policing, particularly how different approaches to understanding the historical development of police organizations in America have influenced the study of policing in geography. Critical approaches have noted that the earliest form of American police organizational structure was informal and militia-like, exemplified by slave patrols that enforced white supremacy through strict racial codes that tightly controlled the lives of black slaves (Williams 2015). Others have noted the development of centralized, bureaucratically organized police agencies, such as the London Metropolitan Police, that emerged in the United Kingdom during the early half of the 19<sup>th</sup> century, would come to influence the development of similar organizational features within American policing during the same time period (Monkkoenen 1992). However, the influence of this policing model was not spatially uniform, in part because the existing slave patrol model was dominant in the slave holding states in the southern United States (Wagner 2009). Although police agencies outside the south adopted organizational structures similar to the London Metropolitan Police, a key difference lay in their highly decentralized model of control, which was organized around principles of local governance rather than the centralized model of control key to the London Metropolitan police (Walker 2016). This meant that while having different historical influences, police organizations both in the south and elsewhere were controlled by local structures of government (Monkkoenen 1992), ordinarily municipal, and were utilized by actors in control of these structures to enforce existing hierarchical structures, whether racial or class based (Donner 1992; Neocleous 2000, Wagner 2009).

Reflecting the larger reaction against political corruption and graft that was endemic to politics in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, a national movement towards reforming police in America away from the worst excesses of violence and corruption developed, advocating that police ought to operate as professional organizations that were not under direct control of local authorities (Walker 2016). This move towards professionalization prioritized the introduction of modernized management practice into police departments, and to establish common professional standards for police agencies throughout America. Although this movement did succeed in ending the worse examples of police operating as immediate violent operatives of locally entrenched political actors (Walker 2016), it did not alter the overall decentralized nature of control over American police. Rather, it diffused this control from entirely within local governance, to be partially vested in the police agencies themselves. Furthermore, this change did not fundamentally alter the overall role of police as enforcing racial hierarchy that had been broadly consistent since before the American Civil War, and would not change in any significant way until at least the emergence of the Civil Rights movement in the 1960s (Walker 2016).

Therefore, it is important to note the guiding principle of policing in the United States remains local control. That is, police agencies are under the control of local governments rather than the federal government. The United States Constitution forbids the federal government from exercising general policing powers, except for the enforcement of federal law (Bayley 1979). Although federal police agencies have broadened powers for investigating federal crime and enforcing federal law following the enactment of the PATRIOT Act in 2001, the larger context of local control still defines the institutional landscape of policing in the United States, such that the overall policing environment in the United States is often characterized as decentralized (Bayley 1992; Bayley and Stenning 2016).

This decentralization coincides with a staggering number of different agencies. There are approximately 18,000 separate law enforcement agencies across the various levels of government, with varying levels of funding, size, jurisdictions, and authority (Bayley 1992; Banks et al. 2016). Typically, these agencies are under the control of subnational or local forms of government, such as state or municipal governments. For context, although Canada is approximately a tenth the size in population, there are only 177 separate police agencies operating in Canada (Conor et al. 2019).

Decentralization means that *PCI Open Data* cannot simply be enacted by a single federal governing body to all policing agencies in the United States. Another consequence of this decentralization is that departments are subject to a variety of different levels of state, county, and municipal government oversight and control (Bayley 1979). This diversity means that departments often have significant variations on training, use of force standards, technology, and other policies.

### 1.2.3 Federal Government Influence in Policing: Federal Funding and Professionalization

Despite the decentralized system, the American federal government still wields influence over policing. There have been two, large scale, systematic shifts in American policing since the 1960s relevant to this discussion, and in both cases, these reform efforts have been initiated by action from the American federal government (Powell, Meitl, and Worrall 2017). The first is the Law Enforcement Assistance Agency, and the second is the Office for Community Oriented Policing. The first came in the late 1960s with the Omnibus Crime Control and Safe Streets Act of 1968. Passed in the wake of increasing social disorder and attendant protests and riots, part of this law created a new federal agency, the Law Enforcement Assistant Agency (LEAA). The LEAA was tasked with assisting local and state criminal justice agencies, including but not limited to police, in reducing crime, and it pursued this objective by distributing over 8 billion dollars in funds to criminal justice agencies over a period of 11 years (Worrall and Zhao 2003). Much of this work resembles what would eventually be done by the Office for Community Oriented Policing (COPS) within the federal Department of Justice, although with a more expansive remit, including training for officers, funding research on new policing policy, funding research into reform efforts to reduce the social determinants of crime, as well as investing in new technology for policing (Worrall and Zhao 2003). Through the 1970s, funding from the LEAA helped many policing agencies implement many new approaches to policing informed by a growing focus on utilizing social science research methods to inform decision making with regards to policy.

The second major development in American policing came in the early 1990s with the creation of the Office for Community Oriented Policing (COPS) within the federal Department of Justice. It was founded in 1994, when the federal government passed the Violent Crime Control and Law Enforcement Act. This act was the largest piece of federal anti-crime legislation at the time in terms of resources, as it reflected over 30 billion dollars over the course of six years (Oliver

2000). Part of the legislation contained the genesis of the Office for Community Oriented Policing, which had over 8 billion dollars to be spent over a period of six years to advance the practice of community policing within the United States (Oliver 2000). Unlike the LEAA, COPS is entirely focused on policing rather than criminal justice agencies more broadly, and COPS has traditionally focused on furthering the adoption of community-oriented policing, a particular approach to policing with three distinct elements, which are community involvement, problem solving policing, and decentralization (Oliver 2000). COPS does this by distributing federal funds as grants for training, implementing policy, hiring community policing officers, updating or adopting new technology to various subnational policing agencies, such as state police, city police, sheriff's departments. These grants take two forms: formula grants and competitive grants (Worrall and Zhao 2003). For both types of grants, police agencies must apply to COPS for grants, demonstrating in those applications a need for funds. Those needs must be consistent with the mission of COPS, "which is to arrest offenders, prevent crime, solve ongoing problems, and improve the overall quality of life" (Worrall and Zhao 2003). Given the emphasis on local control embedded in the American approach to policing, COPS, like the LEAA, can be considered a method through which the federal government can use funding to exert influence on otherwise independent policing agencies spread out across the country.

Although the overall influence has been found to be modest, COPS has influenced American policing with its funding. Over the years since its creation, COPS has provided billions of dollars in grants to police agencies to hire community policing officers, train existing officers, and update technology. These grants have been found to be associated with the adoption of community policing in departments (Helms and Gutierrez 2007; Worrall and Zhao 2003). The financial support that comes from COPS is not only important in establishing community-oriented policing in departments, but also the coordination that comes as well. COPS works to not only support community-oriented policing through providing funds to implement it, but it also serves to network police agencies and related organizations to facilitate adoption. Networks for these sorts have been shown to be associated with adopting community policing policies (Burruss and Giblin 2014).

These efforts at police reform can be categorized as part of the larger effort and movement towards "professionalism" in policing, where one aspect of this is the focus on utilizing standards

of practice and policy informed by “best practices” and “evidence” (Sklansky 2013; Sherman 2013).

#### 1.2.4 Federal Influence: Consent Decrees and Collaborative Reform

If granting and networking structures provided by LEAA and COPS can be described in analogy as a “carrot”, then consent decrees are the “stick”. Consent decrees are court ordered agreements between two parties used in civil or criminal cases in the United States. Consent decrees have been used by the federal government as a method of enacting control over non-federal police agencies. Following the civil unrest after the 1991 video of Los Angeles police officer beating Rodney King, the United States federal government passed the Violent Crime Control and Law Enforcement Act in 1994, which allowed the Attorney General acting through the Department of Justice to investigate when police departments are suspected to be systematically violating the constitutional rights of citizens with its policing practices (Alpert, McLean, and Wolfe 2017). Furthermore, the Attorney General may file a legal suit against the department to cease any “pattern or practice” that is found to be unconstitutional in that investigation (Douglass 2017). A police department can defend itself against the suit in court, but often a department will reach a negotiated settlement to enact reforms to address the problems identified in the investigation. The most serious of these is a consent decree, a legally enforceable court orders that require a police department to enter a collaborative reform process, under the supervision of the independent monitoring teams using specific measures to assess progress (Alpert, McLean, and Wolfe 2017). These teams often include lawyers, former police chiefs, social scientists, and sometimes community members and police union representatives (Alpert, McLean, and Wolfe 2017). The most frequent problem addressed through consent decrees in this period were rights violations of Black and Latino citizens. In 1995, the American Civil Liberties Union filed suit against the Pittsburgh police department following the death of Jonny Bammage, a Black man who was killed by officers during a traffic stop (Klemko and Sullivan 2021). The federal Justice Department then filed a lawsuit against Pittsburgh to address a “pattern or practice” of civil rights abuse from police. The result of this lawsuit was the first consent decree, a court ordered set of reforms that the police department had to enact, monitored by the federal justice department (Klemko and Sullivan 2021). Since its initial use, the federal Justice Department has used consent decrees over 40 times, and it has become a common tool used the federal government to exert influence over policing in the United States (Alpert, McLean, and Wolfe 2017).

There is mixed evidence regarding the effectiveness of consent decrees in remedying troubling outcomes of policing. While there is evidence to support that decrees reduce the number of civil rights cases brought against departments, this may not extend past the duration of the decree (Powell, Meitl, and Worrall 2017). It is also unclear how effective consent decrees are in reducing the number of people killed by police (Goh 2020). Regardless of the effectiveness of enacting change, after being shelved during the Trump administration, consent decrees were restored as a tool for the justice department to use in April of 2021 (Benner 2021).

The use of these decrees is best understood to be on a scale of intervention from the federal justice department. These interventions usually begin with an investigation to determine whether there has been a pattern of misconduct, as what the case in Pittsburgh. If structural problems are found during this phase, departments will ordinarily enter negotiations with the Department of Justice (DOJ) to pursue several possible reform processes (Alpert, McLean, and Wolfe 2017). For instance, a “technical assistance letter” may be sent, advising the department of changes that should be made (Goh 2020). These letters are not enforceable by any court and are an example of more voluntary change on behalf of investigated departments.

One of the less coercive options available to the DOJ is the Collaborative Reform process. The Collaborative Reform Initiative for Technical Assistance (CRI-TA) as a specific program was launched by the U.S. Department of Justice's Office of Community Oriented Policing Services in 2011 (COPS 2015). Although police departments had been involved in voluntary reform efforts with the DOJ in the past, the creation of CRI-TA formalized this process into a proactive agency that focused on providing technical assistance to departments to identify and resolve issues in a department affecting public trust (COPS 2015). Although departments may pursue a collaborative reform process to head off a consent decree (Alpert, McLean, and Wolfe 2017), the collaborative reform process is far more cooperative and collaborative model in comparison.

Although similar, the overall goal of consent decrees and collaborative reform initiative diverges. Consent decrees are outcomes from DOJ investigations regarding “patterns or practices” within police departments that violate citizen’s constitutional rights and are designed to force compliance to enact institutional reforms to remedy these violations. While doing so may improve public trust in the agency under the consent decree (Alpert, McLean, and Wolfe 2017), this is not the primary goal of the consent decree.

In contrast, the primary goal of the collaborative reform process through CRI-TA is to improve trust between law enforcement agencies and the communities they serve, by providing a less adversarial alternative to DOJ “pattern or practice” investigations and subsequent consent decrees (COPS 2015). Departments voluntarily request an assessment of their operations and agreeing to follow the recommendations made by the COPS Office (COPS 2015). Both the assessment and recommendations are made public, and the participating police department is provided with technical assistance teams to support the implementation of those recommendations. The process typically includes a multi-year follow-up assessment to measure progress and make further recommendations as necessary. For instance, the collaborative reform process in Las Vegas featured a partnership with the researchers from the Center for Naval Analyses (CNA), a law firm, and DOJ employees (Fachner and Carter 2014).

During its initial years, the CRI-TA worked with numerous police departments across the U.S., such as the Las Vegas Metropolitan Police and the Philadelphia Police Department (Cole, Finn, and Lawrence 2015). The process led to substantial changes in several departments, including changes to use-of-force policies, implementation of new training programs, increased focus on community-oriented policing, and increased focus on data collection and transparency (Fachner and Carter 2014).

Although there is diversity in American policing policy from decentralization, the influence of the federal government amongst other forces also produces many similarities between police departments in the United States (Crank 2003). Certain approaches and technology are adopted by departments widely without any single authority mandating it. Although decentralization and local control are the main context that American policing occurs, similarities between departments or “isomorphism” is also common (Giblin and Burruss 2009).

This is the wider context in which the Police Data Initiative operates, and the landscape on which PCI open data moves. A close analysis of the development of *PCI Open Data* can help reveal the processes behind isomorphism, and thus contribute to our shared understanding of how certain police policies come to be widely adopted across different police agencies.

#### 1.2.5 Global Policy

*PCI open data* has implications beyond the borders of the United States. Isomorphism is not only limited to American police departments. Increasingly, police policy moves between countries,

interacting with and influencing procedures, technology, and practices across international borders (Skogan 2022). All forms of policy are increasing mobile, and global. Public policy, including police policies, do not remain static, they spread from place to place (Peck 2011a; McCann 2011a). Police policy is no exception. Broad trends in policing in western countries spread beyond their borders, with police policy moving and changing as it does (de Maillard 2018; McMenzie, Cook, and Laing 2019; Jones and Newburn 2021). Very often these policies are presented as “evidence-based policy” and ideologically neutral, and their adoption as the simple use of good ideas to further good outcomes (Sherman 2013). However, this framing can be problematic in that it elides the contextual differences between different places that can influence the adoption and implementation of policy, while often presenting a narrative of policy “success” that oversimplifies or ignores contradictory evidence (McCann and Ward 2013; McCann 2013; Cook and Ward 2012). Furthermore, the highly political process of determining policy “success” or “failure” influences the likelihood of policy mobility, but is not determinative of policy mobility (Malone 2019; Baker, McCann, and Temenos 2020; Lovell 2017; Stein et al. 2017; Müller 2015b). Even if we can observe a particular police policy that might be locally “successful”, however measured or determined, this does not necessarily mean that policy will become mobile. Thus, it is crucial to study the mechanisms, logics, and pathways involved in policy mobility to better understand the nature and exercise of police power.

### 1.3 Knowledge Gap

This dissertation will also address three main knowledge gaps.

#### 1.3.1 Empirical and Theoretical Mobilities Gap

The first knowledge gap is both theoretical and empirical and exists within current research literature sitting at the intersection between sociology, geography, and political science, broadly termed the “mobilities” approach (McCann 2011a). The mobilities approach focuses on studying the movement of policies, along with their attendant discourses and technologies, across space and scale (Peck 2011b; Temenos and McCann 2013; McCann and Ward 2013). Mobility is an approach for studying what is generally referred to as “policy transfer” in the political science literature, yet unlike policy transfer, policy mobility presents an account of policy movement that is more sensitive to the bounded rationality of a wider definition of policy actors, operating in diverse contexts with unique pressures that influence each of them (Prince 2012a; Peck 2011a; Temenos and McCann 2013). This view also conceptualizes policy actors to include more



individuals, focusing on the role played by activists, non-governmental organizations, bureaucrats, policy boosters, experts, and consultants in the movement of policy, both in the interlocal as well as global context (McCann 2010). These actors are both embedded in and help constitute the wider networks of knowledge that define what constitutes “best practice”, but also often within the local contexts in which policy is ultimately created.

Although the mobilities approach has been used to analyze a variety of important urban policies, there has not been direct focus on police policy. One exception might be the work done on safe-injection sites, as this included police actors engaging in changes to policing, but not directly (McCann and Temenos 2015; Baker, McCann, and Temenos 2020). Similarly, analysis of the mobility of “Swedish model” approaches to criminal policy of sex work to Northern Ireland have involved police actors, but not as a policy adopted by police agencies themselves (McMenzie, Cook, and Laing 2019). Another would be the mobility of Israeli homeland security models, although this is better termed “security” rather than “policing”, as it frames security actors working to protect against threats of terrorism (Machold 2015). This highly limited body of research presents an empirical gap, as the mobilities literature lacks a direct case study of the mobility of a police policy. This also connects to a second theoretical gap, as police agencies have not been accounted for as unique institutions within this literature. Within geography, the mobilities approach has focused on urban policy mobility, the “knowledges, expertise and techniques routinely and quickly move from one city to another” (Jacobs 2012). However, since there has not been any direct focus on policing policy, urban policy mobility literature has not accounted for the unique nature of police agencies as institutions enacting policy within urban governance structures. As institutional organizations, police work to conform to broadly held expectations from important external actors on which they depend for support, and this influences the organizational structure and practices of these police agencies (Crank and Langworthy 1992). By meeting these expectations, as well as adhering to certain broader, shared social understandings of how police organizations should be structured and operate referred to as “myths” (Meyer and Rowan), police agencies secure legitimacy in the eyes of the important external actors called “institutional sovereigns” on whom they depend (Crank and Langworthy 1992). Rather than just reacting to these expectations and myths, as institutional organizations police are actively involved in both constructing and shaping existing myths (Crank and Langworthy 1992). Police agencies that secure legitimacy in the eyes of their institutional

sovereigns not only secure the resources necessary to exist (Crank and Langworthy 1992) but also further secure acceptance of their capacity to exercise power (Tyler and Meares 2019). Thus, to properly investigate police policy mobility as an example of urban policy mobility, the institutional behaviour of police agencies must be accounted for. Using institutional theories of organizational change, this research will address this, providing application of mobility to police policy, while also providing framework for how to apply mobility to police policy that is sensitive to policing agencies.

By adding this case study to the literature, this dissertation will also be contributing to the ongoing conversation regarding policy mobilities. The mobilities approach has noted the increasingly global nature of policy spread. Police policy is no exception. Many different areas of policy spread have been analyzed, such as smart cities, harm reduction, homeland security, business improvement districts, and others (Ward 2018; Stein et al. 2017; Malone 2019; Longhurst and McCann 2016; Machold 2015; Wiig 2015).

This will also contribute to reengaging geography to the study of police. Work in human geography on policing has been relatively limited compared to other disciplines, such as criminology (Coleman 2016). This has been a long-standing issue. In 1991, Fyfe argued that Geography as a discipline had neglected to study police (Fyfe 1991). Responding to this call, Herbert conducted an extensive qualitative examination of the LAPD (Herbert 1996). His work focused on the distinctions between police policy and actually-existing police work, finding that much policing that occurred in the LAPD was driven by certain aspects of police culture rather than police policy (Herbert 1996). Herbert's larger contribution was to note that the *de jure* and *de facto* elements of policing were equally important to consider when examining how policing occurs in different spaces (Yarwood 2007).

Other work has focused on policing as an act, carried out by various actors including but not limited to police (Yarwood 2007; Yarwood and Paasche 2015). The focus here has used regulation and governance theory to understand policing (Goodwin 2006; Jessop 1995; Rose-Redwood 2006). Thus, governance theory and regulation theory intertwined have tended to be used to explain how and why policy is adopted. Governance theory has not so much played close attention to the mobility of policy, rather it has held policy and state institutions as both the consequence and cause of structures of governance in different places (Goodwin 2006). How this

precisely occurs is dependent on local power relations. These government structures then contribute to the regulation of spaces through their influence on policing. Neoliberal forms of governance have typically been linked to new forms of policing, and thus as explaining the spread and adoption of the policies that describe and determine their function.

Here some have linked neoliberalism to the increased examples of accountability and transparency to the public, as an example of a public service being driven by market forces (Lupton 1999). Still others have linked the increase in community policing as an example of the offloading of state responsibilities common in actually-existing neoliberalisms (Brenner and Theodore 2002). Similarly, the spread of crime mapping and COMPSTAT-like data led policing practice has been viewed as part of this influence (Yarwood 2007). This focus on data has led to more focused policing in “hot spots”, which in turn is argued to have led to worsened community relations, requiring the intervention of community-policing policy to respond to the declining trust (Yarwood 2007). Thus, the rapid spread and adoption of community-policing is also a facet of neoliberal governance (Yarwood 2007).

The research focus of this body of work has not been primarily concerned with how and why policy spreads. Rather, it has focused on explanations of how police and policing are conceptualized and exist. The common perspective has been that police policy, be it the structure of law enforcement agencies or the methods of enacting policing, are responding to the needs of neoliberal urban restructuring, even if they are simultaneously affecting racialized geometries of power (Jefferson 2018). Even Herbert’s work on broken-windows policing adoption being easier since it aligned with existing police culture, ultimately noted how the policy aligned with neoliberal priorities of abandoning social welfare (Herbert 2001; 1996). Thus, the explanations for the spread of neoliberalism(s) more broadly apply to police policy, as they would with other policies that carry out functions in urban restructuring of neoliberalism, linking broader changes in political economy to change in the policing of space locally.

A significant body of work has also linked the role policing, particularly in the United States, has with racism and white supremacy (Coleman and Kocher 2019; Hamilton and Foote 2018; Kaufman 2016). This is not to say that the important distinction between police policy and the reality of policing is not noticed. Coleman’s work on “state power in blue” and others have emphasized the reality of coercive force through which policing occurs (Bloch 2021; Coleman

2016), while Coleman and Kocher dispute that either legislation or police policy directs or constrains the exercise of police power, rather that police act on the street-level with little regard for policy (2019). Conversely, Kaufman examined how spatially focused policing policy affects the mobility of racialized citizens (2016). However, there has not been great distinctions drawn between the movement of these policies as fundamentally distinct from other sorts of policy movement, and few explanations that attempt to grapple with the distinctions between the vast number of police agencies. Although attention has been paid to the site-specific relations that influence policing in particular places, explanations for policy adoption have focused on neoliberalism (Yarwood 2007). However, research continues to discover spatial variability of policing, such as the militarization of departments in the United States through federal arms and equipment transfers (Radil, Dezzani, and McAden 2017).

Overall, the mobilities approach has an empirical flexibility to lesser seen actors and elements within the framing of assemblage, while remaining aware of the larger “context of contexts”, most notably the political economy in the form of neoliberalism, that is relationally connected with that assemblage. This will work to reengage geography with the study of policing, via offering a novel theoretical approach that focuses on police policy mobility.

### 1.3.2 PCI Open Data Gap

The third gap this dissertation will address is another empirical gap, both in the literature and more general terms. *PCI open data* has yet to have been directly examined, despite the significant change it poses to police transparency and having been part of a White House response to a significant political issue. This can likely be attributed to an ongoing bias in literature towards studying “successful” policy transfer (Lovell 2017). Research has tended to gravitate towards those policies that have been the most highly visible and mobile. Two examples are “harm reduction” public health strategies for managing substance abuse (Baker, McCann, and Temenos 2020; McCann 2008; McCann and Temenos 2015; Longhurst and McCann 2016) as well as business improvement districts (Stein et al. 2017; Ward 2006; McCann and Ward 2013). This bias has been identified as limiting the overall knowledge of policy mobility and there have been several calls for researchers to spend more time studying policy mobility “failures” (Temenos and Lauer mann 2020; Lovell 2017; Stein et al. 2017). This research will respond these calls by providing a scholarly analysis of PCI Open Data and contribute to growing body of literature on policy failure (Temenos and Lauer mann 2020; Baker and McCann 2018).

Moreover, this literature has challenged the simple binary of success/failure as it relates to policy mobility (Baker and McCann 2018). As of 2022, several large American police departments have adopted *PCI open data*, such as New York Police Department. However, given the decentralized nature of American policing, it is not clear whether these large departments are representative of the majority of police agencies in the United States. It is also not clear to what extent *PCI open data* has changed and adapted to local contexts as it has been adopted by different departments. Furthermore, participation in the PDI cannot be used as a measurement for the overall adoption of *PCI open data* within American policing. Although at its peak in 2015 there were over 130 separate agencies covering jurisdictions that included roughly a quarter of Americans, simply being a part of the Police Data Initiative does not mean a department adopted *PCI open data*, or that by not being a part of the PDI that a department did not adopt *PCI open data* (Asher 2015). This dissertation will fill this gap by assessing how many police agencies within the United States have adopted *PCI open data*, and what variations or “mutations” of this policy can be observed. Although this will not be a definitive measurement of “successful” policy mobility, this will add to the current understanding of American policing policy, which lacks any simple way to broadly understand given the highly decentralized landscape of American policing (Bayley 1979; 1992; Banks et al. 2016).

#### 1.4 Purpose and Objectives

The purpose of this dissertation is to understand the mobility of *police citizen interactions open data*, what this particular case of policy mobility means for our understanding of policy mobility broadly, and determine the status of the policy within American policing. Using a mix of qualitative and quantitative research methods, this dissertation responds to the above problems and knowledge gaps to meet the following objectives:

- 1) *Synthesize* insights from mobility and institutional approaches to produce a framework for studying police policy mobility;
- 2) *Investigate* the policy mobility of police-citizen interactions open data (PCI open data);
- 3) *Contribute* to mobilities literature given what this case study reveals about the mobility of police policy broadly;
- 4) *Assess* the adoption and mutation of PCI open data in American policing

## 1.5 Methodology

### 1.5.1 Assemblage as a Concept

This particular type of poststructuralist thinking (characterized by Kim Dovey (2009) as less of a theory and more of a toolkit) is influenced by the philosophy of Deleuze and Guattari (1987). This approach is fundamentally relational, that is, the notion that identities are produced from differences (Müller 2015a). An assemblage is a whole whose properties are created from the interactions between its heterogeneous parts, it does not function in the way an organic system functions, where each part has predetermined roles necessary for the entire functioning of the system, but rather in a way where each of the parts are contingent instead of necessary (Dovey 2009; de Landa 2006). In the original French, assemblage is written as *agencement*, a combination of arrangement and agency (Farías 2011). This is important to note, as the agency of the heterogeneous, contingent parts of an assemblage is a focus of this sort of analysis. The English translation of *agencement* to assemblage was introduced in the translated English version of Deleuze and Guattari's "A Thousand Plateaus" (1987), and has come to be the dominant term used.

An assemblage is not only defined by the interactions between its contingent, heterogeneous parts, but also between the interactions its parts have with other elements beyond the assemblage itself, including other assemblages (De Landa 2006). Assemblages are structured along two dimensions that intersect: the first is a combination of the material (physical form) and expressive (symbolic, representative). This is not a dialectic – assemblages are both material and expressive (Dovey 2009). It is the interactions of both material and expressive elements of an assemblage, in addition to the capacities of these elements, that define an assemblage (De Landa 2006).

Another important concept within assemblage is territorialisation, which is the stabilization or "coming together" of an assemblage, and deterritorialization, which is the destabilization or "coming undone" of an assemblage (Deleuze and Guattari 1988). This is essentially about how an assemblage establishes boundaries that determine its form through affecting its relations.

Assemblages are always subject to change through the constantly occurring interactions that form its identity, but its stability is determined by the extent to which it is territorialized or deterritorialized, with some interactions serving to stabilize an assemblage with others destabilizing it (Deleuze and Guattari 1988). What this means is that assemblages are never truly

“formed”, but instead are only ever in a temporary state of stability, however long that might be (Savage 2020; McCann and Ward 2012).

Yet it is wrong to characterize an assemblage as just a random assortment of elements, constantly changing without any purpose. Assemblages are both productive and desired (Müller 2015a) in that the heterogenous elements are brought together into strategic relations for desired outcomes (Savage 2020). A useful analogy is that of an alliance that seeks certain goals, whose elements do not cease to be heterogenous simply because they are in relation with one another (Allen 2011), yet such an alliance cannot be reduced to a single essence that overlooks the agency and relations between its constitutive elements.

This way of thinking is helpful in conceptualizing policy. Policies are a complex assemblage of different, sometimes contradictory ideas, whose implementation involves further complex interactions with other sets of ideas within government or institutions, which are sometimes complimentary, other times contradictory. Viewing policies as an assemblage allows us to grasp these complex interactions without attempting to reduce the whole of a policy to a single logic and see how these relations help to determine the form policies actually take (Savage 2020; Baker and McGuirk 2017).

### 1.5.2 Assemblage as Methodology

However, it is important to distinguish between using assemblage as a methodological sensibility rather than as an ontological grounding: others have done the same (see: Brenner, Madden, and Wachsmuth 2011; Baker and McGuirk 2017). This dissertation uses assemblage thinking in the former, rather than the latter. This distinguishes its approach from actor-network theory, most closely related to the work of Latour (1987), Callon (1986) and Law (1992), as actor-network theory uses the concept of assemblage ontologically, and in doing so loses the ability to distinguish between the important and unimportant in analysis, unable to account for how policy may relate to larger social and economic processes (Storper and Scott 2015). Assemblage as a methodological sensibility is fundamentally distinct from actor-network theory (Müller 2015a). Actor-network theory (ANT) conceptualizes social relations as determined by the relations of vast collection of actors, without a set of territorial determinants affecting those relations. Characterized as “naïve objectivism” (Brenner, Madden, and Wachsmuth 2011), grounding research ontologically with assemblage ensures a researcher has no particular way to determine

what parts of a particular assemblage may be more influential than others. In essence, it becomes an exercise entirely dependent on the strength of inductive empiricism (Storper and Scott 2015). Opposed to this, assemblage as a methodological sensibility uses the various insights gained from assemblage to examine the relational character of phenomena without losing sight of the social and material “context of contexts” that influence those relations (Brenner, Madden, and Wachsmuth 2011; Baker and McGuirk 2017). This dissertation utilizes this sensibility to avoid this potential pitfall, integrating insights from institutional theories of organizational change to establish the context of police policy mobility (Crank 2003).

### 1.5.3 Methods

This dissertation utilizes multi-method design to answer the research questions, utilizing both primary data collection and secondary data. Qualitative methods of key-informant interview and textual analysis are used to complete the first, second, and third objectives, focusing on “following” policies and actors as well as the relational situations where policy models develop and spread (McCann and Ward 2012). Key-informant interviews (n=5) are semi-structured, with former members of the PDI. Interviews are approximately an hour long, conducted over the telephone, recorded and transcribed. Permission was sought from participants to record interviews in accordance with ethics approval. When requested, confidentiality of participants is guaranteed through use of general descriptions, (eg. senior administrator, etc). Transcription of recorded interviews was conducted by the author, to facilitate better familiarization with content and its recurring themes and strategies, allowing for a foundational conceptual framework to guide the inductive coding process (Spencer et al. 2014). Semi-structured approach with an interview guide was used since this allowed for comprehensiveness of data and kept data collection somewhat systematic while also allowing probing questions for depth when appropriate (Yeo et al. 2014; Patton 2015). Interview questions focused on gaining firsthand accounts of participants’ engagement with the PDI, as well as participants’ perceptions on key factors to successful policy uptake of police interactions open data. The interview framework for PDI members focused on the communication and persuasion strategies they used to advocate for the policy, as well as participant engagement with conferences, their experiences, and perceptions at these events in particular.

For key-informant interviews, non-probability, purposive sampling was utilized, focusing on major, publicly visible actors that engaged with the PDI. For the PDI, this focused on lead



individuals within the founding organizations that ran the initiative (Police Foundation, COPS, Obama Whitehouse). Following this, snowball sampling from these actors was used, focusing on what McCann and Ward refer to as “studying through” the mobility of police interactions open data to specific police departments as well as ascertaining the important factors which lead to the creation of the PDI (McCann and Ward 2012).

This interview method was appropriate for several reasons. By speaking with the key actors involved with the PDI it allowed for gathering data on the wide array of policy actors, relational situations between and among them, and narratives used in communication that allow certain urban policies to become mobile (McCann and Ward 2012). Key-informant interviews have been used in the study of policy mobility in other urban contexts, such as the spread of business improvement districts and safe injection sites (e.g., McCann 2008; E. McCann and Temenos 2015; Ward 2006).

In addition to interviews, textual analysis on a variety of different texts that are part of “informational infrastructure assemblages” key to different police policies, including PCI open data (McCann 2011b; Temenos and McCann 2013). This included video recordings (n=5) of presentations and question-and-answer sessions from several “sites of learning”, such as conferences, panel presentations, and information sessions. Textual analysis also included non-recorded texts (n=5) such as promotional materials, PowerPoint slides, and other texts used during summits and conferences. Such texts are crucial to the knowledge production processes for policy mobility (McCann 2011a). In addition, the interactions between various policy actors that occur at conferences are crucial for understanding policy mobility, making the focus of questions in interviews on conferences appropriate (McCann 2011a). Access to these documents was gained through two main means – first, downloading digital documents and recordings of events, since much of it is publicly available through the website of the International Association of Chiefs of Police, the Police Foundation, or archived under the former Obama Whitehouse. Secondly, by asking for documents participants had used during semi-structured interviews. The focus was on obtaining an illustrative sample of the documents utilized by the PDI to discover the narratives and benchmarks used in mobilizing this policy (Larner and Heron 2004; Larner and Laurie 2010).

Following the collection of interview data, recordings were coded using NVivo (12<sup>th</sup> edition) software, using a standard three-step thematic analysis coding approach, guided by an assemblage approach that remains sensitive to both the relational and territorial aspects of policy mobility, that integrates institutional theories of organizational change in how those territorial aspects are defined (Dolowitz and Marsh 2000; McCann and Ward 2012; 2013; Prince 2012b; Peck and Theodore 2010). The first stage of open coding identified and developed emergent themes within transcripts, the second stage of axial coding applied these thematic codes systematically to the data, and the final stage of selective coding confirmed the coding applied to text to ensure intracoder reliability (Spencer et al. 2014; Patton 2015). During thematic analysis, themes were developed according to the aforementioned theoretical grounding in a mobility/institutional synthesis that was developed in the second chapter, in combination with emergent themes from data. Remaining open to emergent themes while applying theory ensures that analysis remains grounded in data rather than artificially superimposed by theory (Spencer et al. 2014; Patton 2015). For textual data, similar at the treatment of interview data, a standard three-step thematic coding process was used. Beginning by identifying emergent themes with open coding, applying these codes systematically to the data with axial coding, and finally confirming and scrubbing applied codes with selective coding (Patton 2015; Spencer et al. 2014). Analysis used the same theoretical grounding in institutional theory, guided by insights from mobility.

Quantitative methods were used to complete the fourth dissertation objective: to assess the extent to which PCI open data has been adopted by police agencies, and potential mutation of these policies. This was accomplished through using secondary data from the 2020 Law Enforcement Management Administrative Statistics (LEMAS) survey, along with primary data collection on the data sharing practices of a sample of American police agencies. Primary data on the data transparency practices of a sample of American police agencies is used to estimate the current status of PCI open data adoption, while a combination of this data and secondary data from the 2020 LEMAS is used to perform a logistic regression on key variables to test the applicability of several hypotheses generated from an institutional/mobility integration.

## 1.6 Dissertation structure

Chapter 2 addresses the first dissertation objective, which is to synthesize insights from mobility and institutional approaches to produce a framework for studying police policy mobility. It

introduces and explains the mobilities approach to policy transfer, as well as the institutional theory of organizational change, arguing that each of these has weaknesses when applied alone to police policy transfer. Chapter 2 also argues that the diffusion of innovations approach utilized to explain policy transfer in the institutional literature is too rationalist in its approach, that results in an empirical focus that excludes important complexity, and leads to a focus on “successful” policy diffusion that misses out on crucial empirical evidence offered from “unsuccessful” policy diffusion. The diffusion approach also tends to lead to an uncritical reproduction of “best practices” discourses that ought to be critically examined (McCann and Ward 2012; Prince 2015). Chapter 2 also argues that the mobilities approach requires the insights gained from institutional theory to make sense of a variety of police actors involved in assemblages. This chapter then demonstrates how these two approaches can be used in complimentary fashion to overcome their shortcomings when analyzing police policy transfer. This is accomplished by presenting a synthesized set of empirical themes and applying these to a significant case of police policy transfer from the past twenty years, Body-Worn Cameras.

Chapter 3 addresses the second and third dissertation objectives: to investigate the policy mobility of police-citizen interactions open data and contribute to existing theory given what this case study reveals about the mobility of police policy broadly. It applies the mobility/institutional framework developed in Chapter 2 to *police-citizen interactions open data* to “follow” this policy, using qualitative data from key-informant interviews with policy actors and relevant texts. This traces the territorializing effects of the PDI on the nascent policy and outlines the elements that would form the PCI open data policy assemblage, including the influence of federal, police/professional, technocratic, and neoliberal elements in the stabilizing policy assemblage. It frames these elements against mimetic and normative forces driving institutional isomorphism. It positions this assemblage against the disruptions presented by the election of Donald Trump as president, and subsequent changes in heads of key department of justice positions, arguing that these changes disrupted the policy assemblage. Finally, it outlines potential key factors for police policy mobility considering this case study.

Chapter 4 addresses the fourth dissertation objective: to assess the extent to which PCI open data has been adopted by American police agencies through quantitative analysis. Utilizing the insights gleaned on the policy mobility of PCI open-data from Chapter 3 guide analysis, Chapter 4 utilizes logistic regression analysis using the LEMAS surveys administered by the federal

Department of Justice, along with primary data assessing the adoption of PCI open data in a sample of American police agencies. Chapter 4 also assesses the extent to which the observations from the qualitative analysis of Chapter 3 apply broadly to the current state of PCI open-data adoption, and whether a policy-specific model for PCI open data adoption can be useful.

Chapter 5 recaps the key contributions of each manuscript, relating them to the existing academic literature introduced earlier, and shows how they address knowledge gaps and achieve the dissertation's four main objectives. It then summarizes the significant findings and limitations of the dissertation as a whole. This dissertation is manuscript style, therefore chapters 2, 3, and 4 will be revised and submitted for publication in academic journals as stand-alone articles.

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## Chapter 2 Integrating Mobility and Institutional Approaches to Understand Police Policy Transfer

### 2.1 Introduction

We live in an interconnected world where constant communication and movements of goods, people, and ideas flow across borders. Public policy ideas are among these movements, which have been accelerated by globalization (McCann 2011a; Peck and Theodore 2010). Policies operating at a variety of different scales, from statewide to neighbourhood level, increasingly spread from place to place. Business improvement district models from New York cross the Atlantic Ocean and end up in London, while harm reduction health policies from Germany are adopted in Vancouver (McCann and Temenos 2015; Ward 2006). These movements are most often described as "policy transfer" in various disciplines (Newburn, Jones, and Blaustein 2018; Jones and Newburn 2021). While many political actors will frame these movements as simply part of a wider "evidence-informed" approach to policy creation that seeks to integrate lessons regarding "what works" from other places, scholars have identified that the movements of these policies are subject to a wide range of influences beyond a simplistic account of "working". Given the impact these policies have on our lives, such as the influence on public space from Business Improvement Districts or the public health response to substance use, understanding their movements are important. Policing policy is particularly important, given the immensity of power entrusted in policing agencies.

The scalar context of every policy situation affects the movement of policies. In the United States, police agencies are institutions indirectly controlled by the government, which must be accounted for in any analysis of the transfer or mobility of policing policy. The institutional theory of organizational change offers a view of police actors that accounts for their uniqueness and helps to explain their actions and behaviour apart from other government institutions. This theory provides explanations for why police agencies undergo change to maintain legitimacy, often changing in similar ways, adopting similar policies in a process referred to as "organizational isomorphism" (Crank 2003). The existing literature within policing studies often uses this approach when analyzing police departments (Matusiak 2016; Terpstra 2020; Burruss

and Giblin 2014; Kapla 2005; Smith 2019). When attempting to examine the mechanisms involved in policy transfer between police agencies, this body of literature has tended to utilize an approach informed by “diffusion of innovation” (DOI) theory. This theory provides explanations of how police policy moves, and although it gives room for individual understandings of “innovation”, it has been criticized as being too rationalist (Newburn, Jones, and Blaustein 2018; DeGarmo 2012). In other words, it does not account for the complexity of policy, or the processes involved. Opposed to the older DOI, a multi-disciplinary approach broadly referred to as “policy mobilities” can better account for these complexities. Combining the concepts of assemblage, mobility, and neoliberalism, this approach captures the unique relational context of policy transfer (Temenos and McCann 2013; McCann and Ward 2013b).

This chapter argues that a novel integrative approach, which combines insights from both policy mobilities and institutional theory can be a useful approach to understanding the unique process of police policy transfer. Institutional theory can account for the unique rationality of police institutions, while the policy mobilities approach can help to examine the processes behind isomorphism and provide a more nuanced understanding of policy transfer. This chapter begins by describing in greater detail the nature of both the policy mobilities approach, and institutional theory of organizational change. Following this, the complimentary nature of theories is synthesized into a series of analytical foci for studying the mobility of police policy. This integrative approach can provide a more comprehensive and accurate view of police policy mobility, allowing for analysis to better identify key factors associated with the adoption of particular police policies. This will facilitate more accurate analysis of how and why police agencies adopt policy.

To illustrate the efficacy of this integrated approach, this chapter applies it to a recent case of rapid police policy mobility: body-worn cameras (BWCs). BWCs are a particularly useful policy to focus on, not only because of the rapid adoption of BWC policies amongst North American policing agencies, but also because this mobility effectively demonstrates the usefulness of an integrative mobility/institutional approach to studying police policy mobility. This will be shown through following the mobility of BWCs from early pilot projects in the United Kingdom in the mid 2000s, to their widespread adoption amongst major police agencies in the United States in the mid 2010s. In doing so, this will provide a useful case study of the mobility of an influential

police policy, while also demonstrating the usefulness of an integrative mobility/institutional approach to studying police policy mobility.

## 2.2 Policy Mobilities Approach

The movement of policy is not a straightforward process of rational actors emulating successful policies across borders or jurisdictional scales, as older political science literature suggests (McCann and Ward 2013a). This literature conceptualized this movement under the term "policy transfer" (Dolowitz and Marsh 2000, 5) which is defined as "the process by which knowledge about policies, administrative arrangements, institutions, and ideas in one political system (past or present) is used in the development of policies, administrative arrangements, institutions, and ideas in another political system." This view portrays policymaking as driven by rational actors seeking better outcomes through the adoption of best practices in different jurisdictional spaces (Benson and Jordan 2011). However, this literature has been criticized for its overly rationalist viewpoint, its focus on state-level actors, and its inability to capture the complexities of policy movement (Benson and Jordan 2011). By framing policy as something static that could unproblematically be adopted in different places and expected to produce similar if not identical results, the rationalist viewpoint failed to account the myriad of context-specific variables that influence policy in the real-world. In response to these criticisms, a new approach has emerged within geographical studies that aims to overcome these shortcomings (Benson and Jordan 2011; Marsh and Evans 2012).

Drawing from the political science literature on policy transfer, policy mobilities (Peck 2011a; Temenos and McCann 2013; Temenos and Baker 2015; McCann and Ward 2013a) is a new approach that has been referred to as the "assemblage, mobilities, and mutation" approach (McCann and Ward 2013a). This approach is part of the larger field of critical policy studies and is influenced by critical geography, which emphasizes social constructivism and relational understandings of the world (McCann and Ward 2013a). It differs from the policy transfer approach in three ways: it uses "assemblage" thinking to conceptualize policy, it uses "mobilities" thinking to examine the complexity of policy movement, and it integrates work on cities and neoliberalism from urban geography (McCann and Ward 2013a; Peck and Theodore 2010; Peck, Theodore, and Brenner 2009; Temenos and McCann 2013). As a result, the policy mobilities approach places a greater emphasis on space and scale when studying the movement of policies,

along with their accompanying discourses and technologies (Peck and Theodore 2010; McCann 2013; 2011a).

### 2.2.1 Neo-liberalism

Drawing on foundational work in the field of critical urban geography that explores the relationship between forces of capitalism and cities (Das 2017; Harvey 1989), Peck and others examine the connection between rapidly transforming forms of urbanism and neoliberal reactions to contradictions within the capitalist mode of economic organization (Peck, Theodore, and Brenner 2009). Neoliberal urbanism, in this view, emerges as a manifestation of capitalism and does not strictly denote a distinct set of policies. Instead, it offers a largely market-driven framework shaping urban policy in a world where cities fiercely vie for capital investment (Tickell and Peck 2002). Rapid urban policy transformation, a result of these frameworks and competition, entails the swift adoption of policies and practices perceived as “successful” within a neoliberal perspective by policy actors racing against each other (Peck and Theodore 2015; Peck 2011b; Peck and Brenner 2009; Tickell and Peck 2002).

Nevertheless, it's vital to underscore the significance of local settings in policy-making. As put forth by Peck and Theodore, “... while transnational circuits of expertise and practice are proliferating, the stubborn reality is that making policies work very often remains a hands-on, messy, and very much ‘local’ affair” (2015, xvii). As such, insights from post-structuralism, most notably assemblage, are used to understand the complexity of policy mobility (McCann and Ward 2013a).

### 2.2.2 Assemblage

The concept of assemblage, adapted from Deleuze and Guattari's work, is a central part of the methodological sensibility of the mobilities approach (Deleuze and Guattari 1988). Assemblage refers to a collection of diverse elements, both material and expressive, that are drawn together and connected through their relations with one another and with elements outside the assemblage. This whole, or assemblage, is constantly creating spatiality through the process of territorialization, which is how it stabilizes and takes form (Baker and McGuirk 2017). However, assemblages can also be destabilized through deterritorialization, which is necessary for mobility (Baker and McGuirk 2017). It is important to note that the elements that make up an assemblage may be diverse or even conflicting, and that assemblages should be viewed as contingent

groupings rather than reduced to a single logic or unified whole (B. Anderson et al. 2012; Baker and McGuirk 2017; Allen 2011).

Conceptualizing policy as assemblage has been a useful way to capture the “multiplicity, processuality, labour, and uncertainty” within policy transfer (Baker and McGuirk 2017). Policies are not static objects, unproblematically moved from one context to another. Rather, policy is always in the process of change, with any stability in form only being provisional (Baker and McGuirk 2017). In addition, this scholarship has revealed the variety of actors, ideas, technologies, discourses, institutions, and other complexities involved in the creation and movement of policy. Assemblage methodology allows researchers to better explore this complexity, and to explore the agency of the diverse heterogenous elements of policy that is also sensitive to the topological conceptions of distance (Allen 2011). Rather than being bound by traditional understandings of distance and scale, assemblage thinking allows researchers to see how definitions of near and far are socially produced (Temenos and McCann 2013). Assemblage is not only useful in conceptualizing policy, but also the global circuits of policy knowledge through which policies move. Conferences, policy documents, experts, and other elements: these informational infrastructures form assemblages of their own (Cook and Ward 2012; Temenos and McCann 2013).

### 2.2.3 Mobility and Agency of Actors

Two important insights from the policy mobilities approach are the importance of the agency of the multitude of policy actors involved in policy creation, and the multiplicity and complexity of situations where policy is both created and made mobile with the involvement of these actors.

The policy mobilities approach, as opposed to older models of policy transfer, places greater emphasis on the mobility and agency of various policy actors involved in policy transfer, who operate in diverse contexts and under unique pressures (Prince 2012a; Peck 2011a; Temenos and Baker 2015). This approach expands the focus on “transfer agents” (Stone 1999), beyond the obvious government policy actors to include activists, NGOs, bureaucrats, policy boosters, experts, academics, and consultants (McCann and Ward 2010). These additional policy actors not only participate in and contribute to the formation of networks of knowledge that define “best practice,” but also operate within local contexts where policy is ultimately created (Peck and Theodore 2015). The mobility of these policy actors has introduced new spatial elements to

policy through the expansion of expertise to knowledge workers (McCann 2013; McCann, Roy, and Ward 2013). This expansion has made a wide range of actors capable of utilizing expertise (Larner and Heron 2004; Peck 2011a). These policy actors can move from place to place and take on various roles, such as consultants hired to implement policy, conference speakers, and hosts for site visits (Larner and Laurie 2010). The varied products of their expertise, such as PowerPoint presentations at conferences, reports, and TED Talks on policy, are also mobile (McCann 2008; McCann and Ward 2010).

This form of expertise is also infused with relational geographies, particularly narratives of relationships between places that facilitate policy mobility (McCann 2008; McCann and Ward 2010; McCann 2013). Transfer agents use narratives of cities' relationships with each other to mobilize policy, creating these relational geographies (Bunnell 2015). An important way this is accomplished is through "benchmarking": the conceptualization and use of common standards of comparison between places (Larner and Heron 2004). The use of these benchmarks is a way that topographical distance can be overcome; that comparison through a standard set of indicators renders the distant proximate (Prince 2015; 2012a). Seemingly mundane practices like site-visits or fact-finding trips are important spaces for emulation and policy transfer, filled with the technocratic approaches of comparison and benchmarking that facilitate this emulation (Prince 2012a; Larner and Laurie 2010).

Policy models are both fixed and in motion. Since policy is based on specific local contexts it is fixed, yet in order to be adopted elsewhere it must change and adapt to those new local contexts while still holding onto parts of the original, context specific, grounded model (McCann and Ward 2010). Often, the model itself may bear only a passing resemblance to the original policy it is based upon or could even take on a life entirely of its own, referring to a set of conditions that may have never actually existed in the supposed place of origin. Yet the policy must also remain fixed in that models appearing to come from places of successful implementation and outcomes that lends to them an inherent credibility (Peck and Theodore 2010). This requires that models must be able to be defined as successful by a set of benchmarks intelligible to other policymakers, as well being sufficiently similar to that original context so as to make adoption appropriate.

These spaces of “in-between”, through the interactions between various actors, policy models or “best practices” are created from specific, place-bound policies (Ward 2006; Peck and Theodore 2010). These policy models are inherently mobile, designed to then move, be adopted and adapted by other places. The face-to-face nature of these meetings facilitate a range of interactions that sustain the creation of these models (Bathelt and Schuldt 2008). For instance, question and answer sessions between policy makers and transfer agents allows for iterative and reflexive learning, allowing those policy makers to get a better understanding as to whether a policy model can be adapted to their particular context (Cook and Ward 2012). These conferences also produce a wide variety of physical policy representations, such as PowerPoints, publications, email circulation lists, etc. By examining these linkages and the policy representations they produce before, during, and after policy mobility we can better understand the assemblages through which mobility occurs, both successfully and unsuccessfully (Cook and Ward 2012; McCann and Ward 2012; Prince 2012b). In essence, the conferences, fact-finding visits, institutional partnerships, organizational associations, and multitude of other places of transit that facilitate the movement of policies also simultaneously work to *constitute* those policy models (Peck and Theodore 2010; Larner and Laurie 2010; McCann and Ward 2012).

#### 3.2.4 Mutation

The simultaneous process of movement and change is referred to as “mutation” (Peck and Theodore 2010). This is a crucial aspect of policy mobility to understand. Such mobile policies are interpreted and reinterpreted by various policy actors along their journey, in the “in-between” places as well as in their ultimate implementation. Policy consultants, for instance, extract elements or “lessons” from specific policy contexts, weave them into a compelling narrative, and then modify that narrative to align with the needs and aspirations of different clients (McCann 2011b). When mobile policy models are implemented, they are adapted and changed to local contexts (McCann 2011b; Peck, Theodore, and Brenner 2009). Put simply, to become mobile policy *must* change, and by changing policy becomes mobile. Yet this process of mutation is not unidirectional, of policy actors and places mutating policy without being altered themselves. As policy moves, it also changes the places through which it moves, altering the dynamics of socio-institutional landscapes through which it moves (Peck 2011a). The various sites of learning, institutions, and actors involved in policy mobility are altered by the policies that move through them (McCann and Ward 2012; Temenos and McCann 2013).

### 2.2.5 Mobilities, Mutations, Assemblage

The mobilities approach has been described as “rolling conversation” between these sources of insight (Temenos and McCann 2013). The urban geography literature reflects this conversation and encompasses a wide variety of foci for urban policy: smart cities, climate change adaptation, rapid bus transport, business improvement districts, just to name a few (McCann and Temenos 2015; Wiig 2015; Ward 2006; Müller 2015; Cook and Ward 2011). Overall, the mobilities approach has an empirical flexibility to lesser seen actors and elements within the framing of assemblage, while remaining aware of the larger “context of contexts”, most notably the political economy in the form of neoliberalism, that is relationally connected with that assemblage.

Yet there has been little focus in the literature on police policy specifically. While research has been conducted on harm reduction models involving safe consumption sites, which necessarily involves police, these studies do not specifically frame or focus on police agencies as distinct entities (McCann and Temenos 2015; Longhurst and McCann 2016; Baker and McCann 2018; Baker, McCann, and Temenos 2020) The literature on mobilities does not provide specific guidance on policing and police institutions beyond the larger context. In contrast, much of the policing studies literature has relied on institutional theory to understand the behaviour of police agencies as institutional organizations. Institutional theory offers useful explanations regarding the motivations and behaviour of police agencies, both in terms of the policies guiding their behaviour as well as their interactions with other organizations.

### 2.3 Institutional Theory of Organizational Change and Institutional Isomorphism

Institutional theory argues that some organizations are far more influenced by factors in their environment than by functional considerations guided by strict rationality (Meyer and Rowan 1977). Instead, institutional organizations are influenced by external factors when defining functionality and respond to these external influences to secure legitimacy (Meyer and Rowan 1977). This distinguishes institutional organizations from technical organizations. Business organizations are technical organizations, that focus on the efficiency of their core purpose, of producing or delivering their product (Meyer and Rowan 1977). In contrast, institutional organizations operate in fields where it is difficult to determine their success of operations, such as service-based organizations or government agencies. These organizations succeed by conforming to the procedures and policies that have been accepted as being successful in their



institutional environment, even if the connection between those policies and successful outcomes may not be well established (Crank and Langworthy 1992).

### 2.3.1 Institutional Sovereigns, Legitimacy, and Institutional “Myths”

Police organizations are “exemplars of institutional organizations” (Crank 2003, 187).

Institutional organizations behave this way to secure legitimacy from important external actors that have the capacity to affect their organization, referred to as “sovereigns” (Crank and Langworthy 1992). For police organizations, these can include the wider public, politicians at various scales, their own professional organizations, as well as their own members. This legitimacy is socially constructed, and entirely dependent on the perceptions of these “sovereigns” (Meyer and Rowan 1977; Meyer and Scott 1983). Obtaining this legitimacy is a key aim for the organization to survive, in terms of maintaining the flow of resources from these sovereigns on which the institution depends, while also maintaining operational autonomy from outside interference (Crank and Langworthy 1992). Thus, police organizations seek to conform to the widely accepted structures in their institutional environment to obtain and maintain legitimacy (Crank 2003; Crank and Langworthy 1992). However, the environments that institutional organizations operate in are highly complex, filled with important constituencies and sometimes contrasting values (Meyer and Rowan 1977; Meyer and Scott 1983). This means that institutional organizations come to reflect the larger complexity present in their institutional environment (Meyer and Scott 1983).

Responding to the complex expectations of sovereigns, institutional agencies incorporate policies or structures into their institution that are held as appropriate by the external environment (Crank and Langworthy 1992). These “myths” are deeply held culture assumptions about how the institution ought to operate, that have the “ring of truth” to them (Meyer and Scott 1983).

Institutions ensure to demonstrate their adherence to these myths to secure legitimacy from institutional sovereigns (DiMaggio and Powell 1983). Common myths for police include random routine patrol, the crime fighter image, quick response times, amongst others (Matusiak 2021).

These myths have changed over time and will continue to change. It is important to note that myths, or adherence to myths, is not based on purely technical-rational reasons or demonstrated success. For instance, a common expectation from the public is that police agencies will pursue policing strategies that will work to suppress crime incidents. However, random patrol has been

consistently found to not be correlated with reduced crime rates yet remains a powerfully influential myth for police agencies (Matusiak 2016).

Organizations might be pushed to adhere to expectations informed by several myths – even myths that may potentially interfere with established day-to-day operations. Organizations deal with this through “ceremony” – the outward appearance of some practice to adhere to myth—but through “loose-coupling” or “decoupling” these practices from core activities, can demonstrate their adherence to sovereign expectations without fundamentally changing the core functions of the institution (Meyer and Rowan 1977; Meyer and Scott 1983).

Police organizations are also not passive actors in the process of myth-building and will actively seek to contribute to the creation and change of these myths (Crank and Langworthy 1992). For example, the development of the widely held belief in police as “crime fighters” was encouraged by police in the 1930s (Walker 2016), a myth that serves to enable police organizations by linking increases in police budgets are improving the capacity of the organization to enforce the law (Crank and Langworthy 1992). Subsequently, police organizations may then contribute to narratives of crime waves (Chermak 1995) interacting with this myth. Police professional associations will also engage in myth-building, through the support for particular policies as part of emerging professional standards (Crank and Langworthy 1992).

In summary, when a police agency is perceived to adequately meet the socially constructed expectations of its institutional sovereigns through its organizational structure and behaviour, as well as the attendant cultural assumptions or “myths” regarding how a police agency should operate, it is able to secure legitimacy. Securing this legitimacy, rather than meeting an objective technical or rational organizational goal, is the primary driver of a police agency’s organizational structure and operations.

### 2.3.2 Institutional Isomorphism

Individual institutions in a wider field come to resemble one another over time, as they are under similar expectations and myths from the institutional environment (DiMaggio and Powell 1983). These pressures exist across and at different scales, including local, mid-level, and field-level. However, it is at the field-level that expectations and myths tend to push institutions towards similar behaviour, as each responds to the same field-level pressures to gain and maintain legitimacy from their sovereigns (DiMaggio and Powell 1983). These field-level pressures are

transmitted through the interactions between different actors within the larger organizational field. In policing, this includes departments, chiefs' associations, officer associations, research agencies, just to name a few. In institutional theory, these interactions among actors across the organizational field develop sets of shared beliefs regarding the organizations and their activities – in essence, commonly accepted knowledge regarding appropriate and effective means of pursuing objectives (Palmer, Biggart, and Dick 2008). These organizational field-level forces influence the individual actors within the field. Individual police departments contend with these broader forces when implementing policy, either when adopting policy broadly accepted within the organizational field as acceptable, or when going against the grain of these established norms. Over time, these field-level forces tend to result in institutions coming to resemble one another. This is referred to “institutional isomorphism”, a process where organizations change to conform with field-level pressures (DiMaggio and Powell 1983). The higher the level of institutionalism in a field, the higher the isomorphism.

Mimetic isomorphism occurs when organizations adopt successful policies from others, particularly during uncertain situations, to gain legitimacy by meeting specific expectations (DiMaggio and Powell 1983). Normative isomorphism arises from the broader institutional field's influence (DiMaggio and Powell 1983), leading organizations to adopt “best practices” or “professional standards” established through professionalization, training, and organizational networks (Roy and Séguin 2000). Coercive isomorphism results from external pressures compelling an organization to modify its practices, stemming from sources like legislation, court rulings, or regulatory bodies (DiMaggio and Powell 1983); though funding as a measure for this has been debated in research (Giblin and Burruss 2009).

Institutional theory does not preclude the influence of broader forces, such as those from changing political economy under neoliberalism. Rather, it explains the behaviour of institutions as being primarily legitimacy seeking, rather than technical-rational pursuit of organization function. Thus, wider contexts can influence institutions through their effect on the expectations from institutional sovereigns. Indeed, as social systems, certain practices, policies, or structures within organizations become established or “institutionalized” within their broader environment (Scott 2013).

### 2.3.3 Institutional Theory and Policing

Scholars within policing studies literature, working in sociology and criminology, have utilized institutional theory when studying the behaviour of police organizations (Crank 2003; Crank and Langworthy 1992). Applying institutional theory to policing has been established since 1990s and has become well established in broader field of criminal justice research (Terpstra 2020). In studies examining organizational change within policing, institutional theory has had more evidence supporting it when compared to structural contingency or resource dependency theory (Burruss and Giblin 2014; Giblin and Burruss 2009; Willis, Mastrofski, and Weisburd 2007a). Institutional theory has often been utilized in the policing studies literature in a variety of different contexts. Examples include community-oriented policing adoption (Worrall and Zhao 2003; Burruss and Giblin 2014), COMPSTAT (Willis, Mastrofski, and Weisburd 2007a) police chiefs decision making (Kapla 2005; Matusiak 2021; 2016) body worn cameras (Smith 2019) police reform (Terpstra 2020).

However, there is a weakness in institutional theory when examining organizational change, in that there is a lack of attention paid to specific mechanisms behind isomorphism. While institutional theory of organizational change provides a very good overall framework in terms of examining the forces behind policy adoption within police agencies, it does not adequately explain how policies spread between police agencies. Most research in the policing studies literature, including work that has examined specific policies that transfer via institutional isomorphism, has used “diffusion of innovation” theory in conjunction with institutional theory to explain policy transfer.

### 2.3.4 Diffusion of Innovation (DOI) Theory

The Diffusion of Innovation (DOI) theory, originating from Everett Rogers' work, describes how innovations spread within social systems such as an organizational field, and has been applied in fields ranging from political science to policing studies (Rogers 1963; Jones and Newburn 2021). However, it faces criticisms for being overly rationalist, neglecting the contextual intricacies of policy transfer, and being inadequate for capturing complexities in public organizations as compared to commercial organizations (Stone 2012; M. Anderson, Lewis, and Dedehayir 2015). DOI has also been challenged for not adequately explaining diffusion processes, for its ambiguity in defining when an idea is "new", and for its assumption that innovations are static, not capturing the inherent evolutions or mutations they undergo as they spread (DeGarmo 2012;

Willis, Mastrofski, and Weisburd 2007b). Furthermore, by primarily focusing on the spread of successful innovations, it misses insights from policy “failures” (Lovell 2017; Temenos and Lauermann 2020). Empirical investigation has also found that DOI has some evidence of not holding for the mobility of community policing (Gayadeen and Phillips 2014).

By adding insights from institutional theory to the ongoing conversation present in the policy mobilities approach, the methodological sensibility reflected in the policy mobilities approach can be used to qualitatively examine the transmission of information and diffusion processes neglected by DOI, as noted by DeGarmo (2012). Integrating institutional theory alongside assemblage, mobilities, and mutations present within the policy mobilities approach is appropriate given that like institutional theory, each reject *strictly* rationalist theory, focus on bounded rationality of actors, institutions, and contexts. Both are fundamentally relational.

Table 2.1 Integration of Mobilities and Institutionalism Concepts

| Mobilities Concept  | Institutionalism Concept  | Integration   |
|---|---|---|
| Informational Infrastructure facilitate mobility, function as assemblages, facilitate mutation          | Institutional Isomorphism (mimetic, normative, coercive)  | Informational Infrastructure enabling / influencing policy Isomorphism                                    |
| Narratives & Benchmarking as important aspects of mobility, flattening difference and reducing distance | Myths as powerful sources of institutional legitimacy, motivator to ensure policy adheres to                  | Narratives & Benchmarks strengthen importance of what is measured, affecting Myths and influenced by them |
| Mutation as necessary aspect of policy mobility, movement as change                                     | Ceremony / Decoupling as institutional process to seek legitimacy of policy while protecting “core functions” | Ceremony / Decoupling as form of policy mutation, dependent on institutional context                      |
| Policy as Assemblage, relationally constructed, stability as provisional                                | Institutional Isomorphism (mimetic, normative, coercive)  | Relational aspects of isomorphism forces influencing policy assemblage                                    |

#### 2.4 Integrating Institutional Theory into Policy Mobilities

This section will describe how institutional theory can be integrated into the policy mobilities approach, using four points of analytical focus. First, how the concept of informational infrastructure assemblages can be used to understand the connections and pathways between police organizations that enable institutional isomorphism. Secondly, how the narratives and

benchmarks used to enable mobility also interact with institutional myths that police agencies respond to. Thirdly, that ceremony and decoupling observed in institutional organizations responding to sovereign expectations can be a source of policy mutation inherent in policy mobility. Finally, how the relational aspects present in the forces of institutional isomorphism (mimetic, normative, coercive) can be considered part of a police policy assemblage.

#### 2.4.1 Informational Infrastructure Assemblages facilitating Mimetic/Normative Isomorphism

Three insights from the mobilities approach can be utilized alongside descriptions of isomorphism. First, mobilities guides an empirical focus on “informational infrastructures” (McCann and Ward 2012; 2010; Cook and Ward 2012) which are the organizations, individuals, and technologies used to define, package, and transmit knowledge about “best-practice” policy. These informational infrastructures can be made up of professional associations, conferences, site visits, presentations, websites, or other similar elements (Cook and Ward 2012). These informational infrastructures can be understood as an assemblage, not entirely fixed, but having coherence and stability (Cook and Ward 2012). These infrastructures work to transmit products of policy learning such as fact sheets, but also work to create these products. Second, mobility also implies a need to remain sensitive to the wide variety of actors involved in these informational infrastructure assemblages, beyond major policy actors. Third, that mobility/mutation are simultaneous processes (Peck 2011a), and these informational infrastructure assemblages facilitate that mobility/mutation.

Institutional theory gives us greater clarification on the three main forces (mimetic, normative, coercive) driving institutional isomorphism. Viewing the contacts that police organizations have with these informational infrastructure assemblages through this lens frames these interactions as facilitating both mimetic and normative isomorphism in a multidirectional manner. Put plainly, when a police department engages with these informational infrastructure assemblages, this influences the mobility of the policy, the mutation of the policy assemblage, and the form of the informational infrastructure assemblage as well.

This is clear given the fact that in order to move, a policy must change. Mutation/Mobility are simultaneous (Peck and Theodore 2010). Drawing from institutional theory, it is clear policies do not travel as inert objects through inert institutional geographies, the “structured field”, but instead are constructed and altered by their movement through them (Bockman and Eyal 2002).

The movement also transforms the “structured field” which the policies pass through (Peck 2011a). Paying attention to the relations between the structured field and the policy is crucial to understanding both its form and mobility.

When examining police policy movement, we should therefore focus on these informational infrastructure assemblages, noting how they relate to these isomorphic forces. We should note the actors involved within these assemblages while remaining sensitive to the “agency” of non-actor elements within the assemblages. We should consider what forces of isomorphism are enabling policy mobility, and what that would mean for the relationship between a department and an informational infrastructure assemblage. We should consider how the mobility of a policy influences the informational infrastructure assemblages that it interacts with, and vice-versa.

This leads to a series of important questions to ask: to what extent is the information assemblage an effort in place marketing by a specific department, thus more likely driving mimetic isomorphism? To what extent is the information assemblage an effort of professional standard setting, thus driving normative isomorphism? What relations exist between the policy assemblage and the informational infrastructure assemblage that is engaged with by the department? These forces are not neatly separated and almost certainly both present, but these questions can guide analysis.

#### 2.4.2 Narratives, Benchmarking, and Myths

Policy mobilities points us to focus on the importance of relational geographies in policy movement through a topological rather than topographical lens (Savage 2020). Rather than viewing space through a fixed set of coordinates with corresponding territorial scales and relations, we instead should focus on how relations between policy actors and elements are established across space that do not adhere to existing notions of territorial scale (Allen and Cochrane 2007; Prince 2017). This leads to a methodological focus on how these relations are made, more specifically, on the actions of policy actors like transfer agents, and the products and benchmarking they use in creating these relational geographies that affect topological relations between places, rendering the “distant proximate” while flattening contextual differences to make the implementation of distant policy locally appropriate (Larner and Heron 2004; McCann and Ward 2015). Institutional theory can help frame these efforts of comparison and measuring to

affect topological relations in relation to “myths” regarding the operation and execution of policing.

Benchmarks allow for comparison between places, and narratives of success and comparison as facilitating mobility. They also allow for institutions to be able to demonstrate to their sovereigns that they are conforming to important myths. For example, an important benchmark for comparison between police departments are “crime incident” statistics; quantitative spatial data on reported crimes. These data interact with the myth of police as needing to control and reduce crime, allowing for comparison between departments that flattens contextual differences between different places into a single quantitative measure of crime incidents. In doing so, the benchmark reinforces the myth it relates to by confirming that these data are important measures of the performance of the department. Sovereigns have clear criteria through which they can find the performance of the police inadequate, thus incentivizing the police to ensure they meet the standards dictated by the benchmark comparisons, further reinforcing the myth.

#### 2.4.3 Mutation/Mobility Enabled by Ceremony/Decoupling

Further, the policy mobilities approach lends understanding that policies are not concrete, they *must* change to become mobile (Jacobs 2012; Peck and Theodore 2010). Institutional theory gives us the understanding that “ceremony”, “loose-coupling”, “decoupling” can be used by institutions for the outward appearance of adopting policy to gain legitimacy from sovereigns, while keeping core activities unchanged (DiMaggio and Powell 1983). This occurs when policy adoption might threaten core activities or otherwise disrupt existing organization, but when adopting policy necessary for legitimacy. Institutional theory clarifies that structures can be decoupled from routine tasks to protect the day-to-day operations of the organization (Meyer and Scott 1983). Thus, certain aspects of a policy may be transferred while others are not (Newburn, Jones, and Blaustein 2018). Ceremony, decoupling, and loose coupling have been noted extensively in studies on the adoption of major police policy shifts in the past. Scholars have noted the significant level of divergence that the eventual form of transferred policies take. COMPSTAT (Willis, Mastrofski, and Weisburd 2007a; de Maillard 2018; Weisburd et al. 2019; Long and Silverman, 2005), community-oriented policing (Dias Felix and Hilgers 2020; Burruss and Giblin 2014) are two major examples of this. Thus, when considering the mutation of police policy mobility, using ceremony, loose-coupling, and decoupling as a lens for analysis can illuminate an important process behind policy mutation.



#### 2.4.4 Important of Relations in Isomorphism and Assemblage

Recall that assemblages are determined by both the relations *among* their constitutive elements within the assemblage, and the relations those elements have *outside* the assemblage. This means that the relational policy world that a policy inhabits influences its mobility. Certain elements within a policy assemblage (ideas, actors, technologies) may relate to other elements within other policy assemblages viewed as successful or unsuccessful. These relations influence the form of the policy assemblage in question, including its stability and its mobility. Relations are therefore an important aspect to consider through this lens.

Relations between actors are also deeply emersed in the processes behind institutional isomorphism. Normative and mimetic isomorphism is facilitated through processes of inter-agency and inter-place referencing, occurring in multiple places, through conversations at a distance, or through sites of encounter like conferences and site visits (Burruss and Giblin 2014). Therefore, relations between certain elements of policy assemblages, and existing policies or actors within departments or policies favoured by professional policing associations, should influence the mobility of police policy.

In summary, adding insights from institutional theory to the conversation within policy mobilities offers unique opportunities for studying police policy mobility. Institutional theory offers guidance for policy mobilities in analyzing the unique context in which police agencies operate, and in turn policy mobilities offers greater focus on the processes within organizational isomorphism. In an increasingly globalized world, where policing policy has become highly mobile, moving between agencies both within and outside international borders, understanding the nature of these movements is even more important for citizens interested in democratic control over the coercive instruments of the state. The next section will highlight the potential usefulness of the institutional theory integration into policy mobilities by examining the case of one such internationally mobile and highly influential police policy in the past decade: body-worn cameras.

#### 2.5 The Mobility of Body-Worn Cameras

This section examines the mobility of body worn cameras police policy (BWCs) to demonstrate the usefulness of applying the mobilities approach, aided by institutional theory, to understanding police policy transfer.

Body worn cameras are mobile video and audio recording devices worn on an officer's body, that record what an officer sees and hears (Crow and Smykla 2019). The policy of equipping officers with such devices has rapidly spread throughout policing agencies in the United States, Canada, and the United Kingdom (UK) in the past decade. Recent data from 2016 finds that 80% of departments in the United States employing 500 or more officers adopted BWCs, and 31% of local departments with part time officers (Hyland 2018). Body worn cameras have also been adopted by the majority of police agencies in the UK, as well as increasingly by police departments in Canada and throughout Europe (Saulnier, Bagg, and Thompson 2021).

Although not meant to be exhaustive analysis of the mobility of this policy, this section will demonstrate the utility of the mobility/institutional approach for studying police policy mobility. This will take the approach of "studying through" the policy mobility of BWCs, highlighting key moments through the lens of a policy mobilities approach which integrates insights from institutional theory, focused on the four analytical foci outlined in Table 2.1.

#### 2.5.1 Early use of body worn cameras in the United Kingdom

The first pilot programs of BWCs for police began in 2005 in the UK, with a pilot program in Plymouth (Goodall 2007). These early pilot programs occurred within the wider policing context of the United Kingdom, which heavily focused on the use of CCTV and other surveillance techniques as a strategy to reduce crime and assist Crown prosecution (Webster 2009). A 2007 report by the Home Office detailing pilot deployments of BWCs focused on their potential for obtaining recordings where CCTVs and dashboard mounted cameras could not. The first significant deployment of cameras in 2006 were part of a larger domestic violence enforcement campaign, and its benefits were noted as improving the quality of evidence officers provided (Goodall 2007). The early pilot program in Plymouth similarly noted that the high quality of evidence provided from recordings increased the rate of guilty plea. As evidenced by the research focus of the pilot program on providing video recording evidence for prosecution, the overall goal of BWCs in these early pilot programs was to capture the behaviour of citizens, not the behaviour of police.

After these initial pilot programs and the publishing of best practices by the Home Office in 2007, pilot programs began to be run in other departments in the UK. Between 2009 and 2010, Grampian Police in Scotland ran pilot programs, which also focused on the potential influence

BWCs had on crime and court outcomes but also for resolving complaints lodged by citizens (ODS Consulting 2011). In these cases, the BWCs were noted to be useful in absolving police of wrongdoing, framing recordings as providing an objective record to contradict inaccurate citizen accounts (ODS Consulting 2011). When Plymouth police reduced their use of BWCs to only planned operations and during nights on weekends in November 2010, citing the high cost of the policy, the move was criticized by the chairman of the Devon and Cornwall Police Federation: “This was seen as a national project to bring more offenders to justice. It protects both the public and my members. We’re very disappointed they’ve pulled funding on this” (BBC News 2010). A detective from a domestic abuse team also criticized the negative impact reducing camera use would have on the gathering of evidence at crime scenes (BBC News 2010). This policy was firmly about capturing citizen behaviour, both as criminal and false complaints, rather than police behaviour. This early BWC policy assemblage, with elements of existing CCTV policing in the UK, had not yet adopted Axon camera technology, nor shifted to reducing use of force incidents as an important policy objective. This would change once the policy became mobile.

#### 2.5.2 Spread of body worn camera policy beyond the United Kingdom

The one of the first documented use of BWCs outside of the UK was in Canada. A high-profile incident occurred in October of 2007, where Royal Canadian Mounted Police (RCMP) officers killed Robert Dziekanski using conducted energy weapons in the Vancouver Airport. The incident was captured on video recorded by bystanders, and widely covered by news media. The incident led to a scathing report released in December of 2009 by the public commission for complaints against the RCMP that heavily criticized the RCMP for the incident, and its subsequent behaviour following it (Kennedy 2009). While the report did not make any recommendations for BWCs as a remedy, the importance of citizen recorded video of the interaction was highlighted.

Early in 2009, in Victoria, British Columbia, a small department of 243 officers sought to test the use of BWCs to compare results from the UK, stating explicitly in the study report that part of its objective was to “...attempt to compare results with those found in BWV [body-worn video] research from the UK” (Laur et al. 2010). Following the application of BWC in the UK, the focus of the application of BWCs was not primarily on officer conduct but on citizens; specifically, the use of BWCs for obtaining evidence for prosecution, reducing citizen aggression, and increasing paperwork efficiency (Laur et al. 2010). This pilot sought to test whether cameras were correlated

with a reduction in public complaints against police, however the pilot did not seek to test whether officers might behave differently if they were being recorded, but rather if “aggressive behaviour may be reduced when individuals were informed about being recorded” (Laur et al. 2010, 4). The pilot found reduced citizen complaints, reduced “public hostility/aggressiveness”, and increased evidence quality (Laur et al. 2010).

Shortly after this pilot study, the RCMP ran a small pilot program in Kelowna, British Columbia and Codiac, New Brunswick in January of 2010, using inexpensive devices not designed for police work (RCMP 2015). However, this short pilot found the devices to be insufficient for police work and did not recommend their adoption (RCMP 2015).

One of the first uses of BWCs inside the United States occurred in Albuquerque New Mexico, United States (Guerin et al. 2016). The Albuquerque Police department began testing BWCs in August of 2010, like the RCMP in Kelowna, the cameras used were inexpensive and not designed for police use (Guerin et al. 2016). The policy was introduced by police chief Ray Schultz, a self-described “policing futurist” who repeatedly emphasized the importance of technology in policing (Gates 2015). Schultz became chief in 2005, when the department was under increased scrutiny due to significant allegations of corruption, civil rights violations, and excessive use of force (Contreras 2013). Chief Schultz would frame BWC as an important tool for exonerating officers accused of wrongdoing in comments made to the Police Executive Research Forum (PERF 2012). Although the department would fully adopt BWCs, it would largely use ceremonial adoption with officers wearing the cameras but frequently violating policy on use for the next several years (Samuels and Martinez 2014).

In Albuquerque and British Columbia, early mimetic isomorphism, within the context of challenges to institutional legitimacy, was facilitated by BWC pilots which drew on BWC use in the UK (Guerin et al. 2016; Laur et al. 2010). The informational infrastructure assemblage that mobilized BWC would grow, shifting to normative isomorphism as normative actors joined. The policy itself would similarly mutate as the forces of isomorphism shifted.

### 2.5.3 Department of Justice Funded Studies

A period of numerous pilot studies within the United States began to rapidly emerge after the initial testing in Albuquerque, with granting agencies within the Department of Justice providing funding for many of the pilots. These granting agencies would become important parts of the

informational infrastructure assemblage that would lead to rapid policy mobility for BWCs and expand normative isomorphism for the policy. One of the most influential pilots was an experimental study sponsored by the National Institute of Justice that ran in the smaller department of Rialto, California. The Department of Justice provided \$93,000 USD to buy the cameras from Taser international (Dulaney 2012). The company was well known for the directed-energy weapons, so much so that its company name became colloquially used to refer to the weapons themselves (Gates 2015). This might explain why Taser international changed their company name to Taser to Axon international in 2017 as the company became one of the dominant providers of body worn camera technology (Nix, Todak, and Tregle 2020).

The Rialto experiment sought to test the effects of the awareness of being observed on the behaviour of officers. This department had 54 front line officers, but every officer participated in the experiment (Farrar 2013). Running from February of 2012 to February of 2013, shifts were randomly assigned into treatment or control groups for carrying BWCs on their shifts. The devices used were Taser-Axon Flex cameras. The experiment found a 50% reduction in use of force incidents and ten-fold reduction in citizen complaints (Farrar 2013).

Through the “Smart Policing Initiative”, the federal Bureau of Justice Assistance also awarded funding in 2011 to the Phoenix Police Department to pilot BWCs, in association with research partners at Arizona State University (Katz et al. 2014). The trial ran from April of 2013 through to March of 2014 (Katz et al. 2014). This pilot used BWCs specifically to increase police accountability and to increase policing effectiveness in general, but especially in cases of domestic violence (Katz et al. 2014). Arizona State University was also carrying out a partnership to trial BWCs with the Mesa Police Department, running from November 2013 to October of 2013. In this case, a quasi-experimental method was used, similar to the Rialto study (Ready and Young 2015). The Mesa study focused on whether the presence of cameras affected police-citizen interactions, and the effect of policy on officer’s use of cameras. The department’s evaluation of the program found similar findings to that of Rialto – a reduction in citizen complaints against officers, and a reduction in use of force complaints (Rankin 2013). Funding was also provided to studies in Las Vegas, and Indio, California (Miller and Toliver 2014).

These studies, and the professional and governmental organizations involved in providing funding and assistance, became part of the informational infrastructure assemblage through

which BWC policy was mobilized, and mutated to shift the policy goals to include the reduction of the use of force, and increase the overall prominence of this goal as compared to existing goals. Crucially, these studies also reinforced common benchmark metrics surrounding use of force incidents that facilitated department comparisons. The results of these studies would be used to argue for policy adoption, would contribute to the evidence base for the establishment of “best-practice” models to press normative isomorphism, and their presentation at conferences and association meetings would increase awareness of BWCs.

#### 2.5.4 Expansion of Informational Infrastructure Assemblage with News Media

Although one of several studies on BWCs funded by research wings of the Department of Justice, the Rialto study became heavily cited by news media during the period of increasing public protests following a string of high-profile incidents of police killing citizens, sparking protests challenging police legitimacy throughout the United States. The Rialto pilot study was initially covered favourably by local news media in October of 2012, publishing reports featuring interviews with Chief Farrar touting effectiveness of BWCs in reducing complaints and use-of-force incidents (Schneider 2018). Chief Farrar gave several presentations in academic and police settings during the period following the conclusion of the study. Farrar’s position as both an academic researcher and a police chief was frequently noted by Farrar himself in multiple presentations (Farrar 2014; Farrar and Ariel 2013), allowing the Rialto study a relational framing of in-group legitimacy amongst police audiences, as well as academically legitimate amongst scholarly audiences.

The tension between these two relationalities can be seen in some of the knowledge mobilization efforts of the study in interviews and conferences. In these conferences, Farrar presented BWCs as a positive policy with numerous benefits, backed by the experience of his own department in Rialto (Farrar 2014; Farrar and Ariel 2013). Ariel, the coauthor for the Rialto study, was far more guarded in his assessments of the policy. For example, in an interview published by Cambridge university, he framed the results of the Rialto study as preliminary and needing further confirmation before widespread BWC adoption. “Rialto is but one experiment; before this policy is considered more widely, police forces, governments and researchers should invest further time and effort in replicating these findings” (Cambridge University 2014). Farrar was not as guarded in his assessments during presentations and interviews. Framing himself as a police chief whose primary concern was policy results in a 2014 presentation on policing at Stanford's Center on

Democracy, Development, and the Rule of Law, he recommended the widespread adoption of the policy (Farrar 2014). In the same year, Chief Farrar and the Rialto Police Department received an award from the International Association of Chiefs of Police (IACP) for Excellence in Police Programs for the Rialto BWC pilot. Indeed, in presentations, interviews, and other engagements, Farrar did not urge caution, but rather widespread adoption of BWC touting the results in his police department as both compelling anecdotal evidence and social scientific proof. Rialto had the benefit of being a well-designed and executed piece of social science, with an active participant in chief Farrar that lent credence to its findings to police. Professional associations, such as the IACP, and policy associations, such as the Police Foundation, began to offer increasing support for BWCs drawing from pilots such as Rialto (Miller and Toliver 2014). The Rialto study also had the benefit of using Axon technology, which offered not only to sell a department the cameras, but also provide secure storage capacity for the recordings, which had previously been a significant problem for policy adoption. The expanding policy assemblage, and informational infrastructure it spread through, began to move beyond professional and policy organizations and into wider news media.

#### 2.5.5 American Civil Liberties Union and New York Police Department Consent Decree

Rialto and other pilot studies reflected the mutating BWC policy, in that the emphasis of the policy shifted from primarily improving evidence gathering and complaints dismissal, to reducing use-of-force incidents. The position of the American Civil Liberties Union (ACLU) also underscores this shift. Developing from a context of the extensive use of CCTV and other surveillance technology as policing strategy, BWCs became to be perceived as a method to hold police accountable and were endorsed by the ACLU in October of 2013 (Stanley 2013). Although this endorsement was accompanied by significant concerns regarding privacy and noted that tight regulations needed to be implemented regarding the use of BWCs to protect privacy, the support for BWCs signaled the ongoing mutation of the policy and the increasing prominence of new policy goals of reducing use of force incidents. Coercive isomorphic forces in New York city would also further this mutation and underscore important relational connections between federal granting agencies.

In August of 2013, the New York Police Department lost a federal class action lawsuit regarding their “stop-and-frisk” policy. Part of the ordered remedies was that the NYPD had to begin pilot programs for BWCs in those boroughs that had the highest numbers of stops in the previous year

(Scheidlin 2013). The subject of BWCs had been raised during testimony of NYPD's policing expert, James K. Stewart. Stewart is the former head of the National Institute of Justice, the arm of the Department of Justice that funds research and awards grants to police departments, that had provided Rialto and other departments with grants to run pilot BWC programs. When Stewart referred to BWCs during unrelated testimony regarding potential issues in lack of IT capabilities, the Court asked his opinion regarding BWCs. He replied that "I think it's a good idea. We recommended it in Las Vegas. And we're doing it in Phoenix as well" (Scheidlin 2013, 25). In the judgment, the judge noted that it was difficult to determine whether a stop was constitutional due to evidence of what occurred during a stop was limited to testimony after the fact. The pilot program was ordered because "body worn cameras are uniquely suited to addressing the constitutional harms at issue in this case" (Scheidlin 2013, 27). The judge also noted that "It would have been preferable for this remedy to have originated with the NYPD, which has been a leader and innovator in the application of technology to policing, as CompStat illustrates" (Scheidlin 2013, 27). The judge also referenced the Rialto study, when noting that there could be additional benefits from BWCs (Scheidlin 2013).

#### 2.5.6 High Profile Incidents of Police Use-of-Force and News Media

Following the "stop-and-frisk" ruling in New York mandating BWCs for the worse offending precincts, Rialto was featured in an article describing the ruling in the New York Times in August of 2013 (Lovett 2013). This coincided with a rapid increase in news media mentions of BWCs, and of the Rialto study as well (Schneider 2018). During this time, the framing of the Rialto study as a police-academic partnership was used to add credibility to the effectiveness of BWCs in these stories (Schneider 2018).

The focus on BWC policy would continue to increase as more incidents of police use-of-force were captured through bystander video and covered heavily in news media. This phenomenon was not limited to the United States. Two years prior to the New York ruling, in August of 2011, the high-profile shooting of Mark Duggan in the UK sparked riots (BBC 2015). Another incident in September of 2012, dubbed "plebgate" by media involving a dispute between an MP and officers, where events were found to have been exaggerated by police, created further calls for recordings of police interactions for unbiased records of events (BBC 2013). In Canada, these coincided with high profile events where police killed Sammy Yatim in July of 2013 (CBC News



2019). In the United States, similarly high-profile event of Eric Garner occurred on July 17, 2014. In these cases, police were recorded by onlookers.

Since the initial pilot programs carried out in the UK, rapidly evolving consumer technology has resulted in the near ubiquitous presence of smart phones capable of capturing visual recording. This has undoubtedly influenced the number of these high profile, citizen recorded events. Social media has also increased the capability of these recordings to be broadly distributed. The combination of both these developments has been linked to the implementation of BWCs in police departments (Schneider 2018).

The mutation of BWC policy during its mobility reflected this, as it broadened from the initial evidence gathering frame, to improving police transparency and increasing accountability. The shift was reflected in a 2014 report by the Community Oriented Policing Services (COPS) office of the federal Department of Justice, as well as the Police Executive Research Forum (PERF), a national professional organization for police executives, that sought to establish normative “best practices” on BWCs. The introduction listed the policy benefits of BWCs for “documenting evidence” and “preventing and resolving complaints brought by members of the public”, but also included “strengthening police transparency, performance, and accountability” (Miller and Toliver 2014).

#### 2.5.7 Rapid adoption

At this point, BWC policy entered a stage of rapid policy adoption among developed western countries. The College of Police in the UK began widespread BWCs trials, citing the success of the Rialto study in their press release (BBC News 2013). Numerous pilot programs began in several Canadian police agencies beyond the few early test sites (RCMP 2015). The IACP, National Institute of Justice (NIJ), and COPS released formal reports and policy documents featuring recommendations for policy implementation and establishing guidelines for “best practice” use of BWCs (Miller and Toliver 2014; IACP 2014). The final report from the White House Taskforce on 21<sup>st</sup> Century Policing listed BWC as a key technology to be used in reforming police departments (President’s Task Force on 21st Century Policing 2015). Between the period of 2013 to 2018, it is likely that the number of law enforcement agencies in the United States utilizing BWCs effectively doubled (Lum et al. 2019). Axon, the company that had partnered with Rialto for the highly influential study, offered in 2017 to provide one year of free

BWCs for any police agency willing to adopt them (Axon 2017). Most recent estimates suggest that the majority of United States police agencies utilize BWCs and nearly all police agencies in the United Kingdom have implemented BWC programs or are in the stages of implementing them (Lum et al. 2020). Although precise numbers regarding the international adoption of BWCs are not available, there is substantial evidence of increasing adoption of BWCs amongst policing agencies in developed countries, with at least 36 percent of Canadian police agencies considering or running BWC trials, and multiple pilot projects run in Europe and Australia (Saulnier, Bagg, and Thompson 2021; Hyland 2018; Gkoukoudis, Pissanidis, and Demertzis 2022).

## 2.6 Discussion

This section will discuss how the movement of BWCs from their initial use in the UK to their widespread adoption in the United States and increasing uptake amongst police agencies in additional countries provides several examples of how the mobilities/institutional approach can shed light on these developments. Firstly, the role of informational infrastructures in facilitating isomorphism can be seen in this case. Secondly, how benchmarking used for comparisons between places can also influence institutional myths. Thirdly, that ceremony is a significant form of policy mutation that enabled mobility. Finally, that the relationships highlighted in institutional isomorphism influence police policy assemblages and enable mobility.

Table 2.2 Applying Integrated Mobility/Institutional Approach to BWCs

| Integrated Concept  | BWC Example   | Conclusion   |
|---|---|--|
| Informational Infrastructure enabling / influencing policy Isomorphism                                    | Cross Atlantic academic/best-practice Rialto Study; DOJ granting agencies; Conferences enabling mimetic & normative isomorphism | Infrastructures played important role enabling policy mobility of BWC          |
| Narratives & Benchmarks strengthen importance of what is measured, affecting Myths and influenced by them | Use-of-Force incidents benchmark influencing need to reduce incidents; Rialto as benchmarked success story in news media        | Use-of-Force incident benchmarks strengthened relevant myths, enabled mobility |
| Ceremony / Decoupling as form of policy mutation, dependent on institutional context                      | BWC without enforcement as ceremony mutation  | Ceremony mutation allowed for further mobility                                 |

|  |  |  |
|--|--|--|
| Relational aspects of isomorphism forces influencing policy assemblage | NYC ruling influenced by DOJ granting agencies; Farrar as chief/ Ariel as researcher with entirely different messaging | Policy assemblage including academic & police elements allowed for multiple relational geographies to enable stability, mobility |
|--|--|--|

### 2.6.1 Informational infrastructure played important role enabling policy mobility of BWC

Informational infrastructure assemblages help form the “structured field” through which police policy moves (DiMaggio and Powell 1983). The various “evidence-based policing” conferences, best practices focused police chiefs’ associations, information gathering site visits, university researchers, policy entrepreneurs, corporate vendors, and federal DOJ

granting/oversight/assistance structures produce pathways for police policy to become mobile.

These pathways extend internationally, as evidenced by the spread of other policing policies like COMPSTAT or community-oriented policing (de Maillard 2018; Dias Felix and Hilgers 2020).

These informational infrastructure assemblages change the policy assemblages that move through them and are in turn changed by those policies. In the case of BWC, starting in the UK as directed towards evidence gathering, then returning mutated from the United States as a method of enabling transparency and accountability in policing. As this is occurring at the field-level, this enables institutional isomorphism. First mostly mimetic, then mostly normative, as the policy assemblage influences the informational infrastructure assemblage.

The initial mimetic isomorphism in British Columbia and New Mexico BWC pilots that cited the earliest BWC pilots in the UK was facilitated by informational infrastructure that spanned borders between North America and the UK. In addition to this, the Rialto study, which was frequently cited following 2013, was disseminated and promoted through a network of conferences, news media, professional associations, and government agencies. This informational infrastructure assemblage not only enabled the initial mimetic isomorphism of departments emulating Rialto, but also enabled normative isomorphism, as professional associations such as International Association of Chiefs of Police (IACP) and the Police Executive Research Forum (PERF), and government agencies such as the White House and UK Home Office, developed and disseminated best practice models of BWCs that relied upon citations of Rialto amongst the evidence presented to support the myriad of benefits which accompanied adopting BWCs (IACP 2014, PERF 2012).

2.6.2 Use-of-Force Incident Benchmarks strengthened relevant Myths and enabled Mobility Policy assemblages moving through these informational infrastructure assemblages use benchmarking to establish comparisons between places. Place-marketing is often present during this benchmarking, as narratives of success from pilot implementation are used to “sell” the policy. This benchmarking affects police myths in variety of potential ways, such as creating new myths that may supplant old myths or reinforcing existing myths.

Rialto’s success became the dominant narrative of success in the interim period of 2013-15 (Schneider 2018). The pilot program was repeatedly referenced in news media as evidence of the effectiveness of BWCs as a response to the problem of police misconduct and declining public trust in police. In these cases, the quantitative nature of the Rialto study allowed for clear benchmarks, namely the number of citizen complaints, and use-of-force incidents. These benchmarks facilitated comparisons between police departments, thus enabling mimetic isomorphism, but also reinforced sovereign expectations regarding police use-of-force. Increased attention to these measures from multiple pilot studies such as Rialto further emphasized their importance, supporting the institutional myth that police are responsible for the number of use-of-force incidents and must actively work to reduce them, rather than use-of-force incidents being merely a consequence of criminal behaviour or non-compliance.

The academic and scholarly nature of these studies also interacted with the institutional myth of “evidence-based policing”, an expectation from citizens that police departments are engaging with latest research to inform their operations. The professionalization of policing, and framing it as a technical-rational exercise, means that a department that is adopting new technology backed by recent academic research such as BWCs is meeting sovereign expectations. Thus, studies such as Rialto both reinforced benchmarks that facilitated cross-department comparisons, as well presented BWCs as a way for departments to adhere to multiple institutional myths.

### 2.6.3 Ceremony Mutation allowed for further Mobility

There is also decoupling and ceremony that can be observed in the form of BWCs in departments that may have furthered mobility, as ceremonial aspects of the policy could be adopted to gain legitimacy while avoiding other aspects that might threaten existing police operations and structure. Reviews of BWC policy across multiple departments have found variations in BWC policy regarding the number of officers equipped with them, whether they are voluntary, policies

on their use, and the extent to which these policies are enforced (Todak, Gaub, and White 2018). BWCs adapt to the conditions in each department, and in cases where a police union is present, BWC policy adoption tends not to meet all the "standards" of BWC policy as described by best practice models, such as those developed by PERF (Nix, Todak, and Tregle 2020).

Albuquerque is one such example. Although this police agency was among the earliest to test BWCs, its deployment became an emblematic example of how the use of BWCs is not a panacea for officer misconduct. Although officers were equipped with cameras early in 2013, they used them selectively in their encounters with citizens (Samuels and Martinez 2014). Encounters that became subject to citizen complaints often had missing recordings or cameras that were blocked by officers. External reviews of the department found that while the department had policy guidelines on how BWCs were to be used, these were often disregarded, and officers not consistently disciplined for failure to adhere to procedures regarding their use (Samuels and Martinez 2014).

This sort of ceremonial policy adoption may have contributed to the further spread of BWCs, as certain agencies could gain legitimacy while protecting core functions from serious challenge. Equipping officers with BWCs gave the outward appearance of adopting the policy and thus meeting sovereign expectations, while the internal and less visible aspects of the policy that would threaten existing operations could be decoupled, avoiding conflict and potential legitimacy loss from police unions or officers.

#### 2.6.4 Assemblage and Isomorphic Relationality

The BWC policy assemblage had multiple relational connections associated with institutional isomorphic pressures that facilitated mobility. For example, the court ruling that forced limited BWC adoption in the NYPD used testimony from James Stewart, an expert on policing from the National Institute of Justice. This agency, part of the federal Department of Justice, had been providing funding and support for several BWC pilot projects. The funding of studies, publication of results, and active dissemination of information is a source of normative isomorphism (Giblin and Burruss 2009; Burruss and Giblin 2014). Although the judge was already aware of BWCs, Stewart was able to affirm that they were a "good idea" when asked by the judge, referring to the Las Vegas and Phoenix pilot projects as evidence to support this. After the ruling, multiple major news media agencies began writing stories on BWCs, which the judge

had ordered the NYPD to equip officers with, in precincts with the highest levels of racial disparities in policing.

The relational aspects of the Rialto study are also worth highlighting. Chief Farrar serving as both an academic researcher and a member of the police community allowed the Rialto study to be perceived as a legitimate scholarly work as well as a powerful anecdotal narrative from a police actor, enabling mobility by expanding the potential audiences receptive to the Rialto success narrative. Furthermore, Farrar's presence as an element part of the BWC policy assemblage contributed to its stability in managing the tensions between the increasing number of policy objectives as BWC policy mutated from its initial public focused implementation in the UK to its dual public and officer focused implementation in North America. There is an obvious tension present between the policy objective elements in the BWC assemblage: the cameras are meant to simultaneously protect officers from frivolous complaints while gathering evidence to convict citizens, while at the same time enhance public trust in police through surveillance of police behaviour. Yet Farrar's ability to act as a police chief with practical experience regarding a specific policy that could be imitated to respond to increasing sovereign demands, while also serving as an academic researcher utilizing social scientific methods to demonstrate objective evidence to support BWCs, facilitated his capacity to negotiate these tensions and therefore contribute to the stability of the BWC policy assemblage.

## 2.7 Conclusion

This chapter has explored how the institutional theory of organizational change can be integrated within the policy mobility approach to study the transfer of police policy from one context to another. Institutional theory sheds light on the distinct rationality inherent in police institutions, while the policy mobilities approach exposes the underlying mechanisms of isomorphism, granting a deeper insight into policy transfer. Examining the mobility of police policy through this lens allows us to see the broader societal and cultural context, as well as institutionalized rules and norms, that influence the transfer of police policy from one place to another. In the case of BWCs, this approach highlighted the importance of informational infrastructure assemblages in enabling mobility, and the complex interactions between the measurements that permit comparison between different places, with the institutional myths and sovereign demands that police agencies respond to in their pursuit of legitimacy.

It has also argued that this approach provides insight on how police policies are adapted to fit the new context in which they are implemented, and how these adaptations are shaped by the institutional pressures present in the new setting. Policies must change to move, but given the institutional nature of police agencies, the “mutations” of police policy are likely to involve ceremony and decoupling. This would suggest that policies with elements more adaptable to ceremonial adoption may be more easily transferred. Furthermore, this approach offers guidance to focus on the relations between policy assemblage elements as structured through those institutional connections that enable normative and mimetic isomorphism between police agencies.

This chapter has argued that the rapid spread of BWCs to police agencies in Western democratic countries can be traced to early pilot uses focused on evidence gathering in the United Kingdom which spread through informational infrastructure assemblages to North America, mutating to adopt additional policy goals of police accountability, while stabilizing as an assemblage due to a unique set of relations within between its elements to become a widely accepted “best practice” or “myth” for policing. However, this has not been an exhaustive analysis of the mobility of BWCs broadly or the specific adoption of a BWC policy in any one police agency. The analysis of the specific adoption of BWC policy in a police agency could utilize these insights to examine how specific institutional decisionmakers (such as chiefs or other senior officials) interacted with the informational infrastructures that BWC policy spread through. Specific, local context sovereign perceptions and demands regarding BWCs could further contextualize the adoption and implementation of BWC policy, including the level of ceremony or decoupling of policy.

In following chapter, the integrated mobilities approaches developed here will be utilized to examine the development and transfer of a novel approach of applying open data policy on police data, to enhance transparency and increase public trust in police.

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## Chapter 3 Police Data Initiative and Police-Citizen Interactions Open Data

### 3.1 Introduction

This chapter explains the mobility of *police-citizen interactions open data* (PCI open data) using the Obama administration's Police Data Initiative (PDI) as an inflection point in analysis. There has been little direct analysis of both the PDI and PCI open data, which may be explained by the existing bias within the literature that tends to favour examination of policies that are visibly "successful", such as those in public health and urban development (Baker, McCann, and Temenos 2020; McCann 2008; Longhurst and McCann 2016; McCann and Temenos 2015; Ward 2006), even as many scholars have noted that this selective focus frustrates attempts at a wider understanding of policy mobility (Lovell 2017; Temenos and Lauermaun 2020; Stein et al. 2017). This gap may also be explained by lack of direct accounting of the unique nature of police organizations within the policies mobilities literature. While the mobilities approach has shed light on various critical urban policies, analysis of police policy mobility accounting for the institutional nature of police organizations has been largely absent from this conversation, except in peripheral roles within other contexts such as safe-injection sites and criminal policy around sex work (McCann and Temenos 2015; Baker, McCann, and Temenos 2020; McMenzie, Cook, and Laing 2019).

This research fills both gaps by offering a scholarly analysis of PCI open data's development and mobility, and its relations with broader policing policy patterns in the United States. By analyzing PCI open data through the PDI, this research contributes to literature which confronts the binary success/failure paradigm (Stone 2017; Baker and McCann 2018; Temenos and Lauermaun 2020; Stein et al. 2017; Müller 2015) while expanding the policy mobilities approach to account for the unique institutional nature of police organizations. This chapter also contributes to our understanding of policy mobility, offering insights into the complex informational infrastructures through which policy coalesces and spreads (Cook and Ward 2012). Utilizing key-informant interviews and document analysis, informed by a mobility assemblage methodological sensibility, this chapter will "follow" (McCann and Ward 2012) the policy assemblage of PCI open data, utilizing an integrated institutional mobilities approach developed in chapter 2 to

contextualize its mutation and spread. Doing so reveals the tenuous stability of informational infrastructure assemblages which serve to enable police policy mobility and potential implications for the ways in which we understand police policy mobility.

Following the introduction, Section 3.2 provides academic and societal context for the case investigation, while Section 3.3 outlines the methodology utilized for data collection and analysis. Findings are divided into three sections. Section 3.4 presents the technocratic foundations of the PDI by tracing the experiences of key actors involved in the genesis of the PDI. Section 3.5 explores the stabilization of the PDI as an informational infrastructure assemblage, and the actors and relations that would also develop PCI open data policy model. Section 3.6 follows the destabilization of the PDI through the changes to key elements brought on by the election of the Trump administration. Section 3.6 then discusses these findings through an integrated mobility/institutional approach developed in chapter 2 to police policy mobility. Finally, section 3.7 revisits the gaps in existing mobilities literature and what this case study offers in broadening our understanding of police policy mobility.

## 3.2 Context

This section describes the key contextual factors to understand PCI open-data and the PDI: the role of technocracy and its concomitant discourses and epistemologies in the Obama administration, the influence of the federal government on decentralized American policing, and overall trends towards data-driven practices in governance, including police “professionalization”.

### 3.2.1 Technocracy and Obama Administration

Technocracy, the governance or rule by experts, is a concept that has been analyzed in various ways within political and social discourse. Some place technocrats within the context of neoliberalism (Peck and Theodore 2015), suggesting that they are an intrinsic part of a landscape shaped by rapidly shifting policies. However, Prince (2015) argues that technocracy constitutes a distinct assemblage with unique dimensions that exist independently of the prevailing ideologies, such as neoliberalism, that may utilize it.

At the core of technocracy is a combination of material elements—such as the actions of policy experts or technocrats—and expressive elements, like the objective and apolitical rationality that underpins their work (Prince 2015). Technocrats are tasked with creating metrics that measure

policy effectiveness at various stages. These benchmarks, while streamlining the comparison between different places, often ignore the nuanced differences that do not fit into quantifiable metrics (Larner and Heron 2004). This can alter the topological relationship between places by underscoring their similarities and overshadowing their unique characteristics, fostering a sense of proximity even when it's not physically present (Allen 2011; Prince 2017).

Technocratic practices influence policymaking by providing motivation for policy change. Places that score low on benchmarks might strive to emulate the policies of higher-scoring areas, guided by the narratives of success and failure that these metrics tell (McCann 2011a; Ward 2006). The technocrats, along with other policy transfer agents, construct these narratives and are instrumental in rendering certain policies as legitimate through the success stories they propagate.

Moreover, technocrats often become advocates of the policies they help to develop, with their professional achievements being tied to the success of these policies (McCann 2013; Larner and Laurie 2010). They occupy crucial roles in the policy mobility process by producing materials used to disseminate policy knowledge—such as presentations and policy briefs—especially in forums designed for knowledge exchange, like conferences and summits (McCann and Ward 2012).

During the Obama administration, technocracy was particularly prominent. President Obama's approach was often characterized by an empirical, data-centric philosophy of policy formulation (Trish 2018; Haskins and Margolis 2015). Wright and Mata (2020) further elaborate that this administration's epistemology favoured dispersed knowledge and a behavioural economics-informed skepticism of individual human judgment. Instead of relying solely on market mechanisms to harness individual knowledge, the administration embraced tools like wikis and open-source programming, seeing them as new arenas where knowledge could be freely exchanged and utilized.

This technocratic approach also influenced the definition of who qualified as a technocrat, increasingly favouring individuals skilled in data analysis and aggregation over those with traditional forms of expertise (Trish 2018). The Obama administration's openness to the tech sector reflects this shift, seeking expertise from a field that epitomized the capacity to manage large datasets and extract actionable insights from them (Wright and Mata 2020).

As with the shift in expertise from state bureaucrats to private consultants under “New Public Management” in neoliberal shifts in the 1990s (McCann 2008), expertise in this case moved beyond the role of any individual expert to data itself. This was reflected in the Obama administrations increased value on dispersed knowledge. The effective technocrat was therefore not someone who could produce knowledge individually, but rather one who could wield the tools of data aggregation and analysis to gather data (Wright and Mata 2020). Many of these actors were found in the rapidly expanding tech sector of the economy, which the Obama administration actively sought out.

### 3.2.2 Presidential Innovation Fellows

Early in the administration of President Obama, there was considerable focus on bringing in “innovators” from the private sector in the thousands of appointees to federal agencies (Farmer and Panchadsaram 2016). The justification for this from the administration was that certain practices and perspectives from the private sector, namely the private technology sector, could be utilized for better outcomes within government. Obama established a new White House office in this vein, the Chief Technology Officer (CTO) of the United States (Schatz 2009). The essential goal of the Chief Technology Officer (CTO) was to apply the expressive and material elements of technocracy to government writ large, promising to shrink the costs of government while improving quality.

Continuing the technocratic approach to governance, in 2012 the Obama administration established the Presidential Innovation Fellows program (The White House 2013). According to former CTO Todd Park, the program was directly inspired by a volunteer civic-tech activist program, “Code for America” (Scola 2013). The idea was to recruit “innovators” from the private sector to apply certain private sector principles – “lean” and “agile” – to specific projects which had six-month timeframes to produce impacts that were measurable (Farmer and Panchadsaram 2016). The new Chief Technology Officer had been tasked to recruit these innovators, saying that “Basically, what we’re looking for is badass innovators. [For] the baddest of the badasses out there to come to the government for focused six-to-12 month tours of duty to partner with our best innovators on game- changing projects” (Muratovski 2017). These fellows were then paired with small teams of civil servants and federal appointees who would work together towards whatever project they had in mind. The first cohort of fellows did such things as “streamlined the process for startups to sell to government, prototyped a user-centered

government web experience, and conducted a design challenge to make personal health data more accessible to millions of Americans” (Farmer and Panchadsaram 2016). After the initial fellowship was well received, the program was expanded, with additional federal agencies receiving fellows to partner on projects. Once re-elected, Obama made the program permanent, moving it from the White House into the State Department. In 2015, the US Congress passed the TALENT Act supporting this move (Muratovski 2017). Presidential Innovation Fellows would come to be the originators of the Police Data Initiative, utilizing another policy element within the technocratic approach: open data.

### 3.3.3 Open Data: Entrepreneurial and Open Governance

Broadly speaking, open data refers to both public and private data that is made available in machine-readable formats without licensing restrictions, meaning it can be used by anyone for any purpose, intended to maximize its potential for use (Barns 2016; Ubaldi 2013). The data being machine-readable refers to its release in digital formats that certain statistical or programming applications can process, as opposed to reports in PDF format that cannot be processed (Ubaldi 2013). While covering both private and public data, the focus of open data as a policy advocacy movement has mostly been on making government collected information freely available by these standards (Barns 2016; Ubaldi 2013; Sieber and Johnson 2015).

This particular focus for open data comes from its philosophical roots in the freedom of information movement of the 1960s, as well as the open government movement, which was a push to enhance transparency and accountability of elected governments through legislative frameworks that guaranteed the right of access to information for citizens (Barns 2016; Sieber and Johnson 2015; Ubaldi 2013). While open government initially focused on fresh disclosures from government throughout the early 2000s, this eventually changed to include improving access to all existing data through releasing it publicly on the internet, conceptually linking openness with technology (Yu and Robinson 2012; Sieber and Johnson 2015).

Open data subsequently developed to involve an entrepreneurial element, that focused on improving government through the involvement of the private sector, most importantly through combining the existing values of open government with entrepreneurial inducements for private sector use of open data (Yu and Robinson 2012). Code for America, the civic-tech volunteer program that the Presidential Innovation Fellowship program drew its inspiration (Scola 2013)



demonstrates this fusion in its promotional materials for enticing software developers to participate in one of their joint-government programs, stating that “you shouldn’t do this [build digital applications based on open data] just for fun, or even out of a sense of civic duty: you should do it because there’s money there – lots of it” (Sieber and Johnson 2015). This entrepreneurial side of open data seeks to use the private sector to outsource existing and supposedly inefficient government uses of data, as well as hoping to create new private economic activity from open data. For instance, the public transit feature built into the popular Google Maps application that communicates transit times makes use of government open data. Through this use of open data by the private sector, communicating transit information, which was previously a responsibility of a municipal government, has been placed into private hands (Sieber and Johnson 2015).

#### 3.3.4 Government Technology Industry

The government technology sector, which blossomed in the early 2010s, encapsulates the blend of democracy and entrepreneurship inherent in open data policies. Code for America, established in 2009, epitomizes this fusion by leveraging technology to improve governmental services and civic involvement. The organization, envisioned by founder Jennifer Pahlka as a technological counterpart to “Doctors Without Borders,” recruits tech talents to volunteer for civic projects, often in the form of local “brigades” (Scola 2013; Wadhwa 2011). Their work is supported by both private firms like CA Technologies and ESRI, and foundations such as the Knight Foundation with a vested interest in technological integration in journalism and civic transparency (Scola 2013).

Code for America not only contributes to digital service enhancements but also involves itself in political advocacy, such as their partnership with sf.citi to challenge fiscal policies limiting tech industry growth (McNeill 2016). These activities represent the multifaceted nature of open data—an assemblage of democratic transparency and entrepreneurial opportunity.

#### 3.3.5 The Influence of Federal Government in Local Policing and “Professionalization”

The larger technocratic shifts represented in the Obama administration are similar to earlier shifts in American policing which began in earnest in the early 1990s, where departments began pursuing data-based methods for guiding operational decision making, while prioritizing data-gathering and analysis, part of a larger “professionalization” shift in policing, in the

understanding of that term as policing as guided by expertise and “best practices” (Sklansky 2013). Affordable GIS technology and increased data availability have coincided with a recent paradigm shift in policing. This shift occurred because of widespread recognition of the ineffectiveness of random patrol and rapid response strategies that dominated policing during the latter half of the twentieth century (Weisburd et al. 2019). These strategies began to be replaced with policies that were framed as data-driven, place-based approaches to policing that target high-crime locations and high-priority community concerns (Weisburd et al. 2003; Sherman 2013).

One of the most influential examples of these data-driven police policies over the past three decades is COMPSTAT. Originating in New York City in the late 1980s and officially implemented by the NYPD in 1994, COMPSTAT combines enhanced collection and analysis of spatial crime data with changing police organizational structure to empower local police supervisors with decision-making authority to deploy resources in response (Silverman and Eterno 2019; Smith and Bratton 2014). Regular “COMPSTAT meetings” are also held where detailed crime mapping and regular briefings ensure all levels of command are informed and accountable, intended to hold local commanders to higher scrutiny based on their area's crime statistics (Silverman and Eterno 2019; Moore 2003; Smith and Bratton 2014).

COMPSTAT's introduction is correlated with a dramatic drop in crime rates in New York during the 1990s. The policy came to be largely credited to then-Police Commissioner William Bratton and his deputy, Jack Maple, who were recognized as key innovators behind what many considered the “rescue” of New York City (Kelling and Bratton 1998; Sousa and Kelling 2006). The approach quickly gained popularity, and within three years, numerous U.S. police departments were either adopting or adapting COMPSTAT models, with police chiefs nationwide visiting New York to witness the system in action (Pooley 1996; Gootman 2000). The diffusion of COMPSTAT has extended globally, with an unspecified number of international police forces adopting the model to varying extents (Long and Silverman 2005; de Maillard 2018).

Nonetheless, research indicates that the replication of COMPSTAT has resulted in a multitude of localized interpretations. Not all police departments incorporate the comprehensive New York model, which synergistically combines rigorous data collection, internal data dissemination, extensive meetings among precinct leaders, and enhanced command accountability (Weisburd et

al. 2019; Silverman and Eterno 2019). Variations in implementation suggest that while COMPSTAT's core principles are widely recognized, its practical application often varies in its actual implementation, even as the policy itself frequently adopts the label or references the original New York policy (Willis, Mastrofski, and Weisburd 2007).

### 3.3.6 Federal Influence in “Professionalization”: Research and Grants, Decrees and Collaborations, Taskforces

While local policing in the United States has traditionally operated with significant independence (Bayley 1992), with a patchwork of around 18,000 agencies each overseen by local authorities, this decentralized system does not operate in complete isolation from federal influence. The federal government does influence policing in three keyways related to “professionalization”: by utilizing grants and federal research agencies to influence policing, using consent decrees in tandem with less coercive collaborative reform agreements, and through forming policy taskforces in response to crises.

The Office of Community Oriented Policing Services (COPS), established under the Violent Crime Control and Law Enforcement Act of 1994, is a prime example of federal influence through grants and research (Worrall and Zhao 2003). It was designed to bolster community policing through grants promoting best practices in engagement, problem-solving, and decentralization. Such funding often comes with strings attached, requiring police departments to align with certain federal standards and strategies. The success of these programs in fostering the widespread adoption of community policing principles across the United States demonstrates the federal government’s capacity to influence local policing strategies indirectly (Worrall and Zhao 2003; Helms and Gutierrez 2007). A more direct form of federal influence on local policing is with consent decrees. Originating from the same 1994 legislation that created COPS, consent decrees are legally binding agreements that police departments enter following civil rights investigations by the Justice Department. These agreements typically result from systemic issues within police departments and often require comprehensive reforms overseen by independent monitors (Alpert, McLean, and Wolfe 2017; Goh 2020).

Another, less coercive means of federal influence is the Collaborative Reform Initiative for Technical Assistance (CRI-TA). This initiative assists police departments in proactively addressing problems that could diminish public trust (COPS 2015). Unlike consent decrees, which come after the fact, CRI-TA is voluntary and focuses on helping departments implement

changes before issues escalate into civil rights violations. The initiative has resulted in significant policy adjustments in participating departments, suggesting that federal influence can be both constructive and collaborative, not just punitive (Fachner and Carter 2015; 2014; Douglass 2017; Cole, Finn, and Lawrence 2015).

Finally, the federal government has utilized special commissions and taskforces to influence policing in response to crisis moments, such as the President Johnson's Presidential Commission on Law Enforcement formed following riots in the late 1960s (Sousa and Kelling 2006). The Taskforce on 21st Century Policing, established by President Obama following the Michael Brown incident in 2015, can be viewed as a part of this broader drive towards "professionalization". The task force aimed to identify and recommend best practices for reducing crime and bolstering public trust in law enforcement (President's Task Force on 21st Century Policing 2015). This taskforce, consisting of a diverse panel including police officials, scholars, and advocates, proposed reforms across six key areas such as transparency, technology use, and community engagement. At the 2015 International Association of Chiefs of Police (IACP) conference, President Obama highlighted these themes as essential to advancing police reforms (Obama 2015). This stance reflects the administration's technocratic approach to policy-making, prioritizing evidence-based strategies in the pursuit of professionalized policing. Obama's repeated emphasis on trust and the use of data during his address signaled a federal endorsement of the evolving data-centric shift in policing practices.

The overarching theme in these federal initiatives is a drive towards standardization, professionalization, and the adoption of evidence-based practices within local policing. By using both funding incentives and legal compulsion, the federal government influences local police agencies towards reform. This can be seen as an extension of the technocratic governance approach, where data-driven methodologies and best practices are prioritized, aligning with broader shifts within American policing towards evidence-based policy and performance metrics. Despite the fragmented structure of U.S. law enforcement, these mechanisms have facilitated a degree of homogenization in policing practices across the country (Burruss and Giblin 2014), illustrating the complex interplay between local autonomy and federal influence.

### 3.3.7 Context Summary

The Obama administration favoured a technocratic approach to policy that prioritized data and those capable of utilizing it (Wright and Mata 2020) and this approach could alter topographic relations that would influence policy mobility (Prince 2015). Open Data is a policy that is already highly mobile within and between places, that includes both democratic and techno-entrepreneurial elements as an assemblage (Barns 2016; Gonzalez-Zapata and Heeks 2015). The Obama administration's development of a Chief Technology Officer and Presidential Innovation Fellows mirror this technocratic approach, in the emphasis on utilizing approaches from the private tech sector in enhancing government efficiency through data and technology.

American policing has also been undergoing a larger normative shift which resembles the technocratic approach, where departments are increasingly pursuing data-based methods for guiding operational decision making, while prioritizing data-gathering and analysis. The Taskforce on 21st Century Policing, established by the Obama administration after the Michael Brown incident in 2015 to identify and recommend best policing practices to improve crime reduction and public trust, reflects both the federal influence over local policing as well as the technocratic elements within police professionalization. The recommendations made by the taskforce, which emphasized data-driven decision-making in policing (21<sup>st</sup> Century Taskforce 2015), as well as Obama's keynote address at the 2015 IACP conference (Obama 2015), where he stressed the significance of trust and data-driven strategies for police reforms, demonstrate this.

### 3.4 Methods

This research utilizes a methodological approach that has developed in urban studies directed towards "following" policies and the actors involved in their movement, paying close attention to the relational situations where policy models coalesce, and policy knowledge is spread (McCann and Ward 2012). The goal of this approach is to utilize methods that trace the spread and mutation of policy across space through the movements and actions of the people who mobilize policy, as well as the specific relational situations where policy models are formed, and policy knowledge is communicated (McCann and Ward 2012). As such, it uses qualitative data, combining key informant interviews with important policy actors within the PDI, as well as textual analysis of key conference recordings and policy documents.

Key informant, semi-structured interviews were conducted in 2019, utilizing purposive sampling targeting primary individuals involved in the development of the Police Data Initiative within the Obama White House (n=5). The semi-structured approach allowed for a certain degree of data comprehensiveness, while allowing probing for depth when necessary (Yeo et al. 2014; Patton 2015). Questions focused on participants' experiences with the PDI and their insights on the efficacy of the PDI in facilitating the spread of open data in policing. These interviews, lasting around an hour, were self-transcribed, aiding in recognizing recurring themes to guide the coding process (Spencer et al. 2014). The interview technique is ideal for understanding policy mobility, given its success in studying urban policy shifts in other contexts (McCann 2008; McCann and Temenos 2015; Baker, McCann, and Temenos 2020; Ward 2006). Speaking with the key actors involved with the PDI allowed for gathering data on the wide array of policy actors, relational situations between and among them, and the participants reflections on the utility of their activities in mobilizing policy (McCann and Ward 2012).

In addition, thematic analysis was conducted on a variety of different texts part of the “informational infrastructure assemblage” (McCann 2011b; McCann and Ward 2013; Temenos and McCann 2013) this chapter will demonstrate were part of the Police Data Initiative. These texts include statements made by a variety of individuals associated with the PDI, including police officials, technology vendors, and various representatives from the federal government. These were transcribed from publicly available recordings of several PDI relational situations, such as PDI conference presentations, question-and-answer sessions, panel presentations, and informational sessions (n=5). The interactions between various policy actors that occur at conferences are crucial for understanding policy mobility, making the focus on the statements and language used by individuals at these conferences appropriate (McCann and Ward 2010; Cochrane and Ward 2012). In addition, several documents created by the PDI or related organizations, such as promotional materials, PowerPoint slides, and other texts used during summits and conferences, were analyzed (n=5). Such texts are crucial to the knowledge production processes for policy mobility (McCann and Ward 2012). Purposive sampling was used, that focused on gaining an illustrative sample of the documents utilized by the PDI to discover the narratives and benchmarks used in mobilizing this policy (Larner and Laurie 2010; Larner and Heron 2004).

All qualitative data was coded using NVivo software, using a standard three-step thematic analysis coding approach, guided by an assemblage-informed approach sensitive to both the relational and territorial aspects of policy mobility (Dolowitz and Marsh 2000; McCann and Ward 2012; Peck and Theodore 2010; Prince 2012), which integrated institutional theories of organizational change as applied to police agencies in how those territorial aspects are defined. The first stage of open coding identified and developed emergent themes within transcripts, the second stage of axial coding applied these thematic codes systematically to the data, and the final stage of selective coding confirmed the coding applied to text to ensure intracoder reliability (Spencer et al. 2014; Patton 2015). During the first stage of open coding, themes were developed according to the theoretical grounding in a mobility/institutional synthesis developed in chapter 2, in combination with emergent themes from data. Remaining open to emergent themes while applying theory will ensure that analysis remains grounded in data rather than artificially superimposed by theory (Spencer et al. 2014; Patton 2015).

### 3.5 Findings I - Foundations

This section will explore the development of the PDI and the subsequent development of PCI-open data, following through the experiences of two individuals primarily responsible for its genesis: Clarence Wardell and Denice Ross. Both Ross and Wardell were in the Obama White House as Presidential Innovation Fellows.

#### 3.5.1 Technocratic Foundations and Presidential Innovation Fellows

The Presidential Innovation Fellowship program started under the Obama administration in 2012 (The White House 2013). Wardell and Ross both participated in the Presidential Innovation Fellowship as fellows in 2014. Their goal of their work was based on one of the core assumptions behind the entrepreneurial aspect of open data, that there are potential unanticipated uses for data, such as business ventures or other innovations, that cannot be known until that data is made publicly accessible.

Wardell was meant to work on releasing the economic potential of outputs produced by the National labs, while Ross was working on using technology of social media to improve disaster response, which was the field that Wardell was familiar with and had initially applied for. However, both were encouraged to work outside their assigned tasks by their superiors, who emphasized that they looked for people who were “entrepreneurial”, and able to “...find other

things that you're able to provide your skillset and expertise" (Interview #2 2019). Wardell and Ross came into their positions shortly after the death of Michael Brown at the hands of Police in Ferguson Missouri, and the start of the modern civil rights movement known as Black Lives Matter (Phelps, Ward, and Frazier 2021). It was at this time that Ross and Wardell began a dialogue that stemmed from their shared experiences - Wardell's involvement in policing collaboration programs in Philadelphia, and Ross's work on transparency in New Orleans (Interview #1 2019).

### 3.5.2 Wardell and Technical Reform Assistance Efforts

Wardell had been previously employed with the Center for Naval Analyses (CNA), which was involved in the collaborative reform process that the Philadelphia Police Department began in 2013 (Coldren et al. 2015). He was part of the collaborative reform team that CRI-TA provided to the Philadelphia Police Department. During this time, as the city tried to proactively address community concerns surrounding officer-involved shootings, it began sharing this information on recent incidents through a website (Interview #2 2019). Wardell saw this measure not as a comprehensive solution to officer-involved shootings, but as a simple, immediate step that the department could take to respond to calls for greater transparency from the community (Interview #2 2019). This approach stood out, as it was not the norm. While many departments shared crime data, data regarding accountability was rarely shared (Interview #2 2019).

### 3.5.3 Ross and New Orleans, BlightStatus

Ross's experiences in New Orleans had given her a belief in the usefulness of Open Data for solving intractable political issues, which the civil rights protests of 2015 bore a resemblance to. Ross first became involved in New Orleans when she joined The Data Center as co-director in 2001, an organization advocating for data-driven decision-making in New Orleans (Data Center 2023). After Hurricane Katrina, the center provided data for recovery debates and strategies, which had been hampered by the inaccuracy of existing data and difficulty accessing government records (Gardere, Plyer, and Ross 2020). Amidst the city's challenges, including public corruption charges against officials and a consent decree for the police department, Ross pushed for data transparency. Despite resistance, she successfully released a vital parcel layer data set via Dropbox, bypassing the city's dilapidated IT systems (Interview #1 2019). This open data initiative paved the way for more public data releases, eventually leading to New Orleans hosting a Code for America fellowship in 2012. Tasked with creating a tool for tracking blighted



properties, Code for America's tool, "Blight Status," consolidated various data sources into a single, user-friendly platform. This tool allowed residents an easier method to access to comprehensive property information, facilitating informed community discussions (Interview #1 2019).

Wardell and Ross identified a recurring issue from their experiences: the public often disputed facts, like the situation in New Orleans before the implementation of the BlightStatus app. Similarly, in the ongoing debates regarding police use of force controversies, it was unclear whether police violence was improving or worsening in various regions (Interview #1, #2 2019). This lacuna led to crowd sourced data collection efforts, not unlike the situation that had existed post-Katrina (Interview #1 2019).

However, a closer look at the complexity of BlightStatus in New Orleans reveals useful elements of actors that would become important in the PDI and PCI open data, and the connections between technocracy that exist throughout.

#### 3.5.4 BlightStatus, Entrepreneurial Tech

Although some scholars situate technocracy as part of the larger structure of neoliberalism (Peck and Theodore 2015), others have argued that technocracy is an assemblage featuring both transfer agents as experts, as well as a form of rule that is integrated with the broader "context of contexts" of the policy world (Prince 2012; 2015). The mapping tool "BlightStatus", created in 2012 by a New Orleans' Code for America team, is an example of how technocracy functions in this way. Utilizing open data, the mapping tool would be used as the technology to power "BlightStat" meetings (Carpenter, Mitchell, and Price 2015), a policy that began in 2010 that used collaborative meetings where different government and non-government stakeholders to coordinate action and update progress on the goal of eliminating 10,000 blighted properties by 2014.

Noted as a variation of "CitiStat", a similar program used in a variety of American cities (Behn 2006), which is itself modeled after the highly mobile police policy COMPSTAT (Silverman and Eterno 2019). Like the variations in the actual "COMPSTAT" policies adopted by departments (Weisburd et al. 2019), there is not a single CitiStat program, as each city that implements this policy has significant variations in each form it takes (Behn 2006). The core similarities between COMPSTAT, CitiStat, and BlightStat, is that each policy model aims at improving outcomes by

coordinating action between disparate actors within a larger organization, through regular meetings between different actors that utilize regularly updated data, often spatial data, to communicate a consistent picture of reality and verify performance of individual departments and hold these departments accountable.

However, unlike the various mutations of COMPSTAT or CitiStat, BlightStatus was an open data platform that allowed all stakeholders, including citizens, equal access to data (Carpenter, Mitchell, and Price 2015). This equality in access, part of the democratic element of open data, was emphasized by the Data Center as an example of the promise of open data in responding in inequality, as “people with financial resources and powerful social networks have always had access to the data they need to exploit neighborhoods; The Data Center levels the playing field so that agents for good also have access to that same information” (Gardere, Plyer, and Ross 2020). However, while the BlightStatus application may have made the BlightStat program more equitable in terms of access to information, the process of removing blighted properties enabled by it mirrored the inequities of “actually existing” neo-liberalism. By providing greater access to data that quantified and measured “blight”, strict code enforcement was facilitated, leading to such negative impacts such as displacement of poorer homeowners unable to afford to pay fines or upkeep on their properties (Carpenter, Mitchell, and Price 2015).

The story of BlightStatus as a tool further suggests that the assemblage of open data as a combination of entrepreneurial and democratic elements, heavily involving entrepreneurial gov-tech actors such as Socrata and others. While BlightStatus began as an act of civic tech activism from a Code for America team, it morphed into a privately held, for profit company known as “Civic Insight” run by the two Code for America fellows who had originally created it (ESRI 2015). Civic Insight itself was then acquired by Accela in 2015, another private company attempting to sell policy solutions to city governments, which was itself acquired by the private equity firm Berkshire Partners (Mannes 2017). The private equity firm reported plans to immediately attempt to market these government information technologies to European governments (Miller 2017).

The transition from a spatial mapping application by a volunteer “brigade” of civic minded technologists volunteering their time to help their country, to a technology company owned by a private equity firm aggressively marketing its product to international governments occurred

within the space of four years. Meanwhile, the link to the much-touted BlightStatus data mapping application that allowed equal access to property data for all citizens returns a 404-error message. The only direct reference to the BlightStatus program is the presence of a dataset in New Orleans open data portal, itself a Socrata product. Last updated in late 2019, it is a record of every structure that has been demolished since 2010 (City of New Orleans 2019). Within are over 3,940 rows. Seemingly folded into the Socrata open data portal, another product of a technology vendor, it contains several updated datasets containing the various types of information present in the BlightStatus tool, such as records of fines levied, citizen reported blight properties, code enforcements and similar data (City of New Orleans 2023).

Ross framed the open data use for dealing with Urban Blight from the perspective of civic tech activists like Code for America (Interview #1 2019). However, these civic tech activists and organizations must be understood in terms of their relationship with those technology vendors such as Socrata, which sell the technology to organize and distribute this data. Similarly, the movement of civic tech activists from volunteers involved in patriotic service to their country, to technology firm start-up owners selling the technology to solve problems to governments, suggest that clearly delineating these two elements from each other may be difficult. Oliver Wise, former director of New Orleans's Office of Performance and Accountability, similarly used the experience of New Orleans when quoted in an advertisement news story touting the benefits of the police data initiative and open data, as well as the advantages of partnering with tech firms like Socrata when doing so (Neitzel 2018). Wise left the New Orleans's government to take a position with Socrata, the same technology firm that city had purchased technology from that replaced the BlightStatus tool created by the Code for America brigade. Wise worked for Tyler Technologies in 2018, the same year that Socrata was acquired by that company (Neitzel 2018).

This period saw the rapid expansion of the Civic Technology industry. During the period between 2011 and 2017, approximately \$430 million dollars was invested in civic technology organizations (Patel et al. 2013). The belief in the capacity of technology to enhance democracy, especially with regards to the capacity of citizenry to better communicate with government, is a widespread value held by those within the "consultative layer" of the civic technology industry (Brabham and Guth 2017). This was reflected as a consistent theme in throughout interviews, conference recordings, and news media statements by PDI actors.

Accordingly, Open Data was something that “everyone had gravitated towards” (Interview #2 2019). Thus, the combined experiences of Wardell and Ross lead them to hypothesize that police departments could build trust with their communities by proactively releasing police-citizen information as open data, and such transparency might reveal patterns of bias and could be a step towards better community relations (Interview #1 2019).

### 3.5.5 – Early Adopter Departments

Since Wardell’s experiences in Philadelphia had confirmed existing police data releases, the team began a process Ross referred to as “scout and scale”, where they first searched for existing approaches to data releases by departments that might be then adapted and adopted by a wider set of departments (Interview #1 2019). It was this approach that brought their attention to several police departments that had been engaged in tentative data release policies, such as the Dallas Police Department.

Dallas was in many ways an innovator of police policy. In 2008, the Dallas Police Department, with local academic and business support, established the Caruth Police Institute, which seeks to enhance policing through leadership and management training for mid-level and senior officers and engages in regular analysis of DPD practices for continuous improvement (Davis 2010; Davis and Iyengar 2013). In the case of data, Ross and Wardell found that Dallas PD had initiated large data releases of police-citizen interactions data. However, this was done in a manner more consistent with communications of community policing rather than open data. The information was in PDF form and lacked the machine readability critical to open data. Several other cities, such as Montgomery County in Maryland and Louisville in Kentucky (Interviews #1, #2 2019) were noted by Ross and Wardell to have data releases like this, attempting to utilize openness and transparency in response to the issues surrounding inappropriate uses of force against citizenry – black citizenry in particular. Philadelphia had released some summary statistics, and Seattle had shared metadata from a pilot test of their body-worn cameras. However, these releases tended to be technically unsophisticated, with data not in open-data formats.

Multiple actors within the PDI spoke of the power of the White House to “convene” (Interview #1, #2, #4 2019). Seeing that several departments from across the country were seemingly engaged in similar attempts at releasing data, they sought to bring these departments to the White House to establish connections between them. Ross and Wardell both theorized that if they could

unite these departments, they might encourage a commitment to releasing more data, which could then be scaled up to include as many police departments as possible. The ensuing question became whether they could gather these departments, often isolated within their respective cities, and pair them with their city's Chief Information Officer (CIO) or Chief Technology Officer (CTO) who might be managing the city's Open Data portal (Interview #2 2019). They also wanted to involve community technologists and groups like Code for America, along with researchers interested in the problem and willing to provide support capacity for interested departments (Interview #1, #2 2019). Their hope was that pairing these departments with this expertise might help further develop these efforts towards being fully “open”.

### 3.6 Findings II – White House Police Data Initiative

This section will examine the PDI forming as an assemblage and the work by various actors that formed the PDI in stabilizing the earliest policy model of PCI open data.

#### 3.6.1 Early Adopters and PDI territorialization

This first meeting took place in April of 2015, and included these early adopter departments that had been identified as already taking steps towards increased data transparency, along with the civic technology organization Code for America and DataKind, civic technology vendor Socrata, as well as researchers from Stanford University and the University of Chicago’s data social science program (Interview #2 2019). This initial meeting brought together fourteen police chiefs that had identified in the “scout and scale” search, along with these others representatives, for a working session. This first meeting is where the territoriality of PCI Open Data under the PDI would take shape, and the three requirements for a department to join the PDI would be established.

The first was a commitment to release at least three different police data sets in an open data format. Second, appointing some member of the department as the “quarterback”, or individual responsible for the policy and to participate in “check in” conference calls. Third, leadership “buy in” from police, local IT director, and the manager of the county or city. These three elements closely mirrored the same requirements for participating in What Works Cities, the technocratic policy organization which had launched the very same month as this initial meeting (Wilson and Lilly 2016).

Those attending the initial meeting in April of 2015 reflected the elements of the PDI assemblage. The police chiefs who attended were examples of the burgeoning transparency forming in policing as a continuation of professionalization. Technocratic elements of civic tech vendors, alongside civic tech activists, were presented by Code for America and Socrata.

As the PDI was forming, it is important to note that the other major response to the civil rights demonstrations from the Obama White House was the Taskforce on 21<sup>st</sup> Century Policing (President's Task Force on 21st Century Policing 2015). At this initial meeting in April of 2015, the interim results of the report had been released. Wardell reported that although they were not directly involved with the taskforce, they knew that technology and data were going to be an important part of the final recommendations. From their perspective, this meant that PCI Open Data, and the PDI, could be a way that departments could respond to the taskforce's recommendations with something tangible they could commit to and follow through on (Interview #2 2019).

The Police Data Initiative was officially launched the following month, with an additional 7 departments that had joined since the initial 14 following the April 2015 meeting (President's Task Force on 21st Century Policing 2015).

### 3.6.2 Quantifiability

It is also important to note that there is an inherent attractiveness to a policy that allows quantifiability, which may have been important in gaining the attention and support of those higher up in the chain of command within the White House. Key actors within the PDI were tasked with conveying the significance of the efforts of those working in the PDI to higher-ups in the command chain and explaining the ongoing progress. From their perspective, the PDI had an objective quality that was appealing, as they could provide concrete numbers, like how many police departments were involved in the PDI and how many datasets were being opened up (Interview #3 2019). This tangibility made their work more understandable and appealing to many people. Furthermore, they were able to measure the impact of their work on the country by gauging the population affected every time they persuaded a large police department to join the PDI. From their perspective, the objective aspect of these initiatives made them “a straightforward sell” to decision makers in the Obama administration (Interview #3 2019).

Within a year, the PDI had grown to 53 departments participating in the program. These departments in this initial cohort were thought by PDI actors to have been easier to move into the PDI because they already had the technology or data quality to participate, or were integrated in existing policy networks like What Works Cities (Interview #1, #2, #4). However, those “higher up in the chain of command” suggested that they should strive to engage 100 cities (Interview #1 2019). This goal of would tackling “the next layer of cities” seemed to be far more difficult, as they had already recruited all the departments that in their eyes had characteristics which made joining the PDI easier: large cities with well-organized 911 call service data, most of the “What Works Cities”, and all the cities with Chief Data Officers who participated in Code for America events (Interview #1 2019).

This stage of the expansion of the PDI reveals several important insights: one was that existing technological infrastructure influenced participation, as cities that already had police data of suitable quality could more easily released these data as open data. In interviews, this was identified as to be part of the reason PDI actors had invited not only chiefs of police, but also chief information officers from cities. The notion of integrating existing open data platforms into this effort was to continue with an existing policy push.

### 3.6.3 Government Technology and Technocratic Actors

The role of government technology was engaged in this period in 2016. In April of 2016, one year after the initial meeting of the PDI, as the White House was eagerly noting the expanding number of departments that had signed onto the initiative, advertising that Socrata was also offering a discount for it’s services, “Socrata is offering Police Data Initiative participating jurisdictions a discount to its Socrata for Public Safety starter kit bundle that allows for publishing of police data, context, and stories around that data, and also a map-based interface for viewing crime data, for the remainder of 2016” (The White House 2016). Cities that did not have the technical capacity to overcome data issues could utilize the private sector to accomplish it.

Another example of the involvement of these actors was “What Works Cities”, a technocratic Bloomberg organization dedicated to encouraging mid sized cities to “more effectively use data in their policymaking” (Wilson and Lilly 2016). The sorts of connections, contacts, and relationship from those urban spaces integrated into this easily fits into a larger push towards open data, a policy considered successful and “working”. Cities already within the WWC

program necessarily have demonstrated a willingness to alter policy to utilize data according to “best practices”, and partnerships with the Sunlight Foundation to write open-data policies (Wilson and Lilly 2016). In fact, the structure of WWC and PDI bore many similarities. Both programs worked to connect participating members with each other to share progress and solutions for problems, and both programs sought to designate a member of participating cities or police agencies to be responsible for the program, a “champion” in the case of WWC and a “quarterback” in the case of PDI. With regards to establishing a “community of practice” surrounding implementing PCI open data, the connections between each participating department were seen by Wardell as a method through which PCI open data might be furthered once the PDI had officially ended, as the end of the Obama administration was approaching (Interview #2, 4 2019).

#### 3.6.4 Fostering relations between PDI actors

Another key measure that the PDI was tracking was institutionalization (Interview #2 2019). Their goal was to secure long-term support for the initiative as President Obama’s final term reached its end. To this end, the Police Foundation received funding to sustain the Police Data Initiative, primarily as a “community of practice”. A particularly important part of this community of practice was the weekly phone calls with all the departments. PDI members considered these calls as serving dual purposes: they acted as an accountability check for the departments not to them but to each other, and as a problem-solving forum where departments could share experiences and solutions regarding the new datasets and their publication (Interview #2 2019). PDI leadership considered these calls as important for the initiative, significantly contributing to the early momentum (Interview #2 2019).

Yet the PDI would continue to increase to just over 130 participating agencies within the next year, continuing to grow amongst those cities characterized as “tougher” (Interview #1 2019). PDI actors within the Obama White House did not frame themselves as the most effective agents for persuasion to bring in new departments into the PDI. Instead, the most effective strategy was connecting non-participating police departments with those already involved in the initiative, facilitated by the Police Foundation or directly between the chiefs (Interview #1, #2 2019). The narratives presented by Chief Brown from Dallas PD were noted as being far more effective than anything they might say, in part because peer testimony appeared to have resonated more authentically with the police chiefs. Multiple PDI actors described a competitive dynamic



between departments emerging as well. As more departments joined the initiative, non-participating departments questioned why they weren't involved (Interview #2, #3). However, due to the vast number of law enforcement agencies, their primary focus was on engaging departments that showed enthusiasm towards the initiative, getting them started with publishing datasets, and facilitating discussions.

It is also important to note that the prestige of the White House may have also played an important role in compelling some chiefs to come to PDI meetings and subsequently join the PDI. Being part of the Obama administration and having the support of the President, who highlighted the initiative as a critical issue, was framed as having significantly boosted their efforts (Interview #1, #4 2019). Regardless of individual political affiliations, the President's endorsement and an invitation to a conference at the White House carried a strong weight, spurring more engagement and discussion around the initiative (Interview #1 2019). The meetings and conferences held there were opportunities for early adopting chiefs, such as Chief Brown from Dallas, to share their experiences to other chiefs.

### 3.6.5 Beyond “convening” to Policy “boosterism”

In interviews, actors at the PDI did not frame themselves, or the PDI itself, as necessarily serving as policy advocates for PCI Open Data – trying to convince reluctant or recalcitrant departments to adopt PCI Open Data - however it would be incorrect to frame the PDI as entirely unengaged with policy advocacy. Although there was a clear understanding of an “inside and outside [the] gate” (Interview #2 2019) approach to engaging with police policy actors within the PDI, several of the conferences PDI actors presented at and engaged with, civic technology conferences in particular such as DataEdge and GitHub Universe in 2016, were about encouraging the continuing development of increased public expectations for police transparency:

“The only reason that we were able to get departments at the table, was because there was a demand from folks in the community that they be more transparent in terms of what was happening, with police citizen interactions. So we wanted to continue to sustain that, and we let folks know that hey, there’s a group of departments here that are doing this work, and that you can either help your department do the work, or if they release the data and you can make that data visible to the people in the community. Or if they haven’t released it, you can ask them why. Be an advocate in your community.” (Conference #2 2016)

Although there were pressures to increase the total number of departments participating in the initiative, as that number itself was noted as a measure of success and something that could be pointed to as continued momentum, PDI actors noted mixed feelings within the PDI towards to increased number of agencies joining.

And that is that departments would say they would sign up, and a lot jumped in and did everything that we wanted them to do. But a significant number of them, even though they had signed up and agreed to do stuff, weren't doing it. And it wasn't getting done. And I felt we needed more depth to what we were doing and others spent more time on the very surface pieces of it. So, there was a little bit of a dispute that was happening within. So our numbers grew dramatically on people who said they were signing up. The depth of the data we kind of ran into a bit of a problem with. (Interview #3)

The low barrier for entry into the PDI meant that what police departments released as open data varied significantly, both in terms of amount of data released as well as its content. At the beginning of 2016, several cities which joined the initiative had yet to start publishing current incident data online. Out of the 79 U.S. cities with a population close to or over 250,000, only 22 were regularly updating their public incident data. Eleven of these cities were formal members of the Police Data Initiative (Asher 2015). This inconsistency in terms of the consistency of PCI open-data implementation was noted to be a problem, that actors within the PDI began focusing on ensuring those participating departments were meaningfully implementing or developing their own PCI Open Data policies, while also working to increase the participating number of agencies (Interview #3 2019). Additionally, there had been movement on open data in other police departments that had not joined the PDI (Asher 2015). During this time, departments other than those who had joined the PDI were releasing data, some in an open data format and others not (Asher 2015).

Nearing the end of the Obama administration, 129 law enforcement agencies had joined the Police Data Initiative by October of 2016 (Wood 2018). The following month would see the Donald Trump win the presidential election and the new Trump administration was expected to have a significantly different approach on federal involvement in policing. Actors in the PDI had sought to establish ongoing support for the PDI through the National Police Foundation, to establish it as a community of practice between police departments that would continue to spread

PCI open data amongst American policing (Interview #2 2019). Continued funding for the PDI would come from a DOJ grant to the National Police Foundation (USASpending.gov 2016). However, the election of the Trump administration would bring a series of changes that would destabilize the PDI and PCI open data assemblages.

### 3.7 Findings III - Shift under Trump Administration and Deterritorialization

This section will describe how the changes in federal department of justice, along with deemphasized importance of technocratic epistemologies, that accompanied the administration change from Obama to Trump would destabilize the PDI assemblage.

#### 3.7.1 Federal Department of Justice: Consent Decree changes

The shift from the Obama to Trump administration impacted the PDI in several ways. The first was a change in the participation and direction from the federal Department of Justice regarding federal involvement in police reform. The new head and attorney general Jeff Sessions made a series of changes when he took office in February of 2017. In his prepared remarks during his confirmation hearing in front of the Senate Judiciary Committee, Sessions characterized the preceding years as ones where "...enforcement as a whole has been unfairly maligned and blamed for the actions of a few bad actors and for allegations about police that were not true. [Police] believe the political leadership of this country abandoned them. They felt they had become targets. Morale has suffered" (Sessions 2017a). Although Sessions did remark that the justice department can assist state and local law enforcement in building relationships with the communities they serve, he focused on partnerships on how the justice department "must use the research and expertise of the Department of Justice to help them in developing the most effective and lawful enforcement methods to reduce crime. We must re-establish and strengthen the partnership between federal and local officers to enhance a common and unified effort to reverse the current rising crime trends" (Sessions 2017a).

The second important change was the position of the federal Department of Justice regarding the use of consent decrees. During the Obama administration, the DOJ had actively used consent decrees. In the period from 2009 to 2014, 20 investigations had been opened into police departments resulting in 15 consent decrees (Faturechi 2020). In contrast, Sessions was highly critical of the DOJ being involved in police reform. Sessions ordered a review in March of 2017 of all existing DOJ activities,, including consent decrees (Lichtblau and Stolberg 2017). When

the Chicago Police Department was in the process of finalizing a consent decree in October of 2018, Sessions publicly criticized it as “a colossal mistake”, “irresponsible”, and an “insult” to Chicago police officers, and the structure of the consent decree as “anti-democratic in nature” (Madhani 2018). The conditions surrounding consent decrees were also altered in a November memo in 2018, released by Sessions shortly before he was removed from his post by President Trump, who described Sessions as “very weak” and “disgraceful” for declining to oversee the investigation in Russian interference in the 2016 election in favour of Trump (Jacobs and Siddiqui 2018). The memo changed consent decrees to require authorization from political appointees in the DOJ rather than DOJ lawyers, additional violations of a department were required beyond unconstitutional behaviour, and all consent decrees needed firm end dates rather than ending only when terms of the agreement had been reached (Sessions 2018b). These changes effectively placed consent decrees outside the hands of DOJ lawyers and into the hands of political appointees. The next attorney general, Bill Barr, maintained this policy. During the Trump administration, no new consent decrees were enacted by the Department of Justice (Faturechi 2020).

### 3.7.2 Federal Department of Justice: Voluntary Reforms Ended

A closely related change occurred regarding Collaborative Reform initiatives. Under the Obama administration, the office of community-oriented policing services (COPS) had utilized the collaborative reform initiative for technical assistance (CRI-TA) program, to establish collaborative reform partnerships as a “middle ground” between consent decrees and no reform. In the memo released in September of 2017, Sessions effectively ended the collaborative reform partnerships, redirecting the COPS office to instead focus on technological assistance related to “fighting violent crime”, while “respecting local control and accountability” (Sessions 2017b). The memo stated that the change was “...a course correction to ensure that resources go to agencies that require assistance rather than expensive wide-ranging investigative assessments that go beyond the scope of technical assistance and support” (Sessions 2017b).

The Collaborative Reform Initiative remained but changed to reflect the different direction from the political leadership in the department of justice. With an updated slogan of “Law Enforcement Solutions By the Field, For the Field”, the new Collaborative Reform Initiative Technical Assistance Centre (CRI-TAC) focused its assistance on technical assistance to specific crime issues, “human trafficking, mass casualty response, mass demonstration response, drug-

related crime, focused deterrence” (COPS 2019) – in other words, policy focused on crime rather than on trust and legitimacy. According to a 2019 review, the most popular topics agencies received assistance on were de-escalation, intelligence and information sharing, active shooter responses, crisis intervention, and school safety (COPS 2019).

### 3.7.3 PDI at Police Foundation

Following the end of the Obama Administration, the management for the PDI was transferred to the Police Foundation (Business Wire 2018), which changed its name to National Policing Institute in March of 2022 (National Policing Institute 2022). The funding for the Police Data Initiative came from the DOJ COPS grant, that had been set to run until the end of 2018. However, this was a sub-award of a larger grant through CRI-TA to the Police Foundation, which committed a little over \$32,000 dollars a year to “enhance open data and transparency” (USASpending.gov 2016). The March 2017 memo released by Sessions had ordered an immediate review of all department of justice activities to be consistent with the new direction under his leadership, including grants (Sessions 2017b). Although the memo mentioned the importance of “the collection and analysis of timely, reliable statistics on crime and criminals are essential for effect law enforcement strategies”, this framed the importance of police data in terms of directing enforcement strategies, rather than community outreach or accountability efforts.

Nevertheless, the National Police Foundation produced a best-practices guide based on the experiences enacting open data policy of participating departments in the PDI (Police Foundation 2018). The five-part guide focused on framing the best practices of open data through case studies of ten participating departments in the PDI, relying on first-person accounts and direct quotations from “data champions” within those departments (Police Foundation 2018). While building community trust was presented as an important goal served through PCI open data, additional benefits such as improved community engagement to direct enforcement action and more efficient media inquiries were emphasized.

The National Police Foundation listed over 140 departments having joined at the time of its release in November of that year, claiming that over 380 open data sets had been released “with many more in development” (Business Wire 2018). However, the Police Data Initiative would not continue to attract additional departments to join, and this would be the high-water mark for

participation in the initiative. The directives given from the Sessions-led Department of Justice to refocus all granting and technical assistance efforts towards crime fighting suggested that continued support for the PDI, focused on enhancing community trust through transparency and accountability, was not amongst the priorities for the department.

#### 3.7.4 Technocracy Deemphasized under Trump

The change within the COPS office of the U.S. Department of Justice from the Obama to Trump administration highlights an important part of the assemblage of this policy, as well as the role that technocracy plays in policy mobility generally. In this view, technocracy is both a material assemblage of actions and specific actors, namely policy experts who advocate for certain policy based on that expertise, as well as a way of thinking that supports the work of technocrats (Prince 2015), that together influences the topological relations between places that draw them closer or further apart (Allen 2011). The Obama administration had placed a significant importance on using technology as a method to solve problems (Kenneally 2009) – indeed, many of the actors within the PDI in the Obama administration were various sorts of technologists (Interview #1, #2, #4 2019). In contrast, Donald Trump’s brand of political populism rejected the technocratic framing of governance forwarded by the Obama administration, instead framing technocratic expertise and those individuals who possess it as part of a corrupted insider political class (Karakaya and Edgell 2021).

In his testimony before the House Committee on the Judiciary Oversight Hearing on Policing Practices in 2019, former COPS director and retired chief of police Ronald L. Davis categorized the approach of the DOJ of the Trump administration, under Jeff Sessions, as taking an approach that was from the past. He specifically decried the direction of the department as “going backwards”, utilizing “politics and ideological views” to inform policy decision making, rather than “science and evidence” (David 2019). Davis had been a staff member on the Obama White House’s 21<sup>st</sup> Century Policing Taskforce (President’s Task Force on 21st Century Policing 2015).

However, this did not mean that appeals to evidence or data were not utilized to justify policy directions or choices by members of the Trump administration. Yet these invocations were not indicative of the same technocratic leanings present in the Obama administration, but rather a more selective reference of information that supported policies rather than a reflection of a wider scholarly evidence base, or as evidence that was trustworthy given its production from certain

forms of epistemic knowledge production as was the case in the Obama administration (Wright and Mata 2020). For example, in public statements Sessions framed former New York Police Commission Bill Bratton and Rudy Giuliani as “smart law enforcement”, arguing that consent decrees that mandated reporting requirements for officers conducting “Terry” stops, including that that data be in a “publicly available database” had led to officers not conducting them (Sessions 2018a). Sessions supported this narrative by quoting from “a study by two professors from the University of Utah” that suggested the increased murder rate in Chicago was a result of the consent decree (Cassell and Fowles 2018). “There’s a clear lesson here: if you want more shootings and more death, then listen to the ACLU, Black Lives Matter, or Antifa. If you want public safety, then listen to the police professionals who have been studying this for 35 years” (Sessions 2018a).

Sessions similarly suggested that there were spikes in crime in every city where the police had been found to be systematically violating citizen’s rights, and therefore had been placed under a consent decree. He contrasted Baltimore and Chicago, operating under consent decrees which had decreased the number of pretextual “Terry” stops that had been found to systematically targeting Black and Latino citizens in a manner that violated their constitutional rights (Douglass 2017; Goh 2020), with New York City, that was using “smart law enforcement policies” which “bring down crime rates and start a virtuous cycle of safety and prosperity” (Sessions 2018a). However, New York City had also been subject to a consent decree regarding systematic practices of violating Black and Latino citizens’ rights through targeted pretextual stops, known as “stop and frisk” (Scheidlin 2013). Sessions did not note this, instead heaping praise on Bill Bratton and Rudy Giuliani, the two main actors which had long claimed credit for New York’s reducing crime rates in the early 1990s under the development of COMPSTAT alongside Civilities Policing policies (Kelling and Bratton 1998), despite ongoing scholarly debate regarding the causal connection between crime reduction and those policies (Moore 2003; Weisburd et al. 2019; 2003).

### 3.8 Discussion

This section discusses the major themes present in the mobility of PCI open data through the PDI, from the perspective of institutional mobility integration developed in chapter 2.

### 3.8.1 PDI as Informational Infrastructure Enabling Isomorphism

The first lesson is the importance of the PDI acting as an informational infrastructure assemblage as a key element fostering institutional isomorphism of police agencies. This assemblage incorporated elements from an existing, broader informational infrastructure of best-practices urban policy, typified by the involvement of actors such as “What Works Cities” and “Code for America”, that shared an inclination towards the technocratic epistemology also present within the Obama White House. Open data as a policy approach easily fit within this assemblage given its relations with the technocratic epistemology of these actors. Similarly, the dualistic democratic/entrepreneurial aspect of open data was reflected in that technocratic approach, as the presidential innovation fellowship which brought key individuals into the White House that would be the progenitors of the PDI. Additional actors, such technology vendors like “Socrata” and even “Code for America”, with its volunteer brigade members finding their way into the gov-tech industry after their involvement, exemplified this entrepreneurial gov-tech industry relationship.

Similarly, policing elements like the researched focused normative NGOs such as the National Police Foundation, along with membership-based organizations like the International Association of Chiefs of Police, along with Justice Department funding agencies, all had relations with “evidence-based” or “data-driven” policy worlds, rendering the overall technocratic approach encapsulated within the PDI as intelligible and legitimate to these actors as well.

Informational infrastructures have been noted as key in the “making up” of policy (Cook and Ward 2012; McCann 2013; 2011b), but in the case of the development of PCI open data within the PDI we can also see how for police policy, the forces of institutional isomorphism facilitated through informational infrastructure assemblages like the PDI influence this process. Examining the development of PCI open data as a distinct policy assemblage, and the territorialization of the PDI and its subsequent deterritorialization supports this. In its earliest activity following its creation in 2015 in a period of intense activism and perceived trust crisis in police, the PDI primarily facilitated mimetic institutional isomorphism between “early adopter” departments. However, the rapid evolution of the PDI and work on stabilizing a coherent PCI open data policy assemblage, this allowed the PDI to serve as a conduit for field-level normative forces.



The early mimetic isomorphism was facilitated through bringing together police agencies already participating in various forms of data release policies that were disparate and distinct. The relations fostered between actors within these departments altered the topological relations between them (Prince 2017). Furthermore, as the PDI was functioning as an informational infrastructure assemblage, this facilitated the “making up” (Ward 2006; McCann and Ward 2012) of PCI open data. The interactions between the representatives from “early adopter” police agencies, along with the set of data quality commitments as a prerequisite for joining the PDI, thereby established a foundational policy model that could become mobile. This policy model saw an intertwining of technocratic impulses, existing policy preferences for open data within urban policy realms, and police professionalization that endorsed improving technology and access to data as sound policy.

The coherent base set of commitments for joining the PDI, emphasizing the commitments to the release of machine-readable data and establishing transparency as a normative best practice within policing agencies, shifted to be a source of normative isomorphism. This came from the involvement of normative, field-level professional police actors like the International Association of Chiefs of Police (IACP) presenting PCI open data as best practice, alongside the use of normative language from engaged police actors. As this progressed, showing numbers of agencies participating was evidence of normative pick up, using White-House conferences and other sites of encounter to foster connection between policing agencies and driving isomorphism. The framing of open data and transparency as “best practices” was continually emphasized through engagements with professional police associations and through highlighting police voices during conferences. These gatherings served as avenues for the propagation of a “community of practice”, connecting policing agencies, and establishing transparency as a normative practice within them, further displaying how the PDI functioned to create a mobile policy model through early mimetic isomorphism which then enabled normative isomorphism.

The progression of the PDI was marked by the meticulous framing of open data and transparency as quintessential components, and by the construction of a coherent policy assemblage. By showcasing the number of participating agencies and leveraging platforms like White-House conferences and check-in calls to foster inter-agency relations, the PDI facilitated isomorphism which in turn facilitated both the “arriving and making up” (Ward 2006) of PCI open-data.

### 3.8.2 Benchmarking and Myths

The second lesson is that the benchmarks and comparisons used to alter the topographical relations between places (Larner and Heron 2004) and render the distant proximate and policy mobility appropriate (Larner and Laurie 2010; Prince 2015), also interact with existing institutional myths surrounding policing. The case of the PDI shows how making comparisons and benchmarking between different local environments can influence the institutional myths surrounding policing. These comparisons and standards serve as key tools to bridge differences and create a unified approach to transparency in policing, challenging the prevailing narratives and driving uniformity in police practices.

In this case, the myth of police transparency was shaped by using PCI open data, where the number of released datasets was used as a standard to compare transparency levels between different police departments. This emphasis on clear and measurable transparency allowed for the evaluation and comparison of how police agencies are responding to ongoing crises of legitimacy. The Code for America fellows of 2015 in Indianapolis, who created an open data rating benchmark portal is the most explicit attempt at such benchmarking (Code for America 2015). However, this approach was implicated in how PDI actors sought to influence local citizens to pressure their police agencies to release data, as well as in how participating departments began to interact with other departments. Both the data standards as well as focus on quantifiable dataset releases that the PDI encouraged enabled myth-building of police transparency in open data, the belief that police are obligated to release such data, challenging the previous lack of such widely held expectations.

Chief Brown of the Dallas police's statement, "it's the people's data," along with the acknowledgment of the lack of data transparency on police-citizen interactions before the PDI, illustrates this change (Conference #1 2016). This change in common beliefs and expectations was also sped up by the gathering of different police agencies at the White House, where discussions and the setting of standards emphasized transparency as a key requirement, shaping new expectations for data release.

### 3.8.3 Ceremony as Mutation Enabling Mobility

The third lesson is how ceremony as a particular form of policy mutation can also enable mobility. The ease of entry into the PDI was noted to be an intentional, strategic choice to

incorporate more police agencies, to both create a community of practice on the developing PCI open data policy model, as well as facilitating the movement of PCI open data policy to adapt to local contexts and needs.

Although there were informal mechanisms for holding participating police agencies accountable to their open data commitments through relationships between police actors maintained through “check in” conference calls with “agency quarterbacks”, there were no formal internal accountability mechanisms that a department might run afoul of and thus lose membership in the PDI through failure to release data, as the commitment to release data was all that was required for joining.

Unsurprisingly, as would be expected from the common expectation that policy must change to move (Peck 2011), the PCI open data policies developed by the participating police agencies were marked by significant variations. While some departments integrated PCI open data into existing municipal open data portals, others adopted standalone policies within police websites. The choice of technology also varied, with some utilizing advanced government technology software from vendors such as Socrata, and others resorting to simplistic, homemade excel sheets. However, the low barriers and the absence of stringent compliance measures led to a proliferation in the number of joining agencies without a corresponding depth in data contribution. The quantity of participating departments was touted as a symbol of success and momentum, but this surface-level growth obscured the underlying lack of substantial policy adoption and data release. As one PDI actor revealed, many agencies, despite their formal commitment, weren’t actively following through on data release commitments, leading to internal disputes within the initiative and a perceived need for enhanced depth and substance in the contributions. By early 2016, discrepancies in data publication were evident, with several cities lagging in updating their public incident data, highlighting the inconsistencies and varying levels of commitment within the PDI

However, the ceremonial claiming of membership in the PDI, despite the lack of uniformity in policy adherence, reflected a desire to conform to evolving sovereign expectations, without substantial risks due to the absence of formal accountability measures. It created a space where the existing institutional capacity of police agencies, such as their data collection policies and IT

proficiency, did not strongly deter participation in the PDI or hinder the mobility of PCI open data, thus enabling greater mobility of rapidly mutating PCI open data policies.

#### 3.8.4 Police Policy as Assemblage, Relations through Isomorphism

The fourth lesson is found in the basic assertion of viewing policy as assemblage, in that its form is deeply influenced by relations of its constituent elements, both inside and outside the policy assemblage, with particular attention to those relations we can identify as contributing to institutional isomorphism. PCI open-data policy assemblage was secured as a combination of various elements. Notable elements include technocratic impulses and an existing policy preference for open data amongst best-practice oriented urban policy worlds, and how these elements connected to similar perceptions of improving technology and access to data as sound policy within normative isomorphic forces in police professionalization, enabling mobility. The relationship of key actors involved in the creation of the PDI allow us to trace the genesis of the PDI and PCI open data through assemblage thinking. We can see how existing elements of COMPSTAT were present, through the experience of BlightStat meetings and BlightStatus mapping tool in New Orleans. The widespread perceived success of COMPSTAT and its near ubiquitous framing as “best-practices” within normative police professionalization organizations could be seen as relations providing credibility to similar approaches present in PCI open data, enabling mobility of the policy.

The early mimetic isomorphism between the first participating “twenty or so” departments helped create the initial policy model that the PDI would continue to develop. The “low hanging fruit” police agencies were those already engaged in certain types of technology focused policy surrounding data releases, and the earliest stabilized policy assemblage fostered by the PDI was a collaboration heavily influenced by the existing policies of these agencies. The “best-practices” policy model that developed drew from the specific policies enacted by these agencies. This was noted to have helped move the initial hesitancy behind releasing data due to concerns of unexpected calamity to a normative message that the experience of these first “twenty or so” police departments had enacted policies consistent with this model without significant negative outcomes.

Furthermore, the relations between the PDI and the White House were important, especially regarding the use of quantitative benchmarks in the numbers of datasets released as something

that White House officials were noted to have focused on. PDI actors noted that the *numbers* of participating departments were an important goal for these White House actors, and desired that the PDI focus on recruiting as many police agencies as possible. The focus on obtaining more quantitative rather than qualitative agency participation presented to PDI actors meant that developing a more stringent PCI open data policy model, or enhancing participation requirements for the PDI to be more coercive, was not actively encouraged by these interests. In a sense, if viewed from the perspective of institutional theory, the PDI itself became an act of ceremony for the Obama White House as it struggled to respond to its own sovereign demands for action on police brutality and accountability.

Finally, the PDI experienced significant shifts and deterritorialization, notably with changes in the White House's approach to technocratic epistemology and the abatement of federal Department of Justice consent decrees and collaborative reform efforts, that influenced the role of the PDI in fostering further mobility. Although direct coercive forms of isomorphism in the form of consent decrees were not a formal part of the PDI, the existence of these influenced the stability of the PDI and PCI open data policies through rapidly shifting expectations of police agencies from federal sovereigns.

Following the significant shifts in the White House and Department of Justice under President Trump, police institutions found that one of their major institutional sovereigns had a completely distinct set of expectations that did not prioritize open data, transparency, or accountability, nor would this actor be actively working to influence other institutional sovereigns to adopt these expectations. This signaled a larger change in sovereign expectations for police agencies and impacted the territorialization and reterritorialization of the PDI, leading to a decrease in influence of evidence-informed policy from field-level normative forces, thus curtailing additional PCI open data mobility.

### 3.9 Conclusion

This chapter delved into the intricate fabric of the Police Data Initiative (PDI), a multifaceted informational infrastructure assemblage, binding elements of Obama White House technocracy, civic technology democratic/entrepreneurialism, data-driven policing advocates, and normative police organizations and federal agencies, all functioning within a terrain fraught with uncertainties and shifting sovereign demands due to a highly contentious period of increased

public scrutiny of police policy. Based on the data, the Police Data Initiative (PDI) emerged as a complex informational infrastructure amalgamating technocratic and democratic elements, geared towards fostering "evidence-informed" policy within the realm of police work. It was influenced by pre-existing police policies like COMPSTAT, and was deeply intertwined with entities pursuing technological and data-driven approaches to policymaking, such as "Code for America," along with commercial actors in the government technology industry like Socrata.

These components, combined with the territorializing influences of the White House, and the relations fostered by the PDI which led to structured requirements of PCI Open Data, created a cohesive yet mobile policy assemblage, that was underscored by significant institutional ceremony when implemented by different police agencies. By using a basic set of commitments with no official means of enforcing compliance, the initiative aimed to facilitate interactions between police agencies with tentative data release policies with the aim of contributing to the development and enactment of open data policies for police citizen interactions data.

However, the transition of administrations saw a shift in the territorial dynamics of the PDI. The relocation of PDI to the Police Foundation marked a de-territorializing phase, accompanied by a change in relations within the elements of the assemblage due to the federal government's deemphasis of technocratic epistemologies and the justice department's hands-off approach. This led to the PDI assemblage destabilizing, and to the stalling of further PCI open data spread through it.

This case study has filled noted gaps within the policy mobilities literature, which previously overlooked the unique trajectory and characteristics of police policy mobility (Baker, McCann, and Temenos 2020; Stein et al. 2017; McCann 2008; Baker and McCann 2018). By tracing the development and dissemination of PCI Open Data, this research has helped fill this gap.

Similarly, by tracing the destabilization of the PDI informational infrastructure assemblage that accompanied the change in federal administration, this case study has emphasized the importance of the Justice Department in fostering such connections, while also working to add to the growing literature on policy "failures" (Baker and McCann 2018; Temenos and Lauermann 2020; Müller 2015).

Although it has been noted that there are risks surrounding attempts to frame policy mobility as "successful" or "unsuccessful", questions remain regarding how widespread PCI open data has

become in American policing. Given the deterritorialization of the PDI, not to mention the significant mutation and ceremony related to PCI open data from participating agencies within the PDI during its existence, simply noting the number of participating departments in the PDI cannot be relied upon to reliably answer this question.

The insights gleaned from analyzing the PDI as an informational infrastructure assemblage would also imply several potential variables that might serve as stabilizing elements in any local PCI open data policy assemblage. We would expect that cities with pre-existing open data portals or civic-tech elements would be more likely to be able to territorialize a coherent PCI open data policy than those without. We would also expect that departments with better tech capabilities and connections to normative professional organizations to be more likely to have PCI open data. Moreover, spatial data shared with citizenry in the form of crime mapping, although not open data nor police citizen interactions data, would suggest a greater stability for PCI open data assemblage in departments already using these policies.

We would also expect significant mutation of “PCI open data” in each iteration, in terms of consistency of releasing data, quality of data, whether data is machine-readable, or whether important data, such use of force or traffic stops, was released. This research would suggest that relations would be very influential in the localized policy assemblages of PCI open data, with local actors such as police unions influencing decisions of departments regarding legitimacy. Departments having engaged in behaviours such as transferring from UCR to NIBRS, would likely also be indicative of being consistent with a professionalization approach that may foster less ceremony of PCI open data, since increased data quality would facilitate actual data releases.

The next chapter will use quantitative data analysis informed by these insights to explore these questions.

### 3.10 Chapter 3 Bibliography

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## Chapter 4 Assessing PCI Open Data Mobility and Mutation

### 4.1 Introduction

In response to numerous high-profile cases of police officers killing unarmed Black Americans, the "Black Lives Matter" movement emerged, spotlighting this injustice in U.S. policing (Cunningham 2020). This movement highlighted how Black Americans were disproportionately and unfairly targeted by police. This included more frequent stops for citations, questioning, and searches, including traffic stops and pedestrian searches, a point of contention in New York City's "stop and frisk" controversy involving the NYPD. Additionally, Black Americans were arrested at higher rates and more likely to experience police force, ranging from lethal (firearm use) to less-lethal (batons, tasers) (Phelps, Ward, and Frazier 2021; Cunningham 2020).

During this period of protest, police departments sought to address these criticisms through various reforms, aiming to rebuild public trust. However, given the decentralized and fragmented nature of American policing (Bayley 1992), a variety of different policies and reforms emerged. One notable example of federal influence on this decentralized policing landscape came from the Obama administration's Police Data Initiative (PDI), which sought to encourage disparate police departments to enhance public trust through increased transparency (M. Smith and Austin 2015). This effort aimed to surpass traditional transparency approaches common to U.S. police agencies at the time by adopting open data practices regarding data on the interactions police officers had with citizenry, such as arrests or uses-of-force, that were the subject of heightened public scrutiny (The White House 2016). Open data involves releasing information in digital formats suitable for analysis, such as CSV files, freely available online without licensing restrictions (Ubaldi 2013). Police-Citizen Interactions open-data (PCI open-data) would therefore be applying open data principles in a new context (Conti-Cook 2016).

The PDI represented a unique information infrastructure, combining various elements to stabilize its form and foster relationships among participating police departments, thus facilitating the use of PCI open data. By the end of the Obama administration, approximately 130 police agencies had joined this initiative. However, the 2016 election of Donald Trump as president altered the

dynamics within the PDI, causing destabilization. Despite this, PCI open data had been adopted by several large, high-profile police agencies such as Dallas PD.

Although several authors note it is risky to frame policy mobility as either “successful” or “unsuccessful” through simple measures of how widespread a policy has been adopted (Baker, McCann, and Temenos 2020; Stein et al. 2017; Baker and McCann 2018), questions remain regarding how widespread PCI open data has become in American policing. There exists no extant data on the current state of American policing regarding the adoption of these data practices. Although membership in the PDI may be considered reflective of adoption levels, the deterritorialization of the PDI, not to mention the significant mutation and ceremony related to PCI open data from participating agencies within the PDI during its existence make this an unreliable measure to assess existing transparency practices. Given the significant change from established transparency practices PCI open data represent, this lack of research is troubling. This chapter seeks to respond to this, given the potential importance of police open data initiatives in responding to ongoing challenges to police legitimacy related to discriminatory or unjust police practices and behaviour. Many have noted that as protests grew, there was a lack of accessible and authoritative data on interactions between police and citizens, including the most serious interactions where a police officer kills a citizen (Goh 2020). Lack of transparency from police has undoubtedly contributed to the open contestation over basic facts regarding this issue.

Whether a specific police agency uses deadly force more often than other agencies, whether it is deployed more often for certain minority groups compared to the broader population, or even the number of citizens that have been subjected to force by officers from an agency remain open questions. In the absence of transparency, consensus on whether a problem even exists within any specific agency is far more difficult to obtain, frustrating efforts at finding solutions.

Even if enhanced transparency efforts exemplified by PCI open data do not necessarily have the expected effect of facilitating a common perspective on what problems may exist at an agency level, if the adoption of these policies became widespread in American policing, it would represent a major shift in the status quo approaches to transparency. American police have not generally released data on their activities either proactively or regularly (Wood 2018). Instead, agencies have tended to engage in inconsistent and selective information releases, usually in response to specific incidents more akin to public relations communications rather than

government transparency (Wood 2018). Were PCI open data to replace this status-quo, it would be reflective of an entirely different approach to police transparency in American policing.

In addition to the importance this may have for legitimacy challenges to police, and the monumental shift in transparency it would represent, it also raises intriguing questions for the study of police policy mobility. A policy cannot spread and be adopted uniformly across all agencies. Mutation of policy is an inherent aspect of its mobility (Peck and Theodore 2010). Moreover, police agencies are institutional organizations, and thus the manner of policy mutation that may occur for PCI open data may follow certain practices such as a “ceremonial” adoption of policy that outwardly presents adoption while key elements of said policy mutate (Zhao, Lovrich, and Robinson 2001).

Thus, this chapter will provide answers to two research questions, in two phases. The first question and phase will answer: to what extent has PCI open data mobilized through the landscape of American policing, and what mutations can be observed? This is explored by assessing how many police agencies are utilizing data sharing practices that can be understood as examples of PCI open data, as well as how many transparency policies can be observed with significant elements of PCI open data, signifying potential mutations of PCI open data policy models in its ongoing mobility. Accounting for this can help escape the analytical blind spot that emerges from strict successful/unsuccessful binaries (Lovell 2017) to better account for the potential influence of PCI open data on American policing.

This initial phase of research adopts the framework of assemblage thinking to analyze policy. A key aspect of this approach is dedicated to avoiding reductionism when analyzing policy, which can manifest as either an overemphasis on the micro-level factors unique to each policy or too great a focus on macro-level factors that apply broadly across policies (Savage 2020). Policy assemblages are characterized by the relationships within their elements, as well as those extending beyond the assemblage itself. The distinct nature of these relationships within each place-specific policy assemblage leads to the emergence of unique properties. In essence, policies cannot be simply transplanted from one context to another with the expectation of identical assemblages and identical policy outcomes. This is because policies are molded by the specific conditions of their new environment, which alters the interactions and functionalities of their elements (McCann and Ward 2013). As a result, the outcomes of implementing a policy or the

stabilizing/destabilizing influence of an assemblage element in one location may not replicate in another, owing to these context-dependent factors.

However, this does not mean we ought to abandon attempts at understanding broader structural influences or wider analyzes of policy in favour of deeply qualitative case studies alone. The elements of a policy assemblage establish relations that are generative of emergent properties, but they do not cease being distinct elements, blending into a single entity. The agency of these elements remains, and although we should not expect uniformity of how each element will establish relations in each specific policy assemblage, we should not lose sight of the importance of the agency of those elements. Thus, although we should not expect a specific element to operate in precisely the same manner in every policy assemblage it becomes part of, both in terms of the effects of that policy or in the stabilization of a place-specific assemblage necessary for policy adoption, we should not ignore how these elements *remain heterogeneous* from the other elements in any resulting policy assemblage. Thus, while a specific element cannot be expected to be uniformly stabilizing in every place-specific context, we would expect that certain elements would be *more likely* to have similar influences on policy assemblage in places that are fewer place-specific contextual differences. For example, we shouldn't expect that local government data policies will uniformly be a stabilizing influence for open data for every police agency, but we would expect that there would be more similar comparing police agencies operating within the landscape of American policing, rather than comparing police agencies globally.

Thus, the second phase of this chapter utilizes the insights from chapter 3 and chapter 4, arguing that police policy mobility can be best understood by integrating research from the field of policing studies on the unique institutional context and nature of American police agencies, along with insights from the assemblage/mobility approach, to create policy-specific quantitative analysis models. This integrated approach is utilized to identify a series of elements that may function as stabilizing influences for PCI open data policy assemblage and policy adoption, and to generate several hypotheses based upon these. These elements are technocracy within police agencies and in the local government context, as well as connections to informational infrastructure assemblages facilitating policy mobility and institutional isomorphism. Relatedly, the second research question is: can the expected stabilizing influence of these policy assemblage elements be observed quantitatively using logistic regression, alongside established predictors from the policing studies literature? This sheds light on whether or not police agencies are more

likely to adopt data transparency policies, such as PCI open data, when these elements are present in their place-specific context.

This research investigation utilizes original data along with the 2020 Law Enforcement Management Administrative Statistics (LEMAS) survey to answer these research questions. Primary data collection on data sharing practices is used to answer the first research question, to estimate the current state of American police agency policy regarding the release of data on the interactions between police and citizens. This is combined with 2020 LEMAS (secondary) data to answer the second research question and test the applicability of several hypotheses generated from an institutional/mobility integration regarding specific localized elements that, if present, may increase the likelihood of such policy existing.

As previously mentioned, this chapter is divided into two phases, each corresponding with a specific research question. Prior to these phases, this chapter begins with a brief overview of existing theoretical approaches for studying police and policy mobility, and explains how integrating these for policy-specific analysis models is appropriate. Following this, Phase 1 is presented, beginning with describing the methods of data collection, along with a presentation of descriptive statistics of primary data on sampled police agencies. These data are then examined to answer the first research question regarding the extent to which PCI open data has been adopted by American police agencies, and what mutations of this policy can be observed in other data transparency policies.

Following this, Phase 2 is presented, and begins by applying the integrated assemblage/institutional theoretical framework to develop a policy-specific model for PCI open-data, and generate a series of hypotheses on the expected stabilizing influence of these elements for PCI open-data policy adoption. The next section uses logistic regression to test these hypotheses on PCI open-data policy adoption. Finally, the findings for both phases are discussed in Section 4.7 along with major conclusions and limitations of the research.

## 4.2 Theoretical Foundations

### 4.2.1 Diffusion of “Innovations”

Within the police studies literature, the Diffusion of Innovation (DOI) theory, initially developed by Everett Rogers, explains how innovations spread within social systems, including organizational fields, and has found applications in diverse areas from political science to

policing studies (Rogers 1963; Jones and Newburn 2021). The essential assertion of DOI is that the spread of innovative ideas or concepts through a social system consistently demonstrates an “S-shaped” curve of adoption, divided into three periods (Walker 2006).

This typically starts with a few “early adopters” experimenting with and legitimizing the new idea. Following this initial phase, a rapid increase in adoption occurs as the innovation is shown to be beneficial and gains mainstream acceptance. The curve then gradually flattens as the remaining “laggards” adopt the innovation more slowly, while some “resisters” will hold out on adoption. The success of an innovation is assessed based on how swiftly it reaches the point of rapid adoption to the mainstream, the duration of that process, and the total percentage of potential adopters who eventually adopt it. This pattern, evident in numerous examples of organizational innovation within the criminal justice field as defined by Rogers (1995), indicates that new ideas or concepts perceived as innovative follow predictable stages of adoption.

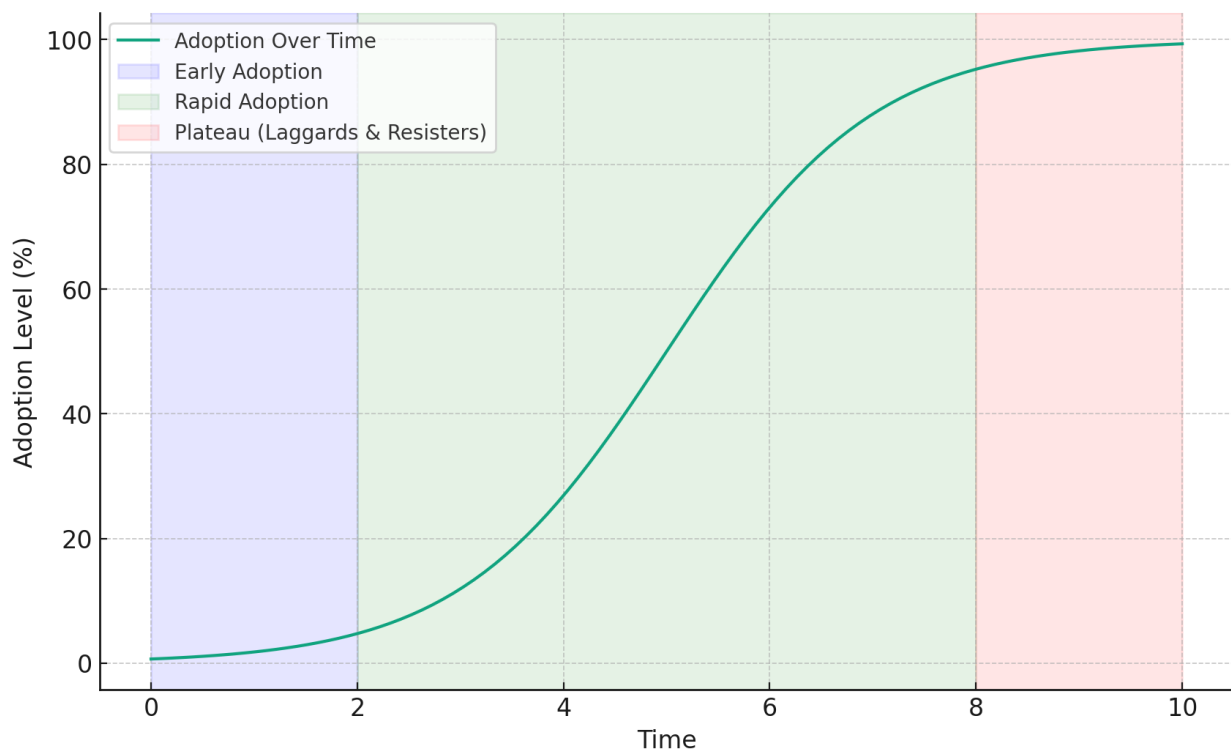


Figure 4.1 "S-Shaped" Adoption Curve

Research utilizing DOI theory have observed this pattern in the study of the spread of various policies and technologies through American policing, such as community policing (Oliver 2000), CompStat (D. Smith and Bratton 2014; Weisburd et al. 2003), crime-mapping (Weisburd and



Lum 2005), and the integration of information technology (W. G. Skogan and Hartnett 2005). Much of this research has focused on attempting to establish what variables might be important for determining where individual departments fit into the categories of organization with regards to adopting innovations: early adopters, mainstream adopters, laggards, and resisters.

#### 4.2.2 Institutional Theory

Within the policing studies field, research uses three general types of theory to explain the underlying motivations that would influence what sort of department each is: early adopters, mainstream adopters, laggards, or resisters. The three main theoretical approaches are resource dependency, structural contingency, and institutional theory.

Stated briefly, resource dependency theory focuses on access to resources for innovation adoption as the key driver (Maguire 2003), while structural contingency maintains that departments are driven to increase performance in certain key areas (Donaldson 2001) and where a department may fit on the DOI scale is dependent on external and internal factors. For police, internal factors would be variables like the overall size of the agency or its command structure, whereas external factors would be community factors like crime rate (Burruss, Giblin, and Schafer 2010).

Contrasting these two approaches is institutional theory (Meyer and Rowan 1977). Institutional theory suggests that certain organizations, such as police departments, prioritize maintaining legitimacy in the eyes of key actors referred to “sovereigns” over maximizing performance in key areas (Crank 2003). These sovereigns encompass a range of stakeholders, from local governments and other police agencies to rank-and-file officers and the public (Crank and Langworthy 1992; Crank 2003). Police departments adapt to the expectations of these sovereigns to secure legitimacy, influencing their operations and choice of practices.

This adaptation results in a phenomenon known as “institutional isomorphism” a concept introduced by DiMaggio and Powell (1983), where organizations within the same field, responding to similar sovereign expectations, gradually come to resemble each other. The process of institutional isomorphism unfolds through three types of pressures: mimetic, where organizations emulate successful peers, normative, influenced by professionalization, training, and networks, and coercive, stemming from external pressures like legislation or funding allocations (Burruss and Giblin 2014).

These processes lead to the adoption of new practices and policies in response to new expectations or demands from sovereigns, solidifying their legitimacy within their institutional field (Scott 2013). The fundamental assertion of institutional theory in this sense is that while agency specific local conditions are influential, police agencies are more likely to adopt a policy when the broader field-level is supportive of that policy (Burruss and Giblin 2014; Crank 2003). Thus, research on the diffusion of an innovation from this perspective focuses on the different exposure to isomorphic pressures in different departments. For example, if a police agency shows greater exposure to normative isomorphic pressures through high levels of engagement with professional associations such as the International Association of the Chiefs of Police, that agency would be more likely to adopt a policy that the field-level is supportive of (Burruss and Giblin 2014).

Research has often tested these theories together or found that they may each explain certain factors. However, when tested together, institutional theory has proven more stable in predicting policy adoption in several cases, such as homeland security initiatives (Burruss, Giblin, and Schafer 2010), community-oriented policing (Burruss and Giblin 2014), and crime analysis units (Giblin 2006). However, it is also difficult to necessarily parse apart structural contingency theory and institutional theory, given some scholarly debate regarding what police agencies perceive as their primary purpose, and therefore what it determined to qualify as best performance (J. J. Smith 2019). Since public trust is associated with greater degree of cooperation with police (Tyler 1990; Tyler et al. 2015), a police agency adopting transparency policy could be interpreted through a structural contingency lens as adapting the structure of the agency to fit with new circumstances of its environment to pursue its goal of reducing crime. Through an institutional lens, a police agency adopting transparency policy would be adopting the policy in response to field-level forces that indicate it would help to secure legitimacy from its institutional sovereigns.

#### 4.2.3 Viewing Diffusion as Mobility, Policy as Assemblage

A limitation inherent to DOI theory is that these perspectives also have a tendency towards viewing “innovations” as rather static or discrete units. This is understandable, given that DOI theory has its foundations in tracking the spread of specific technologies in private sector, where physical technologies are more concrete and the pursuit of organizational profit a more consistent factor amongst adopters (Rogers 1963; Wejnert 2002).

Although institutional theory offers an explanation for the differences that can be observed between the individual instances of an “innovation” that becomes adopted in a specific department as being variations on “ceremony” or “loose-coupling”, where a department outwardly adopts some technology or policy to adhere to sovereign expectations while avoiding any aspects of that technology or policy that would seriously challenge existing practices (Meyer and Rowan 1977; Terpstra 2020), assemblage/mobility thinking extends these considerations further. Mobility/assemblage suggests that the changes observed between the implementation of these policies is an inherent aspect of their diffusion or mobility across police agencies (Peck 2011; McCann and Ward 2013). From this perspective, it is the process of moving that changes what policy will be from one department to the next, and change is a necessary component to movement as the specific context of each agency, although subject to similar field-level forces, will inevitably be unique in certain ways that must be accounted for, as argued in chapter 2. These changes allow for a policy to cohere and stabilize in that specific context. From this perspective, “ceremony” and “loose-coupling” is just one type of mutation amongst many that may occur to stabilize a coherent policy assemblage. Thus, the variations of policy implementations of certain policy models that can be observed in specific cases, such as the rapid spread of the organizational data-driven policy COMPSTAT (Weisburd et al. 2003; Willis, Mastrofski, and Weisburd 2007; Weisburd et al. 2019), can be conceptualized as part of the mobility of that policy.

Mobility/assemblage thinking also further nuances insights regarding the connective threads enabling the normative and mimetic isomorphism identified through institutional theory. The institutions commonly framed as sources of normative isomorphic pressure, such as the International Association of the Chiefs of Police, or the National Police Foundation, serve to contribute to broader informational infrastructure assemblages that work to disseminate and legitimize certain policies through the institutional landscape. Involving a broad array of elements, such as news reports or academic research, these informational infrastructure assemblages work to create, legitimize, and spread certain policy ideas, thus influencing what is and what is not “innovative” (Cook and Ward 2012). These informational infrastructure assemblages also facilitate mimetic isomorphism through facilitating connections between police agencies, but also work to form normative policy models that can mutate and adapt to local contexts to stabilize into coherent policy, as was argued in chapter 3.

The integration of insights from policy mobility/assemblage with institutional theory of organizational change offers a nuanced understanding of how policies, such as those in police agencies, spread and evolve. Institutional theory highlights certain elements that are common within police institutions, while the policy mobilities approach nuances the mechanisms of isomorphism, revealing the complexity of the diffusion. This combined perspective underscores the influence of broader societal and cultural contexts, institutionalized rules, and norms on the transfer of police policy. In the case of Body-Worn Cameras (BWCs) explored in chapter 2, this approach emphasizes the role of informational infrastructure assemblages in facilitating policy mobility and the interplay between metrics allowing comparisons across different locales, and the institutional myths and sovereign demands that shape police agencies quest for legitimacy.

This approach also sheds light on the adaptation of police policies to new contexts, shaped by institutional pressures in the new setting. The mutable nature of police policies, influenced by ceremonial adoption and decoupling, suggests that policies more amenable to ceremonial adoption are likely to be transferred more easily. Moreover, it encourages a focus on the relationships between policy assemblage elements, structured through institutional connections, which facilitate normative and mimetic isomorphism among police agencies.

By adding insights from institutional theory to the ongoing conversation present in the policy mobilities approach, the methodological sensibility reflected in the policy mobilities approach can be used to qualitatively examine the transmission of information and diffusion processes neglected by DOI, as noted by critics (DeGarmo 2012; Strom 2017).

#### 4.2.4 Policy Specific Adoption Models

This combined approach would suggest that insights from the broader field of policing studies ought not be rejected, and that variables found to be important in the adoption or spread of certain policies may indeed be important as a field-level element common to many different policy assemblages. However, this perspective would suggest that in most cases, seeking to conceptualize a wide variety of different policies as “innovative” inappropriately collapses the diversity of these into a single category. Thus, rather than attempting to identify broadly applicable variables that increase the likelihood of adoption of “innovations”, it is more appropriate to conceptualize and form policy-specific explanatory models, based on elements observed qualitatively in relevant informational infrastructure assemblages or individual policy

assemblages, or by those aspects of other policies that would likely relate to the policy under study.

In the case of PCI open data, while policies such as community-oriented policing and COMPSTAT can both be conceptualized as innovative ideas that have diffused across American police agencies, the specific factors linked to adoption for agencies for both of these policies should not be necessarily expected to operate in a similar way viewing both as “innovations”, but rather only if pieces of the various heterogeneous elements that form those assemblages can be reasonably understood to exist in the policy in question. For example, a common element of COMPSTAT policy assemblage is the collection of incident-based data on crime occurrences and police action, similar to elements of incident-based data necessary for PCI open-data policy. Thus, insights on variables associated with this element in COMPSTAT policy assemblages may be relevant for PCI open-data adoption. This policy-specific adoption model will be described in detail in Phase 2.

#### 4.3 Study: Phase 1

To answer both research questions, it is necessary to obtain a measure of PCI open data policy use in American police agencies. As previously stated, no extant data exists, therefore this research makes use of two sources of secondary data, as well as additional primary data collection. The first source of secondary data comes from The Bureau of Justice Statistics’ Law Enforcement Management and Administrative Statistics survey (LEMAS 2020), which provides some of the best data available for researchers attempting to understand American policing writ broadly. However, the latest survey from 2020 does not contain any specific questions regarding police open data practices. The 2016 LEMAS survey, which was more expansive than the 2020 survey, did have a series of questions asking respondents whether their police agency maintained a website for providing direct access to “statistics/data” on several categories, such as crime, traffic and field stops, and arrests (LEMAS 2016). Of the 3500 departments included in the initial survey sample, 321 reported doing so (LEMAS 2016).

Still, these questions may not be a reliable measure of open data, as there are no specific questions regarding the form the data takes, whether it is downloadable, or the aggregation level of the data. These details are all key aspects associated with current definitions of open data (Gonzalez-Zapata and Heeks 2015). The lack of these details means that using these questions as

measures for open data policy adoption would be problematic and likely to compound existing issues with self-reporting surveys from police agencies regarding the subjective interpretation of meaning when answering survey questions (W. Skogan and Frydl 2004). Some evidence of this issue was found during this research, after performing an initial comparison between identifiable open data practices and survey responses for these questions in the 2016 LEMAS data. While not systematic, this initial scan discovered several wide variations of data sharing practices contained within this measurement. For example, Bannockburn Illinois police department reported sharing traffic stop data on the 2016 LEMAS, when the only data regarding traffic stops that could be found was a single pie-chart in a PDF annual report (Bannockburn Police 2018). Contrasting this, Dallas police, noted as a unique case of adopting policy innovations and a key “hub” within police networks (DeGarmo 2012), answered these measurements as not “maintaining website” when Dallas was one of the earliest departments to join the White-house Police Data Initiative and to adopt police-citizen interactions open-data. This indicates that self reported data practices may not be the best measure for understanding current adoption practices, when survey questions are not very carefully designed to capture the distinct elements of open data.

#### 4.3.1 Vera Police Data Transparency Index

This situation presents challenges for attempting to ascertain the status of PCI open data policy in American policing. A lack of data is a consistent problem in studying certain aspects of policing, such as numbers of individuals killed by police (Goh 2020). In response to the lack of information available, crowd sourced data such as “Mapping Police Violence”, or “Fatal Encounters”, have attempted to collect this data independently (Goh 2020; Tate, Jenkins, and Rich 2015). A similar situation exists regarding the adoption of data transparency policies. While datasets like LEMAS do exist, declining response rates, space considerations, and changing priorities in research interests preclude the collection of data on every possible policy that an agency may adopt (RTI 2019; Nix et al. 2019). Such omissions may then reflect the biases towards research neglecting to study “failed” policies (Lovell 2017; Temenos and Lauermann 2020). Some researchers, acknowledging the limitations of doing so, have relied on crowd-generated data that meet certain standards for rigour to overcome the missing data problem. For example, Goh et al. used “Fatal Encounters” crowd sourced data to studying police use of force, given the reported data collection and verification methods that accompanied this dataset (Goh 2020).

Crowd generated data on police data-transparency practices do exist, like those focused on measuring officer-involved deaths. One such project is the Police Data Transparency index, created by the NGO Vera Institute of Justice (Vera 2023). This advocacy group focuses on criminal justice issues in the United States. Originally started in 1961 as a project to address inequity in New York City's bail system, it would eventually become a national organization with offices in four major cities, with a mission statement focused on "ensuring justice in the criminal legal and immigration systems, advocating for non-monetary freedom determinants, reduced incarceration, and dignified treatment of the incarcerated" (Vera 2023).

In 2020, the Vera Institute of Justice developed a police data transparency index for 94 U.S. police agencies (Vera 2023). These agencies were selected from the 50 largest U.S. cities, the largest cities in states without one of these 50, locations of Major City Chiefs Association members, and areas where Vera conducted community interviews on transparency. Covering areas where 25% of the U.S. population resides, Vera researchers from October 2021 to January 2022 assessed each agency website using a standardized matrix for 10 data types (Vera 2023). This process checked the availability and accessibility of official police data on police or local government websites. A second researcher validated each assessment, with a third resolving discrepancies and confirming unavailability of any data. In May 2022, Vera researchers revisited their Police Data Transparency Index, reassessing the 94 cities to update and verify the scores. They adjusted the coding of variables in each dataset, adding or removing datasets as needed to align with their criteria. Vera updated these scores on their website on May 27, 2022, and again in October 2023, ensuring the data remained current (Vera 2023).

#### 4.3.2 Primary Data Collection

Although there are advantages to this sample, it has several weaknesses. American policing is spread across approximately 18000 distinct agencies, with wide variations in department type and size that have been found to differ in meaningful ways (Willits and Nowacki 2014), as well as influence informal contacts between agencies (Roberts and Roberts 2007). While the sample does cover the largest departments in the country broadly, and at least one in each state, it focuses on large departments over 100 sworn officers, and only includes one sheriff's department. In contrast, the sample used in the 2020 LEMAS was 75% local police, 24% sheriff and county police, and 1% state police. Only approximately 30% of these agencies had more than 100 sworn officers, while the rest had fewer (LEMAS 2020).

To gain a better measurement of the state of PCI open data, additional departments were added to the Vera dataset to enhance representation of smaller police agencies, as well as non-local police agencies. This was done using a sub-sample of the 2020 LEMAS dataset. Initially this was done using the established stratum used by LEMAS, which grouped police agencies into stratum based on number of sworn officers and agency type, to produce a sample with stratum ratios equal to the entirety of the LEMAS data. However, after examining departments under 10 officers in this sample and finding no instances of open-data, agencies below 10 officers were excluded. This was done with the expectation that if the number of officers as a measurement of agency size is influential, it should be captured by the range of officers captured in this sample. Although agency size has been found to potentially have a certain threshold of association with technology adoption, this was between large and small agencies at the 250 sworn officer level rather than at much lower levels (Strom 2017).

Table 4.1 LEMAS 2020 / Subsample Comparison

| <b>Strata</b>  | <b>Original LEMAS 2020 Sample</b> | <b>Subsample</b> | <b>Difference %</b> |
|----------------|-----------------------------------|------------------|---------------------|
| LP: 100+       | 669 (19.12%)                      | 92 (27.54%)      | +8.42%              |
| LP: 50-99      | 147 (4.20%)                       | 21 (6.29%)       | +2.09%              |
| LP: 25-49      | 290 (8.29%)                       | 41 (12.28%)      | +3.99%              |
| LP: 10-24      | 573 (16.38%)                      | 80 (23.95%)      | +7.57%              |
| LP: 5-9        | 499 (14.26%)                      | 0 (0%)           | -14.26%             |
| LP: 2-4        | 346 (9.89%)                       | 0 (0%)           | -9.89%              |
| LP: 1          | 107 (3.06%)                       | 0 (0%)           | -3.06%              |
| Sheriff: 100+  | 368 (10.52%)                      | 52 (15.57%)      | +5.05%              |
| Sheriff: 50-99 | 67 (1.91%)                        | 9 (2.69%)        | +0.78%              |
| Sheriff: 25-49 | 111 (3.17%)                       | 16 (4.79%)       | +1.62%              |
| Sheriff: 10-24 | 162 (4.63%)                       | 23 (6.89%)       | +2.26%              |



| <b>Strata</b> | <b>Original LEMAS 2020 Sample</b> | <b>Subsample</b> | <b>Difference %</b> |
|---------------|-----------------------------------|------------------|---------------------|
| Sheriff: 5-9  | 80 (2.29%)                        | 0 (0%)           | -2.29%              |
| Sheriff: 1-4  | 31 (0.89%)                        | 0 (0%)           | -0.89%              |
| State         | 49 (1.40%)                        | 0 (0%)           | -1.40%              |

Obviously, this has resulted in a reduced sample size of 3499 to 334, with large differences from the 2020 LEMAS data with regards to very small police agencies. Although the addition of smaller departments has improved the representativeness of the data, it must be viewed with some caution, as it still skews towards higher local police and sheriff categories by excluding very small police agencies with less than ten sworn officers. In addition to this, this data can no longer be interpreted as a probabilistic sample of the target population of police agencies given the non-random exclusion of very small agencies (Taherdoost 2016). Thus, while being more reflective of police agencies in the United States than the Vera dataset, the generalizability of the findings from this combined dataset must be taken with caution.

The subsample also had changes in representativeness of police agencies by state. All states were represented in the subsample, with percentage change from total numbers in comparison to the full 2020 LEMAS sample under 1+/- percentage point for every state, except for three states: Pennsylvania with an increase of +2, Maryland with a change of +1.71, California with an increase of +1.66. However, while this sample had at least one police agency from every state and remained within +/- one percentage point compared to the full 2020 LEMAS sample, the original LEMAS data did not have equal numbers of agencies from each state. In the subsample, 23 states had fewer than 5 agencies represented, and 9 states had only 1 agency (LEMAS 2020). Thus, state-level influences may not necessarily be captured by this data. Although regional influences have been observed in some policy cases, these appear to be inconsistent, as north-eastern agencies showing less adoption of camera technologies (Nix, Todak, and Tregle 2020) and some finding southern agencies as more (Worrall and Zhao 2003) and less likely (Zhao 1996) to adopt community policing strategies.

### 4.3.3 Dependent Variables: Measuring PCI Open Data

Although establishing a single conceptual definition of “open data” is difficult (Gonzalez-Zapata and Heeks 2015; Zuiderwijk and Janssen 2014), chapter 3 revealed that the policy model that developed from the PDI focused on three key elements commonly used to distinguish open data from other forms of transparency (Ubaldi 2013). First, that data is downloadable, and can be possessed outside of government-controlled sites. Data that is only available to a user from a data source is less open than data which can be downloaded and held by the user. Second, if the data is in a format that enables analysis, whether in comma separated value (CSV) or web application interface or similar data portal, rather than in PDF or website text format more appropriate for communication. Third, if the data is in incident form rather than aggregate form, again enabling analysis.

The Vera dataset included a variety of measures to establish their police data transparency index, based on the availability of data, basic data collection, and specificity in variables within the data (Vera 2023). Within these were key variables that serve as indicators for the basic components of PCI open data: whether data was downloadable, whether it was at aggregate or incident level, and the data format it was available in. These variables allow for a binary measure of whether a department had implemented PCI open data in any one data category. This variable therefore had two categories:

Closed (Value 0): Agencies are categorized as closed if any one category was absent.

Open (Value 1): Agencies are categorized as open if all were present (downloadable, .csv format, and incident level).

However, a key insight from policy mobility is the existence of mutation (Peck 2011; McCann and Ward 2013). This suggests that a simple binary will not capture the variation of what PCI open data may have become as it spread and formed mutations that reflected place-specific policy assemblages. In addition, instances of symbolic adoption of policy to adhere to sovereign expectations may result in mutations on specific data sharing policies (Terpstra 2020; Meyer and Rowan 1977). Therefore, measuring this policy using both a binary variable that notes if a department has implemented PCI open-data for a specific type of data, as well as using an ordinal variable that captures data sharing policy on a spectrum of “openness”, where certain elements of

PCI open-data may be reflected but others not, will better measure the mutation/ceremony of PCI open-data in police agencies.

To do this, an ordinal measurement variable was developed as a scale of the openness of police departments in sharing data. The categorization is based on several criteria related to the format, level of detail, and accessibility of the data. The variable is categorized into four distinct levels:

Closed (Value 1): Departments are categorized as closed if they do not share any data in any format. This represents the lowest level of openness.

Simple Data Sharing (Value 2): Departments are categorized as simple data sharing if they share data in PDF format or data posted as text on their website and the data is at an aggregate level. This level indicates a basic degree of openness where data is shared but not in a detailed or easily usable format.

Partially Open (Value 3): Departments are categorized as partially open if they meet one of two criteria: The first criteria are the data is shared at the incident level in PDF format or as text on the agency's website, regardless of whether it is downloadable or not. The second criteria are the data is shared via a data portal or web interface but is not downloadable, at either the incident or aggregate level. This category reflects a higher level of openness with more detailed data being made available, though with some limitations in terms of format or accessibility.

Open (Value 4): Departments are categorized as open if they meet all the following criteria: The data is at the incident level, it is downloadable, and it is shared either through a web interface or data portal, or in CSV format. This represents the highest level of openness on this scale and is also a measure of a binary conceptualization of PCI open data, as data shared in this manner meets all three requirements to be considered "open data".

This system was used to code the data sharing policies of each sampled police agency.

#### 4.3.4 Data Collection

Between October to November of 2023, data collection on the remaining departments was performed using the web searches of the internet, mirroring the Vera variable collection. First, Google search engine was used to identify police department websites, using the name of the police department as recorded in 2020 LEMAS data. The websites for each police department were then examined, the data sharing practices were recorded on the four data categories

reflective of police-citizen interactions: use of force incidents, officer-involved shootings, arrests, and traffic and pedestrian stops. For each type, a department's policy was recorded as to whether the data was available, whether it was downloadable, what form it was in (Portal/Interface, PDF, CSV, Website text), whether the data was at the aggregate or incident level, and the years where data was available from. If data was not found on the department website or not otherwise linked from the department website to another government source, a second web search was performed to determine whether the data may be available through another official government source using the term "open data" following the department name.

To have a measure of the local environment that may contribute to stabilizing a PCI open data policy assemblage, data was also collected on engagement with similar civic technology policy and vendor use. Specifically, the data sharing practices of the city or community the department was in for local police agencies, and the counties for sheriff agencies. When checking this, it was recorded whether the data sharing practices were "open" through the same three categories used for PCI open data (downloadable, incident, machine readable), whether the city or community used web application mapping tools but did not allow for any downloads, or did not have any open data or mapping available.

This web searching method to ascertain whether a department or community had adopted these information sharing policies is appropriate given the nature of open data information sharing. If an individual with access to the internet and computer can not use an ordinary search tool with a web-browser, such as Google, to locate this data, it is by definition not being shared as open data. Following the Vera data collection approach, data was only recorded if it was obtained from the department website or other government source, not including any crowd sourced information, as this would not be reflective of agency policy. If data was not found after five minutes of searching, this was attributed to the unavailability of the data rather than to a failure to find it. After collection was complete, a second pass through the agency list was performed with brief searches of a few minutes each to look for errors. Following this, a randomly selected 34 of the agencies for a more in-depth 15-minute search to ensure accuracy. None of these searches returned different results than the initial search.

#### 4.4 Phase 1 Results: Assessing PCI Open Data Adoption by American Police Agencies

The following section provides a detailed analysis of primary data from sampled police agencies. This data is analyzed to address the initial research question, which focuses on the degree to which PCI open data has been implemented by American police agencies, as well as the potential mutations of this policy evident in other observed data transparency policies.

##### 4.4.1 By Data Category Type as Ordinal Measurement

Table 4.2 describes the data-sharing policies measured by the ordinal-level openness variable in observed police agencies, distinguished by the type of police-citizen interaction that data pertains to.

Table 4.2 Data Category Specific Data Sharing Practice Non-Responsive Included

| <b>Data Type (Policy)</b> | <b>Closed (1)</b> | <b>Simple Data Sharing (2)</b> | <b>Partially Open (3)</b> | <b>Open (4)</b> | <b>Total</b> |
|---------------------------|-------------------|--------------------------------|---------------------------|-----------------|--------------|
| Use of Force              | 255<br>(76.35%)   | 55 (16.47%)                    | 8 (2.40%)                 | 16<br>(4.79%)   | 334          |
| Officer-Involved Shooting | 283<br>(84.73%)   | 17 (5.09%)                     | 18 (5.39%)                | 16<br>(4.79%)   | 334          |
| Arrests                   | 241<br>(72.16%)   | 53 (15.87%)                    | 22 (6.59%)                | 18<br>(5.39%)   | 334          |
| Traffic/Pedestrian Stops  | 255<br>(76.35%)   | 35 (10.48%)                    | 18 (5.39%)                | 26<br>(7.78%)   | 334          |

Initial inspection of table 4.2 reveals some distinctions between the adoption of data transparency practices when comparing police-citizen interactions data categories. In all four data types, most departments fall into the closed category, indicating limited openness. The least open data category is officer-involved shooting with 84.73% of agencies entirely closed. The open category, representing the highest level of data openness, has the smallest percentages across all data types, ranging from 4.79% to 7.78%. The partially open category also has relatively low percentages. A noticeable number of departments fall into the simple data category, especially in

arrests and use of force, suggesting that some degree of data sharing is occurring, though not in a highly accessible or detailed format.

#### 4.4.2 Correlations between Data Categories

Given the variation in data openness levels across four categories of police interaction data, Kendall’s Tau-b was used to examine potential correlations between specific data categories. This method is suitable because it is designed for paired, ordinal data that can adjust for tied ranks, fitting the characteristics of the dataset (Jenkins-Smith et al. 2017). Table 4.3 presents the Kendall’s Tau-b correlation coefficients between each of the ordinal-level openness variables in specific police-citizen interaction data categories.

Table 4.3 Kendall’s Tau-B Correlation Between Ordinal PCI Open Data by Data Category

| <b>Data Category--<br/>Ordinal</b>    | <b>Use of Force<br/>Openness</b> | <b>Officer-Involved<br/>Shooting Openness</b> | <b>Arrest<br/>Openness</b> | <b>Stops<br/>Openness</b> |
|---------------------------------------|----------------------------------|---|----------------------------|---------------------------|
| Use of Force Openness                 | 1.0000                           |   |                            |                           |
| Officer-Involved<br>Shooting Openness | 0.6195                           | 1.0000  |                            |                           |
| Arrest Openness                       | 0.3721                           | 0.2595  | 1.0000                     |                           |
| Stops Openness                        | 0.3846                           | 0.3258  | 0.3534                     | 1.0000                    |

Examining table 4.3 reveals a strong positive correlation (0.6195) between the openness of use-of-force data and officer-involved shooting data. This suggests that departments with transparency in one of these areas are likely to exhibit openness in the other. However, it may be more likely that this correlation reflects common practices in data sharing portals, which often combine these two data categories into a single category, releasing incidents of use-of-force which include both less-than-lethal and lethal force deployments.

In contrast, the correlations between the openness of use-of-force data and other categories, such as arrests (0.3721) and stops (0.3846), are weaker. These findings indicate a modest level of association. Other correlations were found to be relatively weak, ranging from 0.2595 (between

officer-involved shootings and arrests) to 0.3534 (between arrests and stops), suggesting that there may be unique factors driving openness for each data type, rather than a broad application of data transparency across all potential data categories. This may also indicate that transparency policy assemblages are adapting through ceremony/mutation to local conditions with regards to what data is made available.

#### 4.4.3 Highest Data Sharing as Ordinal Measurement across Categories

Category specific measurement shows low implementation of PCI open data in the sampled police agencies when considered in specific interactions data categories, with weak correlations between each with the exception for use-of-force incidents and officer-involved shootings that itself seems likely to be caused by data category combination in data releases. Although this indicates variation in the interactions data category that agencies are utilizing data transparency, it does not best reflect broader policy adoption of PCI open data or data transparency practices for police-citizen interactions data. It would not be accurate to say that only departments that release use-of-force data as open data have adopted PCI open data, instead it is more accurate to define PCI open data policy adoption as when a police agency has released any type of police-citizen interactions data as open data.

Table 4.4 illustrates this, displaying the distribution of sampled police agencies as distinguished by the highest level of data openness that agency was observed to have, in any of the police-citizen interaction data categories as measured by the ordinal openness variable.

Table 4.4 Highest Data Sharing Level across all Interactions Data Categories

| <b>Highest Level of Openness</b> | <b>Frequency</b> | <b>Percent</b> |
|----------------------------------|------------------|----------------|
| <b>Closed (1)</b>                | 189              | 56.59%         |
| <b>Simple Data Sharing (2)</b>   | 61               | 18.26%         |
| <b>Partially Open (3)</b>        | 37               | 11.08%         |
| <b>Open (4)</b>                  | 47               | 14.07%         |
| <b>Total</b>                     | <b>334</b>       | <b>100.00%</b> |

Accordingly, when agency adoption of PCI open data is measured as existing in at least one of any of the four interactions data categories, the number of agencies that can be understood to have adopted PCI open data is 47 or 14.07% of sampled agencies.

Further, if one considers the highest score of “openness” for each police agency in any one of the four police-citizen interactions data categories, 37 or 11.08% of sampled agencies have data transparency practices that are at least partially open. While most police agencies are closed with regards to data sharing, there exists a spectrum of openness in data sharing practices of the remaining agencies, suggesting potential policy mutation of PCI open data, particularly in the “partially open” category, where some but not all elements of open data are present.

#### 4.4.4 PCI Open Data by Department Strata and Type

Table 4.5 displays the highest levels of data openness across different strata of sampled police agencies. Police agencies are divided into strata based on the type of agency (local police, sheriff/county police) and size as measured by number of full-time sworn officers.

Table 4.5 Highest Openness Levels by Department Strata (with Percentages)

| <b>Strata<br/>(Size/Type)</b> | <b>Closed (1)</b> | <b>Simple Data Sharing<br/>(2)</b> | <b>Partially Open<br/>(3)</b> | <b>Open (4)</b> | <b>Total</b> |
|-------------------------------|-------------------|------------------------------------|-------------------------------|-----------------|--------------|
| <b>LP: 100+</b>               | 15 (16.30%)       | 23 (25.00%)                        | 16 (17.39%)                   | 38<br>(41.30%)  | 92           |
| <b>LP: 50-99</b>              | 12 (57.14%)       | 7 (33.33%)                         | 2 (9.52%)                     | 0 (0.00%)       | 21           |
| <b>LP: 25-49</b>              | 23 (56.10%)       | 9 (21.95%)                         | 6 (14.63%)                    | 3 (7.32%)       | 41           |
| <b>LP: 10-24</b>              | 67 (83.75%)       | 8 (10.00%)                         | 4 (5.00%)                     | 1 (1.25%)       | 80           |
| <b>Sheriff: 100+</b>          | 30 (57.69%)       | 11 (21.15%)                        | 7 (13.46%)                    | 4 (7.69%)       | 52           |
| <b>Sheriff: 50-99</b>         | 4 (44.44%)        | 3 (33.33%)                         | 2 (22.22%)                    | 0 (0.00%)       | 9            |
| <b>Sheriff: 25-49</b>         | 15 (93.75%)       | 0 (0.00%)                          | 0 (0.00%)                     | 1 (6.25%)       | 16           |



| <b>Strata<br/>(Size/Type)</b> | <b>Closed (1)</b> | <b>Simple Data Sharing<br/>(2)</b> | <b>Partially Open<br/>(3)</b> | <b>Open (4)</b> | <b>Total</b> |
|-------------------------------|-------------------|------------------------------------|-------------------------------|-----------------|--------------|
| <b>Sheriff: 10-24</b>         | 23<br>(100.00%)   | 0 (0.00%)                          | 0 (0.00%)                     | 0 (0.00%)       | 23           |
| <b>Total</b>                  | 189               | 61                                 | 37                            | 47              | 334          |

Table 4.5 reveals much variation between agencies categorized by strata with regards to PCI open data, as well as partially open data sharing practices. Both appear to be concentrated in larger departments, as well as in local police agencies. Larger police departments with over one hundred sworn officers tend to have higher scores in the highest openness category. Size appears to be influential for either type of police agency, as both local departments and sheriff’s departments in the smaller strata show lower openness scores when compared to higher strata. However, police agency type appears influential, as the highest stratum of sheriff’s departments has the majority of agencies observed to be closed, when the highest stratum of local police agencies has the majority of agencies observed to utilize open data.

#### 4.4.5 PCI Open Data by State

Although this sample did not have the necessary number of observations from different states for assessing state-level influences through regression, some general observations can still be made by examining the data. California and Texas have a notable presence in the higher openness categories, while Georgia and Pennsylvania were predominantly in the lowest openness category, with little representation in higher categories. Ohio showed a significant presence across different openness levels, including a higher number in category 4. Overall, the distribution suggests varying levels of openness in police data sharing across different states, with some like California and Texas showing higher openness, while others like Georgia and Pennsylvania show lower openness. These variations might reflect differences in state policies, however it should be noted that state differences may be caused by differences in distribution of large cities with large police agencies. California and Texas notably have many large cities, so this may be reflecting agency size distribution (US Census 2022).

#### 4.4.6 Summary of Phase 1 Results: Observations on PCI Open Data Adoption and Mutation

Recall that the first research question was to what extent has PCI open data mobilized through the landscape of American policing, and what mutations can be observed? Some tentative answers to this question can be drawn given these observations. However, these should be interpreted with caution, given the sampling technique utilized was not a truly random representative sample, and thus overall generalizability of these findings is not assured (Taherdoost 2016). Agencies with more full time sworn officers were oversampled relative to their proportion of the target population. In addition to this, although this sample has included smaller departments, it had only collected information on agencies with at least ten full-time sworn officers. These smaller agencies make up approximately 30% of total individual American policing agencies based on 2020 LEMAS data (LEMAS 2020). Therefore, these findings should be considered in this light.

Having said this, PCI open data appears to have found only very modest degree of uptake amongst American police agencies broadly, with only 14% of this sample having adopted this policy in at least one of four relevant police-citizen interaction data categories. However, nearly as many departments at 11% have adopted partial open data sharing practices in at least one police-citizen interaction data category, that utilize some elements of open data such as sharing incident level data or utilizing web-based interfaces to allow users to explore data, moving beyond basic data sharing practices like those exemplified through annual reporting in publicly available PDFs. This suggests that the specifics of PCI open data policy models may be mutating to respond to specific conditions as data sharing transparency policies, or the extent of field-level acceptance of open data practices has not reached the necessary level to result in strong isomorphic pressures.

There also appears to be a meaningful distinction between large and small agencies with regards to data transparency policy. PCI open data policy also appears to be far more prevalent in larger police organizations as measured by number of sworn officers as compared to smaller agencies. Although there also appears to be influence from the type of police organization, with local police agencies tending to be more open when compared to sheriff departments. Although local police agencies had lower levels of agencies sharing no data, as well as most fully open PCI data policies being in local police agencies (41 of 47), both types of agencies showed higher levels of openness in the larger agencies. Of the 47 agencies utilizing PCI open-data, only 5 were departments that had less than one hundred sworn officers. This could be reflective of size

influences on informal networks of communication between agencies (Roberts and Roberts 2007) creating partially closed networks where mimetic isomorphic pressures are greater. This potentially may also be reflective of size influences on likelihood to adopt technologies, as larger agencies tend to adopt new technologies when compared to smaller agencies, although there are technology specific exceptions to this (Strom 2017). Given the oversampling of larger agencies, it is likely that the true number of American police agencies utilizing PCI open data is lower than what is reflected in this sample.

While agencies utilizing PCI open data also appeared more heavily concentrated in California and Texas, this could also be a component of department size, as these states contain the largest number of the 333 cities with populations over one hundred thousand residents in the United States, with California at first with 75 cities followed by Texas at second with 42 cities (US Census 2022). However, although only 6 of these 333 cities are in Ohio, agencies within that state showed higher levels of data openness when compared to larger states like Florida or Georgia.

Ohio must be noted to be an interesting category where state legislation may be influencing data sharing practices amongst police agencies in the state. The Ohio state Office of Criminal Justice Services utilizes a web-based data portal application for providing access to its state-based incident reporting system, a voluntary program for Ohio law enforcement agencies to report their crime statistics and use of force data to the state. Although like the national based incident reporting system (NIBRS), OIBRS is not simply NIBRS data reported in a state data portal, as OIBRS uses a different data format (Ohio Department of Public Safety 2023).

The use-of-force data portal opened in November of 2021, these data are accessible in a web-portal that allows users to visualize and download crime data as well as use of force data in an open format (Ohio Criminal Justice Services 2021). The system is an expansion of an already existing data portal that had made crime data collected through OIBRS available through a similar web-portal interface (Ohio Department of Public Safety 2023). Ohio was also the first state to enroll in the federal national use-of-force data collection program. This program has states submit their use-of-force data in bulk, rather than each agency submitting reports individually through federal data submission portals (Federal Bureau of Investigations 2019). Although participation in OIBRS is voluntary, the increased number of PCI open data in Ohio

agencies suggests that such a state-based program may be important in influencing PCI open data adoption, potentially overcoming issues regarding agency-level technological capabilities. Participating departments were not required to maintain data portals and websites, but instead provide the raw data to the state program which then did necessary privacy screening and transformation (Ohio Department of Public Safety 2023). However, state-focused data gathering was not a focus of this research, so data gathering did not create enough observations for analysis of the influence of state-level programs such as this.

In summary, these data seem to indicate that there is a highly stratified uptake of PCI open data across American policing. Large, local police agencies appear to have adopted PCI open data far more than smaller agencies, and local police agencies appear to have adopted PCI open data far more than sheriff or county police. Considered alone, 41.3% of local police agencies with more than one hundred sworn officers have adopted PCI open data policy in at least one important interactions data category. There also appears to be potential mutation of open data practices in transparency practices related to these categories of data, as many departments utilized partially open data transparency practices that had some but not all elements of a fully open data policy.

#### 4.5 Study: Phase 2

After exploring the first research question regarding the present situation of policy adoption and mutation of PCI open data in American policing, the second research question will now be explored: are police agencies more likely to adopt data transparency policies, such as PCI open data, when key stabilizing elements are present in their place-specific context?

First, section 4.5.1 explains a policy-specific model for PCI open data, the value of which is then argued for in section 4.2.4. Following this, the model is used to develop key hypotheses, which are then tested with logistic regression.

##### 4.5.1 PCI Open Data Policy Mobility Model

As previously stated, policy-specific explanatory models are a better approach for understanding police policy mobility. Although PCI open-data policy assemblages will be unique to each specific implementation, applying an integrated institutional/assemblage lens to observations of from previous research will reveal several elements that would be more likely to be stabilizing, and therefore more likely to be observed in those agencies that have adopted PCI open-data.

*COSMOPOLITANISM, NORMATIVE PRESSURES, INFORMATIONAL INFRASTRUCTURES*  
DOI theory has found that “early adopters” tend to be more tightly linked to regional and national networks that facilitate the exchange of information and confirm the suitability of innovations. The propensity for organizations to engage with such networks is evidence of an organization being prone to seek new ideas and is referred to as “cosmopolitanism” (Rogers 1995). Research on police policy diffusion has linked agency cosmopolitanism to policy adoption in several cases. This was the case in data-intensive policy, such as the adoption of centralized data sharing amongst police in northeastern Illinois (Skogan and Hartnett 2005) computer crime mapping (Roberts and Roberts 2009), and incident based spatial crime mapping (Weisburd and Lum 2005), as well as legitimacy building policy such as community-oriented policing (Burruss and Giblin 2014).

Yet measuring cosmopolitanism through engagement with networks such as these is dual-faceted, in that it can be used as a measure of an internal, agency-specific tendency towards seeking outside ideas, as well as measuring normative isomorphic pressures on a police agency. These pressures, coming from interactions within organizational fields such as funding agencies and professional associations, lead to shared beliefs and practices becoming institutionalized (Palmer, Biggart, and Dick 2008; Crank 2003). Crank and Langworthy (1992) assert that organizations such as the International Association of Chiefs of Police (IACP) are a source of such normative pressure, as they create standards that police agencies are expected to adhere to and that such standards are communicated through events such as annual meetings and publications.

These networks can also be understood as informational infrastructures (McCann and Ward 2012; 2010; Cook and Ward 2012). These informational infrastructures can be made up of professional associations, conferences, site visits, presentations, websites, or other similar elements (Cook and Ward 2011; 2012). These informational infrastructures can be understood as an assemblage, not entirely fixed, but having coherence and stability (Cook and Ward 2012). These infrastructures work to transmit products of policy learning such as fact sheets, but also work to create these products.

In this case, involvement with the IACP would be indicative of greater cosmopolitanism within a department, as well as a source of exposure to normative isomorphic forces, including informational infrastructure assemblages contributing to policy mobility. Agencies that connect with the IACP would be more likely to have greater opportunities for establishing relations with

other police agencies, engaging with policy specific informational infrastructures, as well as exposure to the norming pressures of professionalization standards. Similarly, the Police Data Initiative can also be conceptualized as a national network indicating increased cosmopolitanism on behalf of participating departments, as well as an informational infrastructure assemblage acting as a vector for increased mimetic and normative isomorphic pressures.

#### *DEPARTMENT SIZE*

Agency size has been found to positively associate with the adoption of “innovations” in some cases, but studies on police policy have found mixed results regarding the relationship broadly. Agency size has been found to be positively associated with adopting community policing (Morabito 2010; Burruss and Giblin 2014) intelligence led policing (Carter, Phillips, and Gayadeen 2014), crime mapping (Chamard 2004), and body worn cameras (Nix, Todak, and Tregle 2020) in police agencies. However, agency size was found to negative correlate with the adoption of body worn cameras (Nowacki and Willits 2018) and either unrelated (Worrall and Zhao 2003; Wilson 2005) or negatively correlated with adopting community-oriented policing (Maguire and Mastrofski 2000). It has also been suggested that agency size may have a complex relationship with technology adoption, with potential agency size thresholds existing where it is important for smaller agencies under 250 sworn officers (Strom 2017).

The association between size and policy adoption in these cases can be viewed as supportive of different theoretical explanations regarding policy diffusion. From resource dependency theory, agency size is expected to facilitate policy adoption since larger departments have larger budgets and can therefore have the funding necessary or “slack resources” to adopt newer technology or policies that require specialized employees or equipment (Rogers 1995; Mastrofski 2019). However, from the institutional perspective, agency size can result in funding problems that serve as a local constraint on the effects of the institutional environment that push isomorphism (Burruss and Giblin 2014). From the perspective of mobility approach, these local constraints would serve as a destabilizing force on any potential policy assemblage. Size may also potentially be influential in informal communications between police agencies (Roberts and Roberts 2007), where agencies have greater level of informal contact with agencies of similar size. Mimetic isomorphic pressures may potentially operate within agency size stratum. The relevance of agency size therefore may provide more support for several different theoretical explanations regarding police agency behaviour.

### *DEPARTMENT AND LOCAL TECHNOCRATIC ELEMENTS FOR POLICY STABILIZATION*

Police agencies that had previous experience using technology have been found to be more likely to adopt new technologies. Departments that utilize more technology were more likely to utilize BWCs (Nowacki and Willits 2018). Early adopters of crime mapping technologies tend to be large police agencies with pre-existing interests and expertise in related technologies (Weisburd and Lum 2005; Chamard 2004). Agencies with prior technological experience increased the likelihood of adoption of new information technologies (Skogan and Hartnett 2005).

From an assemblage perspective, a police agency with pre-existing data intensive policy practices, such as hot-spots policing, would be more likely to be able to stabilize a PCI open data policy assemblage due to the familiarity of utilizing incident based, spatial data. The technocratic epistemology represented by this use would also indicate a higher degree of adherence to normative isomorphic pressures from professionalization sources. Therefore, the presence of the technological capability within the department would further indicate a greater likelihood of policy stabilization.

However, through a policy-assemblage lens, technocratic elements at the local scale beyond the police agency would also likely serve as a stabilizing element. Given the involvement of civic technology elements in the PDI revealed in Chapter 3, we would expect that cities with pre-existing open-data portals or similar civic-tech elements would be more likely to be able to territorialize a coherent PCI open data policy than those without. This would be because agencies operating in cities that already make use of open-data platforms for other government data, whether purchased from civic-tech vendors or created internally, as this proximity would likely present opportunities for the relations between non-police actors that would foster policy assemblage stabilization. This would be consistent with previous research on local pressures from local government have been noted to often drive considerations for police agencies regarding adopting new technologies (Strom 2017; Morabito 2010).

In summary, a policy-specific model for PCI open data focuses on several key elements: agency engagement with informational infrastructures, department size as influencing relations and place-specific context, existing data-related policies as indicate of technocratic elements, and local technocratic elements in relevant government sectors.

## 4.6 Supporting Elements of Logistic Regression

### 4.6.1 Sample Adjustment for Non-Responsive Departments

Before using this model to generate and test hypotheses, some data issues must be addressed. Since smaller departments were prioritized for inclusion in the sample, non-responsive agencies in the LEMAS 2020 survey were included. LEMAS survey includes these nonresponsive departments in their dataset. These nonresponsive departments were not excluded in the subsample from the initial 3500, as non-response rates for police agencies under 100 sworn officers was higher than those over. For answering the first research question regarding the current levels of PCI open data adoption across American policing, inclusion of these non-responsive agencies was done to better reflect these smaller departments under 100 sworn officers. However, to test hypotheses on the correlations between the selected dependent and independent variables, these non-responsive departments needed to be excluded prior to analysis, as they had no values for the LEMAS survey questions used as measures for key independent variables. There were 65 missing observations in total dropped from the original sample of 334 police agencies. Table 4.7 compares the distribution of the non-responsive police agencies by strata and reductions in each as compared to the original sample. Table 4.8 shows the distribution of highest openness category of the sampled police agencies with non-responsive agencies dropped.

Table 4.6 Change from dropping Non-Responsive LEMAS Departments

| <b>Strata</b>  | <b>Freq. (334)</b> | <b>Percent (334)</b> | <b>Freq. (269)</b> | <b>Percent (269)</b> | <b>Reduction in Freq.</b> |
|----------------|--------------------|----------------------|--------------------|----------------------|---------------------------|
| LP: 100+       | 92                 | 27.54%               | 84                 | 31.23%               | -8                        |
| LP: 50-99      | 21                 | 6.29%                | 16                 | 5.95%                | -5                        |
| LP: 25-49      | 41                 | 12.28%               | 31                 | 11.52%               | -10                       |
| LP: 10-24      | 80                 | 23.95%               | 68                 | 25.28%               | -12                       |
| Sheriff: 100+  | 52                 | 15.57%               | 33                 | 12.27%               | -19                       |
| Sheriff: 50-99 | 9                  | 2.69%                | 6                  | 2.23%                | -3                        |
| Sheriff: 25-49 | 16                 | 4.79%                | 12                 | 4.46%                | -4                        |



| <b>Strata</b>  | <b>Freq. (334)</b> | <b>Percent (334)</b> | <b>Freq. (269)</b> | <b>Percent (269)</b> | <b>Reduction in Freq.</b> |
|----------------|--------------------|----------------------|--------------------|----------------------|---------------------------|
| Sheriff: 10-24 | 23                 | 6.89%                | 19                 | 7.06%                | -4                        |
| <b>Total</b>   | <b>334</b>         | <b>100.00%</b>       | <b>269</b>         | <b>100.00%</b>       | <b>-65</b>                |

Table 4.7 Highest Data Sharing Practices across all Categories Non-Responsive Dropped

| <b>Highest Level of Openness</b> | <b>Frequency</b> | <b>Percent</b> | <b>Cumulative Percent</b> |
|----------------------------------|------------------|----------------|---------------------------|
| <b>Closed (1)</b>                | 142              | 52.79%         | 52.79%                    |
| <b>Simple Data Sharing (2)</b>   | 50               | 18.59%         | 71.38%                    |
| <b>Partially Open (3)</b>        | 33               | 12.27%         | 83.64%                    |
| <b>Open (4)</b>                  | 44               | 16.36%         | 100.00%                   |
| <b>Total</b>                     | <b>269</b>       | <b>100.00%</b> |                           |

Tables 4.7 and 4.8 show that including non-responsive police agencies in Phase 1 increased the representation of local police agencies with less than one hundred sworn officers, as well as sheriff's departments with more than one hundred sworn officers. In addition to better representing these agencies in the sample, keeping these in my sample when gathering additional data on open data practices proved to be useful, as in the final 47 of 334 departments that had at least one PCI open data policy, 3 were from non-responsive departments. Similar to non-responsive included sample, this sub sample had the same concentration in the higher strata of officers.

Table 4.9 displays the changes from dropping non-responsive police agencies in distribution of observed data openness policies in sampled police agencies, by specific police-citizen interaction data type.

Table 4.8 Influence of dropping Non-Responsive Departments

| <b>Data Type (Policy)</b>        | <b>Survey Completion</b> | <b>Closed (1)</b> | <b>Simple Data Sharing (2)</b> | <b>Partially Open (3)</b> | <b>Open (4)</b> | <b>Total</b> |
|----------------------------------|--------------------------|-------------------|--------------------------------|---------------------------|-----------------|--------------|
| <b>Use of Force</b>              | Yes                      | 199<br>(73.98%)   | 48 (17.84%)                    | 8 (2.97%)                 | 14<br>(5.20%)   | <b>269</b>   |
|                                  | No                       | 56<br>(86.15%)    | 7 (10.77%)                     | 0 (0.00%)                 | 2<br>(3.08%)    | <b>65</b>    |
| <b>Officer-Involved Shooting</b> | Yes                      | 223<br>(82.90%)   | 15 (5.58%)                     | 17 (6.32%)                | 14<br>(5.20%)   | <b>269</b>   |
|                                  | No                       | 60<br>(92.31%)    | 2 (3.08%)                      | 1 (1.54%)                 | 2<br>(3.08%)    | <b>65</b>    |
| <b>Arrests</b>                   | Yes                      | 187<br>(69.52%)   | 46 (17.10%)                    | 19 (7.06%)                | 17<br>(6.32%)   | <b>269</b>   |
|                                  | No                       | 54<br>(83.08%)    | 7 (10.77%)                     | 3 (4.62%)                 | 1<br>(1.54%)    | <b>65</b>    |
| <b>Stops</b>                     | Yes                      | 198<br>(73.61%)   | 31 (11.52%)                    | 15 (5.58%)                | 25<br>(9.29%)   | <b>269</b>   |
|                                  | No                       | 57<br>(87.69%)    | 4 (6.15%)                      | 3 (4.62%)                 | 1<br>(1.54%)    | <b>65</b>    |

Dropping non-responsive agencies resulted in a slight decrease in the proportion of agencies within the closed data openness category, with corresponding increases in the other categories, particularly in simple data sharing and open. Although this skewed the data towards departments with greater data transparency openness, the reduction in sample size did not dramatically alter the core findings regarding the distribution of data openness and the correlations among different types of openness. However, once again caution should be exercised in generalizing these results, considering the potential non-randomness of the non-responsive observations.

#### 4.6.2 Dependent Variable

For this logistic regression, PCI open data adoption was conceptualized as when a police agency had released data in any of the four police-citizen interactions categories as open data (incident level, downloadable, machine readable). This was measured as a dichotomous binary variable.

#### 4.6.3 Independent Variables

The key elements to be measured were specific to those observed to be potentially important to the stabilization of PCI open-data assemblages, given qualitative investigation into the development and mobility of policy models developed within the Police Data Initiative from chapter 3. Like established research into policy diffusion, it is expected certain variables like cosmopolitanism and existing technology use should be positive correlated with PCI open data adoption, and that policy specific influences of local government open data usage should also positively correlate with PCI open data adoption. Although the very nature of assemblage thinking reminds us that each policy assemblage will be context specific to every department, and thus establishing an authoritative list of variables for all PCI open data policy assemblages impossible, we can nevertheless reasonably expect that certain elements should be expected to be stabilizing influences in most cases, and thus potentially observable through quantitative analysis.

##### *DEPARTMENT SIZE AND TYPE*

To measure department size and type, the data within the 2020 LEMAS data for each agency was used. The natural logarithm of the number of full-time sworn officers contained within the 2020 LEMAS data was used to measure size, a method used by previous researcher (W. G. Skogan and Hartnett 2005; Nowacki and Willits 2018; Willits and Nowacki 2014). This transformation addresses the issue of outliers, such as the New York City Police Department, which has a much larger number of full-time sworn officers than most other agencies. Using the natural log of these figures helps normalize the data, making it more comparable across different sizes of police departments. Using the logged number of sworn officers is preferable to using other metrics like the population served or budget sizes, which often show a high degree of correlation in studies of police organizations (Nowacki and Willits 2018; Willits and Nowacki 2014). This decision was supported by the results from variance inflation factor (VIF) tests, which indicated values ranging from 10 to 14 for these variables, with an average VIF of 12.49. Since all values were over 10, this suggests multicollinearity would be a problem if these were included together in regression (Jenkins-Smith et al. 2017).

Agency type was based on LEMAS 2020 data, measured as whether a department was a local police agency, or a sheriff or county police agency. A dummy variable was created for sheriff/county police and local police, grouping these sheriff and county police together.

### *TECHNOLOGY: DATA USAGE AND TECHNOCRATIC ELEMENTS*

For within-department elements, departments that have integrated data gathering and analysis tools into their operations should also be more likely than those without to stabilize a PCI open data policy assemblage than those who do not, as these practices would reflect technocratic epistemologies within that agency. This was measured using self-reported use of hot-spot analysis in the 2020 LEMAS data. Hot-spots analysis is a data-intensive form of using spatial analysis of crime incidents to direct policing resources to concentrated locations of crime (Ariel 2019). Departments that utilized hot spot analysis are expected to be more likely to stabilize a PCI open data policy, as this would capture the capability to have incident level spatial data as a technological capacity within the department.

### *DEPARTMENT CONNECTIONS TO NORMATIVE INFORMATIONAL INFRASTRUCTURES ASSEMBLAGES*

Other research has found that increased connections with other departments, referred to as “cosmopolitanism” (Rogers 1995), are associated with DOI policy adoption. So too does an assemblage approach, as engagement and connection to normative isomorphic forces through informational infrastructure assemblages should be expected to enable policy mobility and policy assemblage stabilization. Thus, police agencies with greater contact with these organizations, such as the IACP or the National Police Foundation, should be expected to be more likely to stabilize a PCI open data policy assemblage. This was measured using self reported response on 2020 LEMAS as to whether the police agency had a formal or informal problem-solving agreement with any law-enforcement organization such as IACP or the National Police Foundation.

Furthermore, the Police Data Initiative can also be conceptualized as a normative informational infrastructure assemblage, that also facilitates mimetic and normative isomorphic pressures on police agencies that engaged with it. Thus, participating in the PDI should be expected to have a strong positive influence of stabilizing a PCI open data policy assemblage for those agencies. This was measured using the most recent PDI participant membership list to measure whether a department had participated in the initiative.

### *TECHNOLOGY VENDORS, TECHNOCRACY*

Through a policy-assemblage perspective, technocratic factors at the local level, including those beyond the police agency, can act as stabilizing forces. Therefore, cities with existing open-data

portals or civic-tech initiatives should be more likely to successfully stabilize PCI open data policy assemblages compared to those without. This is because agencies in cities already utilizing open-data platforms for government data, either through external civic-tech vendors or in-house development, would have greater opportunities to establish relationships between police and non-police stakeholders supportive of data transparency policies, facilitating policy stabilization. This aligns with previous findings that local government pressures often influence the decisions of police agencies to adopt new technologies (Strom 2017; Morabito 2010). For policy assemblage to stabilize, we should look to elements outside the immediate police agency. This was measured by creating a binary variable for each police agency based on whether its relevant local government (municipal for local police and county for sheriff/county police) utilized open government data.

#### 4.6.4 Hypotheses

Hypothesis 1: Departments reporting greater connections with normative professional organizations are more likely to utilize PCI open data.

Hypothesis 2: Departments using data policies and practices consistent with technocracy are more likely to utilize PCI open data.

Hypothesis 3: Departments participating in Police Data Initiative are more likely to enact PCI open data.

Hypothesis 4: Departments operating where relevant local government utilizes open data practices are more likely to enact PCI open data.

Table 4.9 Descriptive Statistics for Variables

| <b>Variable</b> | <b>Obvs</b> | <b>Mean</b> | <b>StD</b> | <b>Min</b> | <b>Max</b> | <b>Description</b>                            |
|-----------------|-------------|-------------|------------|------------|------------|---|
| PCI Open Data   | 269         | 0.160       | 0.367      | 0          | 1          | 1 = PCI Open Data in at least 1 data category |
| Size (ln)       | 269         | 4.543       | 1.934      | 1.386      | 10.458     | Natural log of FT officers                    |
| Local Police    | 269         | 0.714       | 0.453      | 0          | 1          | 1 = Local police                              |

| Variable                          | Obvs | Mean  | StD   | Min | Max | Description   |
|-----------------------------------|------|-------|-------|-----|-----|---|
| Professional Contact              | 269  | 0.665 | 0.473 | 0   | 1   | 1 = reported formal/informal problem solving with LEA |
| Hot-Spots Usage                   | 269  | 0.584 | 0.494 | 0   | 1   | 1 = reported used data for hot spot analysis          |
| Open Data use in local government | 269  | 0.268 | 0.444 | 0   | 1   | 1 = municipality / county utilized open-data          |
| Police Data Initiative            | 269  | 0.097 | 0.296 | 0   | 1   | 1 = member of PDI                                     |

#### 4.7 Logistic Regression on Variables of Interest

To examine whether local open data elements influence broader trends, logistic regression analysis was conducted using LEMAS 2020 variables and collected data. Logistic regression is suitable given nature of the data (Jenkins-Smith et al. 2017). The dependent variable is dichotomous, indicating whether an agency utilized PCI open data in one of four categories, suitable for logistic regression's handling of non-linear relationships without the need for normally distributed residuals.

##### 4.7.1 Data Limitations

Another essential requirement of logistic regression is the independence of observations (Jenkins-Smith et al. 2017). This study assumes police agency relationships influence the adoption of PCI open data, but this assumption would only be compromised with time-lagged series data. Since this analysis captures a single snapshot in time, each policy observation is considered independent. Multicollinearity diagnostics did not reveal significant issues, with all values well below concerning thresholds. Additionally, visual inspection of a lowess plot confirmed the relationship between the sole continuous independent variable of full-time sworn officers and the log odds of the dependent variable as linear, satisfying another assumption of logistic regression (Jenkins-Smith et al. 2017).

A notable limitation of these data is the violation of the events per variable (EPV) guideline, with 269 agencies but only 44 events of PCI open data, which is a deviation from the 10 events to 1

independent variable guideline (Hosmer, Lemeshow, and Sturdivant 2013). However, some have suggested that a 5 to 1 ratio may be more appropriate under certain conditions, as analysis problems may be as common within this range as they are within a 10-16 range (Vittinghoff and McCulloch 2007). Consequently, six independent variables were included to reflect influential factors identified in literature on policy implementation in American police agencies and local elements potentially enhancing PCI open-data policy stabilization. Given these data limitations, the findings should be interpreted with caution.

Lastly, this analysis, being a subset of the original 2020 LEMAS data, raises concerns about its generalizability. Although the 2020 LEMAS provides weights to adjust for missing responses from smaller agencies, using these weights was not suitable given the sampling changes and the aim to explore specific variable relationships. Therefore, the applicability of these findings to the broader population of American police agencies should be considered with caution.

#### 4.7.2 Results of Logistic Regression

Logistic regression results are reported with odds ratio in addition to coefficients. Statistically significant variables are denoted with asterisks.

Table 4.10 Logistic Regression on PCI Open Data Adoption

| <b>Variable</b>        | <b>b (se)</b>     | <b>Odds ratio</b> |
|------------------------|-------------------|-------------------|
| Size (ln)              | 0.650 (0.208)**   | 1.915             |
| Local police           | 1.038 (0.651)     | 2.825             |
| Professional Contact   | -0.093 (0.543)    | 0.911             |
| Hot-spots usage        | -0.304 (0.871)    | 0.738             |
| OD in local government | 0.954 (0.557)     | 2.597             |
| PDI member             | 1.845 (0.576)**   | 6.328**           |
| _cons                  | -6.574 (1.094)*** | 0.0014***         |

Standard errors in parentheses.

\*\* indicates  $p < 0.01$

\*\*\* indicates  $p < 0.001$

Hypotheses 1 and 2 posited that departments with greater connections to normative professional organizations and those utilizing technocratic data policies such as hot-spots analysis would be more likely to adopt PCI open data. Contrary to expectations, this analysis did not support these hypotheses, as neither of these variables reached statistical significance, suggesting that normative isomorphic pressures or within-agency technocratic elements may not be stabilizing influences on PDI open data assemblages, or at least not widely so.

However, normative isomorphic pressures via informational infrastructure assemblages may be influential, as indicated by results for hypothesis 3. This hypothesis posited that participation in the Police Data Initiative would be positively associated with PCI open data adoption, and was supported, demonstrating a significant positive influence on the likelihood of enacting PCI open data policies.

However, although membership in the Police Data Initiative significantly increases the odds of the outcome by approximately 532.8% ( $p = 0.001$ ), indicating a strong and significant association, the confidence intervals had a wide range from about 2.05 to 19.55. Wide ranges can indicate a significant degree of variability in the effect size of a variable, and therefore substantial uncertainty about the precise magnitude of the effect. While these results clearly show an increased likelihood of PCI adoption with PDI membership, this wide interval may suggest high variability in the effect of PDI membership. It could mean that for some agencies, PDI membership has a moderately strong positive effect, while for others, it could have a very strong positive effect. This would seem to suggest that there are other moderating or mediating factors not captured in the model that influence the relationship between PDI membership and the outcome variable. It could be that participation with the Police Data Initiative may be reflective of both internal agency characteristics that may increase PCI adoption like cosmopolitanism, as well as serving as an informational infrastructure facilitating both normative isomorphic forces through professionalization, and mimetic isomorphic forces through facilitating relations between participating agencies. These different factors may then vary between police agencies that are participating with PDI, explaining the high variability in the effect of PDI membership.

Finally, hypothesis 4 posited that the presence of open data policy in local government would be positively associated with PCI open data adoption. Although showing a positive relationship and



approaching a conventional level of statistical significance ( $p = 0.087$ ) this did not meet the minimum threshold of .05 and therefore this hypothesis was not supported.

While not explicitly tested through a standalone hypothesis, the significant positive coefficient for the logged number of full-time officers speaks to the influence of department size on policy adoption. This suggests that larger departments, possibly due to their resources or greater exposure to and capacity for engaging with technological innovations and professional networks, are more predisposed to adopting PCI open data policies.

In summary, the logistic regression analysis provides support for only one of the four hypotheses. Of the independent variables, only department size measured as the number of sworn officers and PDI membership were found to be statistically significant. In both cases, there was a positive relationship between independent and the dependent variable.

#### 4.8 Discussion

Considering both the results of logistic regression on PCI open data policy adoption, as well as the dispersion of data practices amongst American police agencies, several interesting insights can be drawn.

The first would be that data transparency practices appear to be meaningfully connected to agency size. This was supported by logistic regression on PCI open data policies, as well as inspection of tabular data with the non-responsive agencies included. The largest percentage of police agencies that had adopted PCI open data in at least one data category, regardless of agency type, was in the largest stratum of over 100 full time sworn officers. For local police, 38 of the 92 (41%) of large local police departments had PCI open data, while 4 of 52 or 8% sheriffs/county agencies with more than 100 officers had PCI open data. This may be further evidence of size-related asymmetries in network connections between agencies (Roberts and Roberts 2007).

Although agency type appeared to be meaningful when inspecting these data in cross tabulation, this was not reflected in logistic regression results, where local police agencies were not found to be statistically significant.

With regards to policy mutation, viewing data openness as spectrum revealed more complexity than might be immediately apparent through a strict binary approach to policy that was utilized for regression. Inspection of the ordinal measurement of openness applied in Phase 1 reveals that while closed data practices remain the norm across the four data categories of interest, there

exists are similar number of agencies in nearly all data categories that use partially open data practices, beyond the simple PDF annual report model. In addition, excluding use-of-force and officer-involved shootings data, agencies do not appear to consistently share data of any interactions category.

That size is positively associated with policy adoption could support the structural contingency theory when applied to PCI open data adoption. It may be that larger agencies with more officers and more interactions with citizens may be more likely to adopt these policies to contextualize the greater number of interactions that take place. In this case, smaller agencies with less data may be less likely to pursue these policies, as smaller agencies with far fewer numbers of fraught interactions such as use-of-force may be able to meet transparency expectations from institutional sovereigns with traditional, non-data transparency practices.

If institutional explanations for policy adoption were accurate in this case, then field-level professionalization should be positively associated with PCI policy adoption. However, the role of cosmopolitanism and isomorphic pressures in PCI open data adoption remains unclear.

Although the measure for engagement with commonly accepted law enforcement professional organizations such as the IACP or the National Police Foundation were found to be statistically insignificant, participation in the Police Data Initiative was statistically significant and positively associated with adoption. This can be interpreted as providing some support to the assertion that informational infrastructure assemblages are important avenues for policy mobility. Given the non-significance of cosmopolitanism measure, this would suggest that contact with policy-specific informational infrastructures may allow for policy mobility to a greater degree than contact with professionalization organizations facilitating broad field-level normative pressures.

However, data issues require caution when interpreting these findings. It may be that effects observed here for PDI membership could indicate data issues related to the low number of observed events, or that this model did not account for some mediating factor, as there may be additional local factors influencing whether PDI membership is influential. Joining the PDI may be indicative of other issues not necessarily captured by these independent variables, as PDI membership could potentially be viewed as indicative of department cosmopolitanism as well as technocratic elements within a department.

It is also possible that the lack of statistical significance for associations with professionalization organizations may also be indicative of the degree of field-level support for PCI open data. Although these professionalization organizations were supportive of the adoption of PCI open data (Police Foundation 2018), other policies directed at increasing public trust such as body-worn cameras were also supported and may have been to a greater degree (Nix, Todak, and Tregle 2020; Lum et al. 2019), thus overshadowing PCI open data as a response to legitimacy challenges. Future research may attempt to measure the degree the field-level normative forces support a particular policy and compare this with other policies that may overlap in certain policy areas, such as transparency.

In addition, all other independent variables capturing technocratic elements within agencies as well as open data policy in local government was not found to be statistically significant in logistic regression. It may be that these influences are too context specific to be captured by this sort of analysis. However, given the limitations of the data, this may be a function of requiring larger sample sizes to detect this influence.

This model may also not capture the complexity of interactions between department types and their relevant local governments. From an assemblage perspective, relations between an agency and that local government level may influence and form connections regardless of the specifics of the authority relations. However, the nature of those authority relations are also important to consider. Given that with the exception of Alaska, Connecticut, and DC, sheriffs are the organizational heads of sheriff departments, who are directly elected rather than appointed by local governments, there could potentially be a weakening in the influence of local open data practices when agency type is considered. Thus, it may be necessary to consider local police agencies and sheriff agencies separately when attempting to measure this.

#### 4.9 Conclusion

This chapter has introduced an integrated approach to studying police policy mobility, which integrates mobility/assemblage thinking with institutional theory. This approach challenges traditional views of policy diffusion from DOI as the movement of static innovations, proposing instead that policies are dynamic assemblages that evolve and adapt as they move across different policing contexts. However, this mobility occurs within the context of police agencies as institutional organizations. Thus, an integrated approach emphasizes the importance of the

complex interplay of factors that influence policy mobility, such as institutional connections and societal norms in shaping the mobility of police policy. This integrated approach recognizes that the journey of a policy from one agency to another inherently involves changes and adaptations, while also being shaped by both broader field-level factors as well as the unique place-specific contexts of each police agency.

This suggests we ought to reject the search for universally applicable predictors of policy adoption in favour of a more tailored examination of how and why certain policies spread and adapt in the complex landscape of policing. Policy-specific adoption models can therefore utilize existing research on the mobility of other policies to bring clarity to how broader field-level contexts influence how different policies mobilize, while remaining sensitive to the unique elements of each policy assemblage and the specific contexts into which policies are introduced. The empirical results of applying this approach to studying the mobility of police-citizen interactions data have yielded mixed findings regarding this novel approach. The finding that larger agencies are more likely to adopt open data policies supports the notion that policy mobility is influenced by structural and institutional factors, such as agency size, which may be linked to a greater degree of network connections and resources. However, the lack of statistical significance found for the role of professionalization organizations in policy adoption presents a challenge to the expectation set by institutional theory. While this might suggest a need to reevaluate the role of such organizations in facilitating policy mobility, the significant positive association between Police Data Initiative (PDI) membership and policy adoption underscores the importance of policy-specific informational infrastructure assemblages. This finding corroborates the synthesized approach's assertion that connections through specific informational infrastructures ought to be crucial for policy mobility. It implies that direct engagement with policy-relevant networks and initiatives may be more influential in encouraging policy adoption than generalized professional affiliations.

Observations on potential policy mutation of police open data policies and the spectrum of data openness provides further evidence for the utility of viewing policies as mutable assemblages rather than static entities. The observed variations in data practices among agencies echo the approach's perspective that policies undergo mutations as they move between different contexts. This variability not only supports the assemblage concept but also points to the necessity of

considering the granularity of policy implementation in understanding its mobility, further supporting the usefulness of policy-specific adoption models.

However, expected positive relationship between the presence of local technocratic data practices and open data policy adoption was not found. However, data limitations mean that some findings must be interpreted with caution, and thus this approach could benefit from a more detailed examination of the interplay between police policy and local government influences. In addition, more detailed examination regarding the differing roles of sheriffs and local police departments would also be beneficial, that would account for how such differences contribute to the complex mobility of these policies.

In conclusion, this chapter has shown mixed results regarding the integrated institutional/mobility approach to studying police policy. While supporting the significance of some agency specific local contexts and the role of specific informational infrastructures in facilitating policy mobility, the findings also suggest areas where the approach could be refined to better capture the nuances of professional affiliations and the specific interrelations between policing agencies and local governance structures.

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## Chapter 5 Conclusion

### 5.1 Introduction

It is often observed that we live in an increasingly interconnected world. Enhanced modes of transportation and telecommunications have made it easier for things and people to move from one place to another. But this also includes the movement of policy ideas. The mobility of policy means that approaches to public health may develop in one country and become adopted halfway across the world, or ideas from places viewed as successful will influence the development of policy in a completely different context. Each of these examples is important in its own right, but the policies utilized in policing are particularly important, given the unique nature of policing. Stripped away of all disabusing language, police are imbued with the coercive authority of the state. The policies that move in these cases can influence the guidelines wherein an officer can use violence against a citizen, including lethal force. While policies on public health can contribute to life and death, police policies are unique in that there are few other examples where policy so directly apply to life and death. Thus, understanding the processes behind the movements of police policies between places is of vital importance.

With this in mind, the concluding chapter first revisits the main contributions from each research manuscript and contextualizes these against the broader context of the relevant scholarly literature that was identified in the introductory chapter, explaining how each has responded to theoretical and empirical knowledge gaps and met the four primary goals of this dissertation. Next, significant research contributions are summarized, as well as research limitations. Finally, the conclusion synthesizes key messages from across the entire body of work, highlighting the novel and innovative contributions of the dissertation.

### 5.2 Knowledge Gaps, Research Goals, Manuscript Summaries

This dissertation addresses three knowledge gaps and four associated research goals.

The first knowledge gap is an empirical gap regarding the lack of academic study on police policy mobility within the broader policy mobilities literature, focused mainly within political and urban geography. The second gap is theoretical, i.e., the failure to account for the unique

institutional nature of police agencies as distinct organizations in limited instances in which police agencies are present in that policy mobilities literature. The third gap is a lack of empirical data analysis of the primary policy on which this dissertation is focused: police-citizen interactions (PCI) open data.

In response to these knowledge gaps, this dissertation adopted four research goals:

- 1) synthesize insights from mobility and institutional approaches to produce a framework for studying police policy mobility;
- 2) investigate the policy mobility of PCI open data;
- 3) contribute to mobilities literature given what the case study reveals about the mobility of police policy broadly; and
- 4) assess the extent to which PCI open data has been adopted by police agencies.

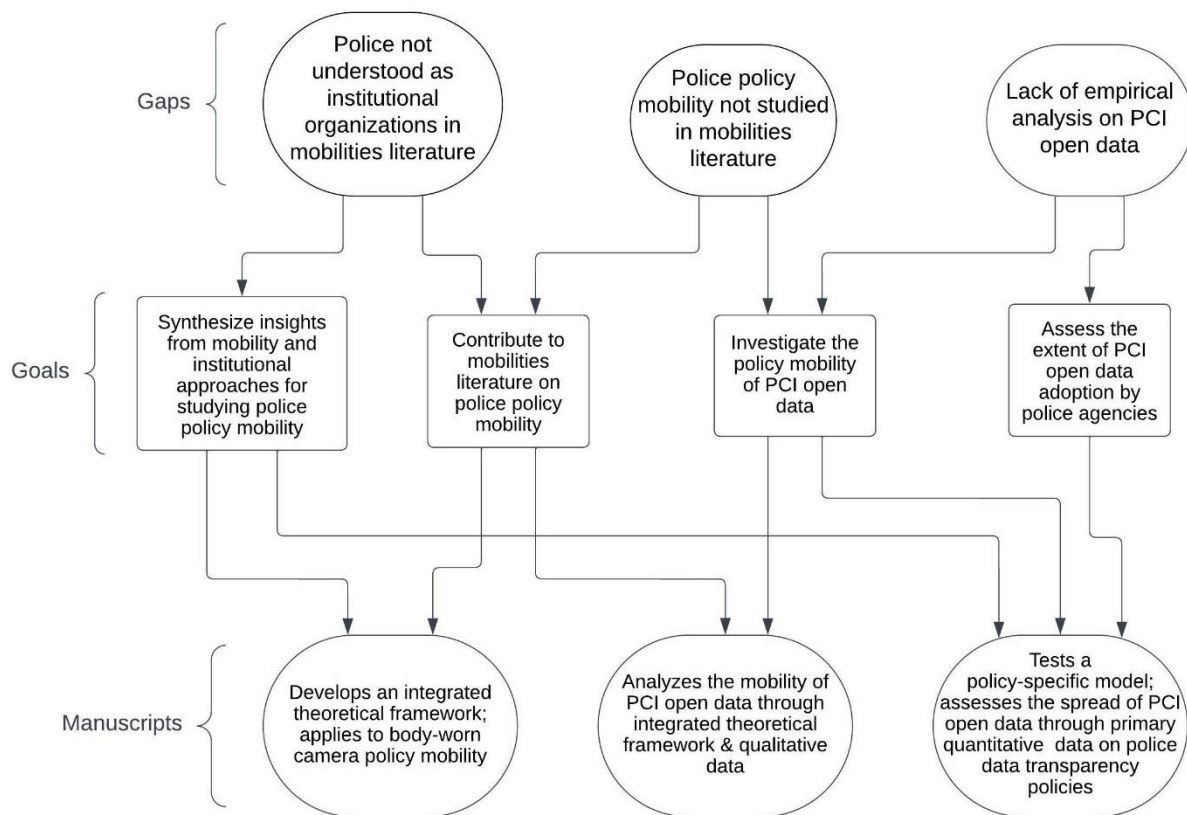


Figure 5.1 Knowledge Gaps, Dissertation Goals, Manuscript Contributions

The research carried out to meet these goals is reported in three manuscripts: chapters 2, 3, and 4 respectively. The first manuscript (chapter 2) developed an integrated theoretical framework for

studying police policy mobility that combined insights from the mobility/assemblage approach with those from institutional theory of organizational change. This framework was applied to the mobility of body-worn cameras (BWC) in policing, tracing its early development in the United Kingdom and subsequent mutations as it spread to new contexts in North America. The chapter identified the importance of informational infrastructures for this mobility, ceremony/decoupling as policy mutations enabling mobility, and the importance of assemblage thinking in establishing the complex web of relations between important actors.

The second manuscript (chapter 3) applied the theoretical framework developed in the first manuscript to study the development of PCI open-data through the Whitehouse-led Police Data Initiative (PDI). Using qualitative data from key-informant interviews, relevant conference recordings, and important texts, it identified the complex elements formed the PDI as an informational infrastructure assemblage. These included technocratic epistemologies within the Obama Whitehouse, civic technology elements with blended entrepreneurial and democratic motivations, alongside normative police professionalization organizations both inside and outside the federal Department of Justice. The work of actors from these diverse elements served to stabilize this assemblage, that then destabilized following the election of Donald Trump to the Whitehouse, and the subsequent shift in support from both the Whitehouse and Jeff Sessions led Department of Justice. This analysis noted the importance of the PDI as enabling mimetic and normative organizational isomorphism amongst engaged American police agencies with respect to PCI open data, how the benchmarking facilitated by the PDI served to contribute to myth-building for the importance of police data transparency, the role that the PDI served as enabling ceremonial adoption and thus mobility, and finally the importance of the relations between the elements that formed the PDI in influencing its form, focusing on the experiences of Whitehouse innovation fellows.

The third manuscript (chapter 4) utilized the insights from the previous two manuscripts to develop and apply a policy-specific adoption model. In contrast to traditional diffusion of innovation theory approaches common in the policing studies literature, this policy-specific adoption model approach merged mobility/assemblage concepts with institutional theory to reject the idea that broadly applicable models for police policy mobility were possible, and instead argued for policy specific models over universal predictors, focusing on how stabilization of different policy assemblages would necessarily involve different assemblage elements.



Combining primary and secondary quantitative data on the data transparency practices, including implementation of PCI open data, of a dataset of sampled American police agencies in two phases, the empirical findings on the mobility of PCI data reveal mixed results. Findings suggest agency size and direct engagement with policy-relevant networks significantly influence policy adoption, while the expected role of professionalization organizations was not substantiated.

### 5.3 Research Contributions: Empirical and Theoretical Knowledge Advances

#### 5.3.1 Literature Gaps

The policy mobilities approach, bridging sociology, geography, and political science, offers critical insights into how policies are shared and reshaped across urban landscapes (Peck 2011; Temenos and McCann 2013; McCann and Ward 2013). The first main insight from this approach is that it accounts for a wide array of policy actors involved in mobility, sensitive to the particular contexts with unique pressures that influence each of them (Prince 2012; Peck 2011; Temenos and McCann 2013). For example, it focuses on the mobility and agency of policy actors like consultants, who navigate complex networks to spread best practices across diverse urban contexts (Larner and Laurie 2010). These actors play pivotal roles in forming and transferring policies by leveraging the second insight of this approach, which are the relational geographies and narratives between cities (Bunnell 2015). These actors both employ and sometimes form benchmarks for comparison to facilitate policy emulation and adaptation (Larner and Heron 2004). The third insight is that policies, inherently designed to be mobile, undergo mutation and adaptation in response to local needs and contexts, facilitated by interactive spaces such as conferences and site visits where iterative learning and policy modeling occur (Peck and Theodore 2010; 2015; Ward 2006; Bathelt and Schuldt 2008; Cook and Ward 2012; McCann and Ward 2012; Prince 2012). This importance of this process and these spaces is the fourth main insight from this approach, as it is in these spaces of transit where policies not only move but are also shaped and reshaped, impacting and being impacted by the socio-institutional landscapes they traverse (Peck, Theodore, and Brenner 2009; McCann 2008; 2011a; McCann and Ward 2010; Temenos and Baker 2015).

Within geography, the mobilities approach has focused on urban policy mobility, the “knowledges, expertise and techniques routinely and quickly move from one city to another” (Jacobs 2012). Although this literature noted the wide variety of policy actors involved in mobility, such as activists, non-governmental organizations, bureaucrats, policy boosters, experts,

and consultants (McCann and Ward 2010; McCann 2013), it has not developed any particular accounting for the unique nature of police organizations as distinct organizations, whose particularities require special theoretical attention. It also has also only tangentially analyzed police policy mobility, such as in the case of studying the movement of harm-reduction policies (McCann and Temenos 2015; Baker, McCann, and Temenos 2020; Longhurst and McCann 2016), or decriminalized models of sex-work (McMenzie, Cook, and Laing 2019).

This constitutes both an empirical and theoretical gap, as police agencies have not been included nor accounted for as unique institutions within this literature. This gap is also mirrored in policing studies literatures, that utilize diffusion of innovation frameworks for studying the spread of police policy. In this case, these frameworks tend to utilize conceptions of policy that are static (Rogers 1963; Wejnert 2002), failing to appreciate the complexity of policy better captured by assemblage thinking. In short, just as the mobility approach would benefit from integration of insights from the institutional perspective, so would the existing framework for policy transfer utilized within policing studies benefit from insights from the mobility approach. This dissertation addresses this, using institutional theories of organizational change, providing application of mobility to police policy, while also providing framework for how to apply mobility to police policy that is sensitive to policing agencies.

The third gap and final gap is another empirical gap, both in the literature and more general terms. PCI open data has yet to have been directly examined, despite the significant change it poses to police transparency and having been part of a White House response to a significant political issue. This can likely be attributed to an ongoing bias in literature towards studying “successful” policy (Lovell 2017), which researchers in the policy mobilities field have called for addressing (Baker and McCann 2018) and some research has addressed ((Malone 2019; Müller 2015)). However, this bias is not only present within the policy mobilities literature, but also within the policing studies literature. Research on widely adopted policies such a body worn cameras (Nix, Todak, and Tregle 2020; J. J. Smith 2019; Nowacki and Willits 2018) CompStat (D. Smith and Bratton 2014; Willis and Mastrofski 2012; Willis, Mastrofski, and Weisburd 2007) or community policing strategies (Zhao 1996; Burruss and Giblin 2014; Morabito 2010; Phillips and Gayadeen 2014; Gayadeen and Phillips 2014) but policy failures remain underexamined.

Beyond examining police policing that may be less “successful”, PCI open data remains an underexamined. Little research in this literature has examined PCI open data or the PDI (Wood 2018), and if so, not using deep qualitative analysis. Contributing to the closing of this gap by examining the PDI and PCI open data in-depth will add to the current understanding of American policing policy, which lacks any simple way to broadly understand given the highly decentralized landscape of American policing (Bayley 1979; Banks et al. 2016).

### 5.3.2 Research Contributions

#### *Case study of BWC, PCI Open Data*

Both the first and second manuscripts (chapter 2 and 3) findings directly address the empirical gap regarding police policy mobility in the mobilities literature by providing a focused analysis of two police policies, tracing the development, transfer, and adaptation of BWC policies and PCI open data. By applying the mobilities approach to the specific context of data transparency and BWC policies, this dissertation not only expands the scope of policy actors considered within the literature but also introduces a nuanced examination of the institutional pressures shaping police policy adaptation and adoption. Moreover, by examining two police policies with differing levels of adoption, this dissertation illuminates the complex mechanisms through police policies move, adapt, and sometimes stall within the policing domain. For instance, the first manuscript (chapter 2) revealed the shifting discourses and policy aims of BWCs as evidence gathering from early pilots in the UK to transparency and accountability discourses when moving to North America. This closing of the empirical gap contributes to closing the second theoretical gap regarding the policy mobilities approach not accounting for the unique institutional dynamics of police organizations. Through highlighting the essential roles played by various actors, including federal agencies, technological and civic organizations, and local police departments, in shaping the policy mobility of PCI open data, the second manuscript (chapter 3) has demonstrated the importance of these institutional factors. In addition, findings from the first manuscript (chapter 2) offer clarification towards the theoretical gap within the mobilities literature, through the integration of institutional theory within the policy mobility approach to study police policy transfer, specifically focusing on BWCs. This research offers a deeper insight into the mechanisms of isomorphism through its integration of institutional theory with the policy mobility approach, offering a novel perspective on the dynamics of police policy movement,

thereby contributing significantly to closing the identified knowledge gap and advancing our understanding of policy mobility in unique organizational contexts like police agencies.

*Unique Information Infrastructure Assemblages*

Recall that the policy mobilities literature highlights the importance of the “spaces in between” where policy moves and is formed (Peck, Theodore, and Brenner 2009; McCann 2008; 2011b; McCann and Ward 2010; 2012; Temenos and Baker 2015). Both the first manuscript (chapter 2) and second manuscript contribute to this understanding by highlighting the role of informational infrastructure assemblages in facilitating policy movement as an example of such a “space in between”, while adding to these insights from the institutional approach previously not considered: the importance of institutional myths and sovereign demands on police agencies in structuring these assemblages. The unique informational infrastructure assemblages involved in the mobility of police policy involve the particular field-level influences that pressure police agencies towards isomorphism (Giblin and Burruss 2009; Burruss and Giblin 2014), in addition to the general political and economic pressures noted under global capitalism (Peck and Theodore 2015).

For example, the second manuscript (chapter 3) presents a close analysis of the Police Data Initiative (PDI) as a pivotal informational infrastructure assemblage that enabled the institutional isomorphism of police agencies engaged, and an example of a space in-between where an initial PCI open data policy model developed. This model itself was an assemblage that contained elements of best-practices urban policy and technocratic epistemology, reflecting these sensibilities that were present in the Obama Whitehouse and amongst civic-tech actors, but also those of early-adopter police agencies amongst its initial members.

The third manuscript (chapter 4) also contributes to understanding the role of the PDI as an informational infrastructure assemblage in facilitating policy adoption. The statistical significance of PDI membership in predicting policy adoption underscores the importance of specific policy networks in promoting policy mobility. This supports the research goal to provide a scholarly analysis of PCI Open Data by showing how such infrastructures can overcome traditional barriers to policy mobility and adaptation. However, findings from the third manuscript (chapter 4) also note the lack of significant statistical association between engagement with law enforcement professional organizations and PCI open data adoption. This suggests that direct contact with policy-specific informational infrastructures, exemplified by the

PDI in this case, may be more critical for policy mobility than broader professional affiliations. It may also be the case that for cases of policy mobility with less “successful” policies, these informational infrastructures may be even more influential than generalized law enforcement professional organizations. This contributes to the discussion on the limitations of current approaches to studying policy mobility and underscores the need for more nuanced analysis of the factors influencing PCI open data adoption.

#### *Informational Infrastructure Assemblages enabling Mimetic and Normative pressures*

The second manuscript (chapter 3) also offered insights on the variations in the adoption and implementation of PCI open data across different police departments. The strategic choices regarding using a less stringent set of conditions for police agencies to join the PDI, as well as no formal mechanisms for specific policy adoption, set conditions for higher instances of ceremonial policy adoption. However, although this limited the capacity of the PDI to serve as a vector for coercive isomorphic pressure, the lower barrier to entry enhanced its capacity to operate as a vector for normative and mimetic isomorphic pressures, by fostering connections between departments of different perspectives towards genuine policy adoption, as well as signaling through increasing membership amongst agencies that PCI open data policies were “best practice”, increasing normative pressures to conform. This responds to the gap concerning the extent to which PCI open data has adapted to local contexts. The research shows how the PDI enabled policy mobility while allowing for mutations that suited local needs, thereby contributing to our understanding the decentralized nature of American policing and the variations in policy adoption, and the complex role that informational infrastructure assemblages like the PDI may play in it. Similarly, the third manuscript (chapter 4) provides evidence of policy mutations in the implementation of data transparency policies, revealing a spectrum of data openness among police agencies beyond those identified as having adopted PCI open data. Those observed data transparency policies that went beyond older models of simple data sharing such as annual report PDFs with aggregated data, yet fell short of full implementation of the key elements of PCI open data, might be considered instances of decoupling mutation noted in manuscript 1 (chapter 2).

#### *Benchmarks and Myths*

Another important theoretical innovation this dissertation offers is found in the suggestion that the relationship between the benchmarks utilized in rendering the distant proximate (Prince 2012; 2015) and the institutional myths (Meyer and Rowan 1977; Meyer and Scott 1983) that police

agencies respond to should be considered as influenced by one another. Manuscript 1 (chapter 2) argued that the utilizing of use-of-force incidents as a benchmark to compare the performance of different police agencies across space was an example of this interaction, both serving to mobilize BWC policy as well as contribute to myth building regarding police policy responsibility towards use of force incidents. Similarly, Manuscript 2 (chapter 3) argued that the benchmarking present in the PDI ought to be considered as myth-building towards perspectives of data sharing as natural police activity contributes to this perspective. Put more simply, this contribution argues that measurements used to compare different police agencies focus on things that are considered important indicators of police performance, yet the fact that they are used as indicators contributes to shared perspectives that they are truly important.

#### *Ceremony/Decoupling as Mutation*

Another contribution to this literature that flows from integrating institutional perspectives with the mobility approach is to nuance the common observation regarding policy “mutations” (Peck and Theodore 2010). Manuscript 1 and 2 (chapter 2 and 3) emphasized that the particular mutations that police policies undergo are likely to be influenced by the institutional nature of police agencies, suggesting that policies amenable to ceremonial adoption where the outward appearance of a policy exists without substantial changes to operations, or decoupling where a policy is enacted by in a way that silos its operations from existing structures (DiMaggio and Powell 1983), may transfer more easily. This would suggest that those policies more easily adapted to either ceremonial or decoupled implementation may be more easily made mobile, and thus spread between police agencies. This provides a way to account for the larger field-level forces that influence police agencies as institutional organizations (Crank 2003) while remaining sensitive to the inevitable mutations that accompany policy mobility (Peck 2011).

#### *Nuancing Policy Failures*

A very important contribution that both manuscript 2 (chapter 3) and manuscript 3 (chapter 4) have offered through the empirical examination of PCI open data is adding to the growing body of literature on the complexity of policy failure (Lovell). By examining the role of the PDI in promoting PCI open data amidst a backdrop of changing federal priorities that led to its destabilization, in concert with the observations of PCI open data policies amongst police agencies outside of the PDI, this dissertation challenges the simple binary of success/failure in policy mobility. Even as the PDI did not continue as a federal initiative with the full backing of

the Whitehouse or federal Department of Justice, its influence seemingly carried on contributing to the spread of data transparency policies. This may be evidence of the generative effects of policy failure noted by some (Chang 2017; Malone 2019). However, the destabilization of the PDI did not mean the failure of the specific PCI open data policies in police agencies that it had facilitated. Therefore, this would not accurately describe it, or PCI open data more broadly, as failure. Malone’s use of the term “anonymity” for describing the successful intra-urban spread of residential security taxation districts within New Orleans, that nevertheless yielded a failed inter-urban spread beyond New Orleans, provides a useful example of how conceptualizing mobilities outside a success/failure binary is necessary to accurately capture reality (2019). The case of PCI open data and the PDI resist any easy classification.

#### *Challenging Diffusion paradigms in Policing Studies literature*

Finally, the development and application of a policy-specific adoption model that manuscript 3 (chapter 4) offers a new perspective for existing research paradigms for policy transfer within the policing studies literature. Albeit with mixed results, the findings from manuscript 3 (chapter 4) do emphasize the importance of considering the unique contexts and factors influencing the spread and adaptation of policies like PCI open data. This approach aligns with the research gap by arguing against the search for universally applicable predictors of policy adoption through the rigid application of diffusion of innovation theory, and for a more nuanced understanding of policy mobility in the policing landscape.

Overall, these findings significantly contribute to addressing the research gap by providing empirical evidence on the adoption and adaptation of PCI open data policies among American police agencies. They highlight the complexities of policy mobility in a decentralized policing system, the influence of institutional factors on policy adoption, and the importance of specific informational infrastructures in facilitating these processes.

#### 5.4 Limitations and Future Research

Some limitations to the research should necessarily be mentioned. For both the first and second manuscript, much of the methodological descriptions by scholars for how to approach studying policy assemblage focus on close, ethnographic methods (Baker and McGuirk 2017; McCann and Ward 2012; Cochrane and Ward 2012). Studying those places of transit for policy in these reports follow participant observation or site visits to gain deep, close ethnographic data on them. The qualitative data used for manuscript 1 and 2 did not utilize such close, ethnographic methods

of data collection. However, this research did make use of recordings of sites of learning, and key informant interviews of those present and involved with the PDI. Although less preferable to being physically present at said locations, such methods have been noted as “following after” (McCann and Ward 2012) as a method used for studying the mobility of the people and policies in movement. However, these do pose limitations for the research data.

Data imitations are present in the third manuscript (chapter 4) as well. It deviates from the events per variable (EPV) guideline, presenting 269 agencies but only 44 events, with six independent variables included to reflect literature-identified factors influencing policy implementation. This violates the recommended 10 to 1 ratio (Hosmer, Lemeshow, and Sturdivant 2013). Although some have suggested a more lenient 5 to 1 ratio under certain conditions (Vittinghoff and McCulloch 2007), a greater number of observations would have been preferable. In addition, the sample was drawn from a non-random subset of the 2020 LEMAS data. Although agency size and type strata were used to gain a more representative sample, this presents inherent limitations on generalizability. Non-responsive agencies also presented a problem, as dropping observations was necessary for Phase 2 logistic regression. In summary, although the findings in Chapter 4 offer clarify regarding American data transparency policy, these limitations necessitate cautious interpretation concerning their applicability to the broader population of American police agencies.

Future research should address both concerns. Close, ethnographic observation of the sites of learning identified in this dissertation as both unique to police policy mobility and important should be considered objects of study for the policy mobilities field. Greater insights into the potential distinctions between policy specific or policy-field focused informational infrastructure assemblages like the PDI should be studied, in concert with closer consideration of broader field-level professionalization sites of learning, such as the International Association Chief of Police conference. Parsing apart differences in the narratives and benchmarks used in mobilizing and stabilizing policy models in either situation would be instructive in further understanding some of the potential differences indicated in manuscript 3 (chapter 4) with regards to the influence of regarding facilitating institutional isomorphism amongst American police agencies.

The data issues present in manuscript 3 (chapter 4) also call for further research. There is an inherent challenge in studying policies that have not broadly spread amongst police agencies, in



that obtaining the sufficient number of observations in order to utilize certain quantitative analysis tools requires particularly large samples. The uneven spread of data transparency policies observed in this study, as primarily being concentrated amongst larger, local police agencies, further complicates this effort, as oversampling large agencies relative to their proportion of the total number of American police agencies would likely result in greater internal validity by overcoming EPV concerns yet reduce external validity through a less representative sample. This broadly reflects an important observation made from both manuscript 1 and 2 (chapter 2 and 3), regarding the connection between myth-building and benchmarking. One might somewhat cynically note that no one bothers to measure something that they feel is unimportant. The 2020 LEMAS did not include any direct measures on data transparency policies, perhaps reflecting their reduced stature in the broader discussions regarding police policy reform. This means that researchers must fill this void to push back against that tendency to examine policies perceived as successful, at the expense of those “anonymous” (Malone 2019) or “failed” (Temenos and Lauermann 2020) policies that do enhance our understanding of policy mobility.

### 5.5 Conclusion: Key Messages

If we consider the findings across all manuscripts, three key messages emerge. The first is the value of bridging divides between empirical work occurring within different disciplines. The second is the implication of research itself within policy mobility itself. The third message is that policy mobility can likely be facilitated through deliberate use of key elements identified within this dissertation.

Beginning with the value of empirical work across divides, in a broader sense, this dissertation has sought to bridge this divide between work occurring within different research fields in the social sciences, in particular the field of policing studies and policy mobility. Researchers operating within these research fields are typically working within disciplines in the social sciences. Much of the published research in policing studies is from criminologists, sociologists, and others. Those publishing in the policy mobility field are from geography, political studies, and others. On a meta level, this divide reflects differences regarding epistemological assumptions, where policy mobilities trends towards qualitative methods and policing studies trends towards quantitative, but both are firmly empirical in their approaches. This also reflects some broader differences in research objectives. Many of the published authors in the policing

studies literature are former or current police officers, and although much of the empirical work is focused on attempting to understand the processes that enable policies to become widespread in the field, much of the work reflects attempts to understand the immediate influence of specific policies to policing on instrumental outcomes, such as crime rates. However, it is through combining insights from these disparate works that the complexity of police policy mobility can be best understood.

This leads to the second key message of this dissertation, that the work of researchers is implicated in the movement of policy as well. It is an established practice that scholars are expected to offer some considerations for how their work might apply to “the real world”, to guide decision making or policy creation. With respect this dissertation, it is ironic to present these considerations given how both manuscript 1 and 2 (chapter 2 and 3) have detailed how both scholarly authority and “best practice” technocratic epistemologies are deeply intertwined with the processes of policy mobility. In many ways, this dissertation itself is a reflection of the observation made by Clarence Wardell regarding the period of time the PDI was coalescing in the Obama Whitehouse, when open data was something that “everyone gravitated towards”. Research funding bodies in Canada, like SSHRC, are subject to those same laws of gravity, as are doctoral students. This is not to suggest that open data policies are not necessarily wise policies to adopt, either considered as a reflection of those earliest aspirations contained in the democratic element of open data, or even the potential for economic activity within the entrepreneurial element. It is only to note that the chorus of voices making “best practice” recommendations *constitutes* part of that gravity, it *structures* the nature of the social world that determines which policies receive attention.

There is an inherent tension between the work of scholars to attempt to understand the world with the work of those highly mobile policy transfer agents to change the world. In manuscript 1 (chapter 2), a moment during a presentation of the findings of the influential “Rialto” study in an academic conference portrays this tension, as student-practitioner Chief Farrar’s presentation oversteps the ordinary cautious language used in empirical research to make bolder claims regarding the efficacy of body-worn cameras in reducing use of force incidents. His supervisor, not a police officer but an academic, interjects to emphasize the fundamental causality being tested: that when individuals know they are being observed, they will behave differently. Farrar’s presentation seems oddly out of place, but when one then observes the same presentation within

the context of another conference where more of the audience are police officers themselves, Farrar's framing and overall narrative seems far more appropriate. In this setting, the academic question at the heart of the Rialto study, which is will police officers who know they are being observed be less prone to abuse their authority or brutalize citizenry is avoided. Instead, the cameras are presented as a way to record evidence to *protect* officers from unfounded complaints. This insight also provides some guidance regarding the further mobility of police policies outside the United States. The structure of American policing is comparatively decentralized compared to some other countries, such as Canada, suggesting that field-level forces may be more influential in such a decentralized context. Yet this does not mean that the influence of global field-level professionalization should be underestimated in Canada. This dissertation followed the mobility of body-worn cameras from the United Kingdom to the United States, but this policy has moved across many borders, including Canada. The University of Saskatchewan is situated in Canada, in the city of Saskatoon, where the Saskatoon Police Service began a pilot project on body-worn cameras in 2022. The 40 cameras used in the pilot are from Axon, the technology vendor that emerged from the early stages of policy to be the dominant supplier of these cameras for policing. Following a political protest in September of 2023, where police officers from the Saskatoon Police Service had been deployed to escort a march and counter demonstration, I came upon a dozen or so officers in a circle talking with each other. Sensing an opportune moment, I approached the officers and asked them if any were wearing a body-worn camera, explaining that I was aware that their department was operating a pilot project on said cameras, and if they might share any initial feelings they had about the cameras. After a moment passed it seemed that the officers seemed hesitant to reply to a nosy academic who had approached them without any introduction. However, the officer who appeared to be senior amongst them then replied that he had some experience with using a camera. I asked him what his feelings were on the cameras, and his reply matched the discourse utilized in initial reports in the UK during the late 2000s, in the policy documents circulated by American police professional organizations, as well as the federal Justice Department: that having recorded evidence of interactions between citizens and officers was useful for protecting officers from unfounded complaints of wrongful behaviour. On the Saskatoon Police Service website detailing the pilot project (Saskatoon Police Service 2023), the six goals of equipping front-line officers with BWCs mirror language on evidence gathering, case resolution, and public complaints present in IACP documents (IACP 2014) as well as the

early assessments from the UK (Goodall 2007). This is obviously only an anecdotal example but does reinforce the message relayed from the movement of BWCs, that police policy mobility is a *global* phenomenon, just as other scholars have noted for other policy mobility (Prince 2017; González 2011; McCann 2011a).

This dissertation offers important insights into the processes involved in the movement of police policy but cannot make any recommendations regarding the implementation of any specific policy, including the set of data transparency policies at the heart of this research. It has not sought to investigate whether sharing information regarding the interactions between police and citizenry will influence overall trust in police, nor whether that sharing would improve policing in general. It has instead focused on attempting to understand the processes behind the movement of policy, and the highly complex nature of how “best-practice” comes to be formed.

With this in mind, this dissertation has outlined the mobility of policies that does offer some guidance regarding the deliberate mobilization of policy models, which constitutes its third key message. The Police Data Initiative is an example of the sort of informational infrastructure assemblage that can facilitate the development and mobility of policy models through fostering relationships between relevant policy actors. Although the broader field-level factors or local contexts may contribute to frustrate or facilitate the mobility of the policy model developed, it appears quite likely that federal arrangements such as the PDI are a useful tool for influencing American policing. Furthermore, flexibility in engagement with these sorts of collaborative informational infrastructure assemblages may limit coercive isomorphic pressures the enable, as was the case of the PDI, but may better enable mimetic and normative isomorphic pressures through allowing for policy mutations to adapt to local contexts, even as these may take the form of ceremonial or decoupled policy adoption.

These observations should also be considered in light of one of the key assumptions made when treating police organizations as institutional organizations: that police are first and foremost concerned with securing and maintaining legitimacy in the eyes of their institutional sovereigns. This does not discount that police will also view their purpose to reduce crime, or enforce the law, or any other instrumental objective from a technical-rational perspective. It simply means that the core importance of legitimacy in securing the resources and authority necessary to pursue any objective places it in a positive of supremacy in relation to those objectives. This should lead

all people, whether they are police leaders or front-line officers, concerned citizens or activists, representatives in government, or any other person who lives where police policy is enacted to ask meaningful questions regarding *why* certain policies become mobile and assemble within their local police departments. Is a policy from “elsewhere” being adopted to respond to a local problem, or because all relevant actors have come to view that policy as simply what a “professional” police force does? Why have institutional sovereigns come to believe this? What discourses are being utilized to enable this mobility, and who is working to mobilize those? What benchmarks are used to render the distant places of policy learning topologically proximate, and what contextual differences that underscore distance are ignored? Ultimately, it is *these* questions that are of equal importance to whether policy outcomes from other places may be recreated.

## 5.6 Chapter 5 Bibliography

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