CONCENTRATED SURVEILLANCE WITHOUT CONSTITUTIONAL PRIVACY: LAW, INEQUALITY, AND PUBLIC HOUSING

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Equal treatment of citizens under the law is a supposedly central value in the American legal system, and yet laws often contribute to the further entrenchment of inequality. This Article utilizes qualitative social scientific data to shed light on the differential impacts of law. In particular, this Article asks how vulnerable individuals and families interface with daily residential surveillance. What protections can they expect in the aftermath of recent constitutional developments in the area of rights and technology? Do those developments affirm equality, or do they further entrench inequality? Understanding the dynamic between interpretation of the Fourth Amendment and social and economic inequality contributes to solving the larger puzzle of why, despite its commitment to equality, law often constitutes and reproduces inequality. A case study, this Article explores specific language from the 2018 landmark Supreme Court decision in Carpenter v. United States, *138 S. Ct. 2206 (2018), which held that government access to cell-site location information (CSLI, or cell phone tower pings) data collected and stored by wireless phone carriers constituted a search under the Fourth Amendment, thus requiring a warrant based on probable cause.*

Central to the Supreme Court's determination in Carpenter *is a distinction between conventional and new technologies, as the Court declared, "[o]ur decision today is a narrow one. . . . We do not . . . call into question conventional surveillance techniques and tools, such as security cameras." In granting a significant constitutional rights protection to cellular telephone users,* Carpenter *held the potential to finally extend similar protections to those subject to residential surveillance by the government. In both cases—precise location and movement tracking through cellular telephones and around the clock location and movement recording through imposed camera surveillance—those whose data is collected are deprived of a shelter of privacy if the government can access such data on demand. However, the location and movement data collection which* Carpenter *was limited to leave intact a type of personal data collection associated with housing and employment precarity, family instability, and over-policing with which many vulner-*

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able populations must live within public housing and impoverished urban neighborhoods.

Grounded on original interviews with New York City public housing residents, this Article contributes a different approach to the policy and doctrinal matters raised in Carpenter*—an approach that forestages the real-world impact of the seemingly aseptic doctrinal distinction between conventional and new technologies—thus shedding light on one of the myriad ways law's commitment to equality fails to deliver.*

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INTRODUCTION

The increasing technological capacity for surveillance has been mirrored, in part, by changes in law: in *Carpenter v. United States*, the Supreme Court expanded individual privacy rights under the Fourth Amendment in order to protect a person's cell phone location data from unfettered use by the state. The decision, heralded at the time as a giant step forward in technological regulation,

rested on a central trope that fits neatly into a chronology of ever-expanding technology. The Court emphasized in their holding that "new technologies" raise constitutional privacy protections in a way that "conventional" technologies do not. Hence, cell phone location and movement data, automatically collected and stored as "pings" by the towers of cell phone service providers, was protected and required a search warrant before use; other data, such as the automatic collection of location and movement of individuals recorded by surveillance cameras, was not.

This Article takes issue with the "new" versus "conventional" distinction deployed in *Carpenter* and notes the obvious and more subtle impact that the distinction has on social and economic inequality in the United States. It contributes to a rich sociolegal and doctrinal literature on surveillance gathering and its use by the state—which has emphasized the features of carceral logics, "e-carceration," over-policing, stop-and-frisk policy, mass incarceration, "poverty governance," and intersectionality[1]—in order to draw out the overlooked effects of this distinction on vulnerable and marginalized populations. Importantly, the article adopts a social science methodology of direct interviews of the people affected by surveillance camera data collection, themselves. Thirty-one interviewees living in public housing in New York City offer their perspective on life under surveillance by omnipresent cameras located in the myriad communal spaces in their buildings—entrances, doorways, elevators, and playgrounds. Their assessment allows a complex picture of surveillance—which includes a tension between safety and privacy concerns—to emerge. The focus of this Article is on the public housing residents who must contend with poverty, housing precarity, and concentrated[2] governmental surveillance. Through an analysis of original social science data, this Article explores how surveillance camera data disrupts a shelter of privacy[3] for residents of public housing subject to the tracking of their location and movement data, similar to the very data collection which the Court in *Carpenter* is concerned with. This Article will argue that not only is location and movement data collected by surveillance cameras in public housing analogous to location and

1. ANDREW GUTHRIE FERGUSON, THE RISE OF BIG DATA POLICING: SURVEILLANCE, RACE, AND THE FUTURE OF LAW ENFORCEMENT 54-58 (2017).

2. For example, high numbers of police-installed, accessible, and maintained surveillance cameras produce a 24-hour feed. Other scholarly work also focuses on the meaning and implications of the digitalization and concentration of surveillance as a source of disempowerment. *See generally*, *e.g.*, SHOSHANA ZUBOFF, THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER (2019).

3. This phrase is used in privacy literature and scholarship to refer to holistic spaces of autonomy and deliberation, unconstrained by geography or tangible barriers, which are thought to be constitutionally protected. *See, e.g.*, James R. Beattie, Jr., *Privacy in the First Amendment: Private Facts and the Zone of Deliberation*, 44 VAND. L. REV. 889, 912 (1991); JOHN STUART MILL, CONSIDERATIONS ON REPRESENTATIVE GOVERNMENT 219 (Harper & Bros. 1862).

movement data collected by "newer" technologies, but that police access to such data should be considered a search requiring a warrant based on probable cause. Furthermore, this Article provides an analysis of the impact of this distinction, which reveals a mechanism of the entrenchment of social and economic inequality, showing that even rights expansion can promote inequality when it does not contemplate diversity in experience and context.

The doctrinal protections of the Fourth Amendment have evolved far slower than technology has advanced. Nonetheless, with its decision in *Carpenter*, a majority of the Supreme Court has indicated a readiness to adapt Fourth Amendment jurisprudence to technological changes.[4] Such modernizing adaptation is driven by the depth and breadth of changes in technology which threaten a meaningful shelter of privacy as they enhance the capabilities of government to conduct both deep-targeting and dragnet data collection. These evolving methods have constantly tested the warrant requirement as a necessary component of any presumptively reasonable search. A turning point in this adaptive process came in the seminal decision *Katz v. United States* when the Court added the subjective-objective test of legitimate expectation of privacy to the traditional test that protected privacy as anchored in places and tangible objects.[5] If it could be proved that a reasonable person would legitimately expect privacy in relation to certain data, such as no eavesdropping on a call from a telephone booth, the Fourth Amendment's requirement of a warrant before a "search and seizure" was implicated.

The speed of technological development, however, quickly placed the Court in a position to be talking, as it does in *Carpenter*, in terms of drawing a distinction between conventional and new technologies. Prior to the Supreme Court's decision in *Carpenter*, much of the data gathered by third parties was not protected by the Fourth Amendment, and so the decision does substantively extend rights.[6] However, even given the potential of a revamping of the Fourth Amendment to enhance protection of the most vulnerable, an (as this Article will argue) arbitrary division between new and conventional technology instead further divides protections along a line which reproduces conditions that drive social and economic inequality.

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4. Thus far. Gorsuch's dissent in *Carpenter* may point in the direction the Court will be headed in the near future. *See* Carpenter v. United States, 138 S. Ct. 2206, 2268 (2018).

5. Katz v. United States, 389 U.S. 347, 350-53 (1967); *see* Susan Freiwald, *Online Surveillance: Remembering the Lessons of the Wiretap Act*, 56 ALA. L. REV. 9, 79-83 (2004).

6. *Katz*, 389 U.S. at 361 (Harlan J., concurring); *see also* Eunice Park, *Objects, Places and Cyber-Spaces Post-Carpenter: Extending the Third-Party Doctrine Beyond CSLI: A Consideration of IoT and DNA*, 21 YALE J.L. & TECH. 1, 6 (2019) (arguing that the decision in *Carpenter* opened up new possibilities for understanding privacy); Shaun B. Spencer, *When Targeting Becomes Secondary: A Framework for Regulating Predictive Surveillance in Antiterrorism Investigations*, 92 DENV. U. L. REV. 493, 517-21 (2015) (arguing that surveillance practices protected under the third-party doctrine do not pass constitutional muster).

While this Article attempts to unsettle the doctrinal distinction used in *Carpenter*, its broader aim is to contribute to the understanding of the causes of the resilience and growth of inequality in the United States.[7] Scholarship, in law as well as social science, has endeavored to map the complex causation of growing inequality, identifying the ways in which the judicial system all the way up to the Supreme Court generally interpret matters in ways that promote social and economic inequality. Although the decision in *Carpenter*, did not, on its face, explicitly disfavor economically and socially vulnerable populations, this Article shows that the doctrine set forth in *Carpenter* has precisely that effect. The implications for these findings are important in terms of how we think about the ways law constitutes, obscures, and entrenches social and economic inequality even as it seeks to be neutral or claims to be doing the opposite.

The Article proceeds in three Parts. In Part I, the Article provides an introduction to the use of surveillance cameras in public housing. The data discussed helps to deepen and broaden our understanding of the everyday lives of residents whose movements are often recorded in several locations as they move around their homes. By grounding and contextualizing the data and its contradictions through the analysis of public housing residents themselves, this Part seeks to illuminate the meaning of a meaningful "shelter of privacy" which is given primacy in interpretations of the Fourth Amendment. In Part II, the Article analyzes the holding of *Carpenter* in terms of the distinction between new technology and conventional technology. It explores the reasoning underlying the concept of "new technology," and examines in particular whether location and movement data collected by surveillance cameras in public housing is akin to that collected by the cell phone data pings at issue in *Carpenter*. Lower court cases involving surveillance camera data, issued since the Supreme Court's embrace of new technology regulation, are also examined. In Part III, the Article incorporates an intersectional approach to further explore the implications and mechanisms of the entrenchment of social and economic inequality, specifically in terms of whether surveillance camera video footage ought to be considered a search under the Fourth Amendment and thus ought to require a warrant based on probable cause.

I. SURVEILLANCE CAMERAS AND SOCIAL AND ECONOMIC INEQUALITY: THE CASE OF PUBLIC HOUSING IN NEW YORK CITY

Data collected by surveillance cameras in public housing includes troves of location and movement data; this Article claims that this data is analogous to

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7. *Carpenter*, 138 S. Ct. at 2223. In interpreting the Fourth Amendment and the effect of the milieu of new technology used in policing and criminal justice, the judiciary and scholars have sought to understand intersections with justice and equality. *See generally*, *e.g.*, Chaz Arnett, *From Decarceration to E-Carceration*, 41 CARDOZO L. REV. 641 (2019) (discussing criminal justice and electronic surveillance through the use of ankle monitors).

location and movement data collected by newer technologies. It does so by exploring how the data deprive the individuals to whom they are related of a meaningful shelter of privacy. The analysis of the legal treatment of location and movement data collection is not new.[8] In order to add nuance to existing discussions of the social context of location and movement data collection in legal fora,[9] this Article will turn to qualitative data gathered through interviewing residents of public housing in New York City. Over-surveillance of low-income communities is problematic and contributes to housing and employment precarity, family disruption, and over-policing; prominent sociolegal case studies have also demonstrated its connection to mass incarceration.[10] The type of surveillance associated with public housing in New York City is common not only in public housing, but also in low-income neighborhoods more generally. As such, though the case and data presented below is limited to New York City, the experiences of residents are also more broadly relatable to the experiences of those living in low-income housing and in primarily low-income neighborhoods across the country.

Increasingly, we understand that data technology brings with it familiar challenges but cast in unique ways. Surveillance and the data it produces exists within a milieu of choices and power relations. Who controls the deployment and use of surveillance equipment? Who can access it and through which procedures? Who imposes authoritative interpretations on the data? These questions matter for how data and the narratives that accompany them impact individuals and society. Extrapolating these questions to scenarios in which law enforcement or welfare management have on-demand access to surveillance data, the implicated set of choices and power relations deeply shape the experience of personal autonomy and privacy of individuals caught in the intersection of poverty, work, and housing precarity, and legal vulnerability.[11]

In a problem familiar to us in the context of the unreliability of eyewitness identification, data collection technology's design and impact are not perfect or neutral.[12] Although camera surveillance can capture a moment, with picture and

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8. *See*, *e.g*., ORIN S. KERR, THE DIGITAL FOURTH AMENDMENT: IMPLEMENTING CARTER (forthcoming) (on file with author).

9. *See generally* Commonwealth v. Mora, 150 N.E.3d 297 (Mass. 2020).

10. *See* Monica C. Bell, *Anti-Segregation Policing*, 95 N.Y.U. L. REV. 650, 695-96 (2020).

11. *See generally* Torin Monahan, *Built to Lie: Investigating Technologies of Deception, Surveillance and Control*, 32 INFO. SOC'Y 229 (2016).

12. *See*, *e.g*., Neil M. Richards, *The Dangers of Surveillance*, 126 HARV. L. REV. 1934, 36-45 (2013); ROBERT O'HARROW, JR., NO PLACE TO HIDE 1-4 (2005); Daniel J. Solove, *Introduction: Privacy Self-Management and the Consent Dilemma*, 126 HARV. L. REV. 1880, 1894-900 (2013); FERGUSON, *supra* note 1, at 88; ROB KITCHIN, THE DATA REVOLUTION: BIG DATA, OPEN DATA, DATA INFRASTRUCTURES AND THEIR CONSEQUENCES 11-12 (2014); Daniel J. Solove & Woodrow Hartzog, *The FTC and the New Common Law of Privacy*, 114 COLUM. L. REV. 583, 590-95 (2014); Megan O'Neill & Bethan Loftus, *Policing and the Surveillance of the Marginal: Everyday Contexts of Social Control*, 17 THEORETICAL CRIMINOLOGY 437,

sound, like traditional eyewitness testimony it does not and cannot capture the full and accurate picture. Surveillance footage, as other surveillance data including cell phone pings, is imperfect and vulnerable to power imbalance and interpretation, and it requires additional considerations as a data source in need of regulation and restriction from on-demand governmental access. For example, Forrest Stuart notes in his study of policing in LA's Skid Row that narratives about surveillance video footage turn into an interpretive "tug-of-war" between police and a community watch group.[13] He observed that both groups attempted "to graft their contesting narratives onto footage."[14] Furthermore, even the existence of a video camera itself is also not neutral, enmeshed, as it is, in the private and public powers of private owners and companies, police forces, welfare benefits administrators, etc. The position of a camera also changes depending on who owns it, such as if a camera is owned by police or others with formal or informal retaliatory powers. Finally, the presence of a camera itself has an impact based on a complex relationship between the camera, the powers behind it, the specific place and context, and those captured by it.

Much like the data gathered through cell phone "pings" in *Carpenter*[15] or the heat emanating from the home in *Kyllo*,[16] data gathered from any technology tools must be laced into a social narrative. In *Kyllo*, the interpretation of whether data should be subject to warrant requirements was gauged in relation to policing at the height of the War on Drugs. In *Carpenter*, the Court focused on updating the interpretation of the Fourth Amendment to reflect new and emerging impositions into personal privacy which are not capturable under previous tests.[17] When a court deals with data and technology, they are engaging in a discussion

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439-41 (2013); Sarah Brayne, *Big Data Surveillance: The Case of Policing*, 82 AM. SOCIO. REV. 977, 990 (2017); Khaled Beydoun, *The New State of Surveillance: Societies of Subjugation*, 79 WASH. & LEE L. REV. 769, 793 (2022); Hillary B. Farber, *Sensing and Surveillance: Constitutional Privacy Issues of Unmanned Aircraft*, *in* UNMANNED AIRCRAFT IN THE NATIONAL AIRSPACE: CRITICAL ISSUES, TECHNOLOGY, AND THE LAW 225, 225-28 (Donna Ann Dulo ed., 2015); Hillary B. Farber, *Keep Out! The Efficacy of Trespass, Nuisance and Privacy Torts as Applied to Drones*, 33 GA. ST. U. L. REV. 359, 370-79 (2017); Shaun B. Spencer, *Predictive Surveillance and the Threat to Fourth Amendment Jurisprudence*, 14 I/S: J.L. & POL'Y FOR INFO. SOC'Y 109, 111-20 (2017).

13. FORREST STUART, DOWN, OUT, AND UNDER ARREST: POLICING AND EVERYDAY LIFE IN SKID ROW 236 (2016).

14. *Id.*

15. Carpenter v. United States, 138 S. Ct. 2206, 2206 (2018).

16. Kyllo v. United States, 533 U.S. 27, 34 (2001). In *Kyllo*, a search warrant to search a home was issued based on data gathered through the use of a thermal imaging device. The Ninth Circuit found that Kyllo had no expectation of privacy for the heat emanating from his home as he had made no effort to conceal it and because it did not reveal any intimate details of Kyllo's life. The Supreme Court reversed the Ninth Circuit's decision, finding that the surveillance was a search because it was made with a device not generally in public use and explored aspects of a home that would previously have been unknowable without conducting a physical search of the premises.

17. *Carpenter*, 138 S. Ct. at 2223.

of social meaning, power, and possibilities. However, the magnifying capability, ever-growing presence, and duration of data collection technologies multiplies the potential for distortion of that which is captured in it at the same time as they deprive individuals and groups of a shelter of privacy that even vulnerable populations in the past could rely on if in limited fashion.[18]

Social science increasingly recognizes the role of power in terms of these three aspects of technology: the meaning of data, the gathering of data, and the effect of technology on the individual, communities, and society. For these reasons and others, it is important that data, including video camera surveillance data, be evaluated appropriately and treated according to its significant ability to impact, with its disparate applications and possibilities, the lives of vulnerable individuals, families, and communities. In particular, in this section I ask how vulnerable individuals and families interface with daily residential surveillance. What protections can they expect in the aftermath of recent constitutional developments in the area of rights and technology? Do those developments further entrench social and economic inequality?

To compare the data about location and movement that troubled the Court in *Carpenter*, this Article examines the impact and complexity of surveillance cameras and conventional surveillance techniques in thirty-one interviews conducted with New York City public housing residents, as well as ethnographic observations of surveillance objects in public housing taken over an approximately six-month period ending in 2017.[19] These interviews are used to detect and contextualize the adaptive responses on the part of the subjects to surveillance structures in public housing. This analysis shows that residents have a complex and ambivalent relationship with surveillance cameras that reaches deep into their domestic lives; additionally, it brings into focus the connection between a community that is over-surveilled, over-policed and subject to a myriad of historical and contemporary injustices with (yet another) unequal provision of rights.

The law is oblivious neither to the costs nor to the benefits of technology-mediated data collection; nor is the law unwilling to extend protections that mediate its costs. My empirical research dissects how *Carpenter's* conventional versus new technology division maps on to housing and employment precarity, family instability, and over-policing in ways that entrench social and economic inequality even as the Supreme Court extends rights protections. In so doing, this Article advances our understanding of the impact of surveillance technology to the ongoing discussion of law and social and economic inequality in a milieu of

18. "Vulnerable" refers here to primarily low-income Black, indigenous, and people of color (BIPOC) but also takes into account an intersectional and inclusive understanding of social and economic vulnerability which may include other aspects of identity, attributions, status, or experience.

19. See notes on data and methodology, *infra* Appendix I.

rapidly advancing technology.[20]

Arguably, one could make the arguments of this Article conceptually, relying solely on common knowledge about surveillance in public housing to argue that it was unfair for a rights-protecting precedent such as the one in *Carpenter* to leave intact this kind of lack of protection of surveillance camera-produced data. However, (1) intellectual rigor calls for actually investigating the concrete impact experienced by vulnerable populations, and (2) understanding the broader question of law's causal contribution to social and economic inequality requires, among other things, that the scholar takes seriously the complexity, nuanced, and ambivalent viewpoints of those with first-hand experience. Using this data, I am better situated to convey that such a division (between new and conventional technology) functionally deprives residents of the benefits of a shelter of privacy through ongoing collection of residential surveillance data that creates a trove of data which can be accessed on-demand by law enforcement.

A. An Introduction to Public Housing

Approximately 400,000 New Yorkers (5%) officially live in public housing,[21] though it is speculated that approximately 600,000 residents total live there,[22] including those residing in public housing unofficially (with many residing there off-lease). Public housing in New York has a clear police presence, a relationship stitched together at various levels, with both public housing administration and city policing existing in a symbiotic relationship. At the organizational level, the public housing administration and the police (police or "NYPD") influence and shape each other. This is measured through historical interactions as well as through concrete policies that function in concert and

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20. Others have dissected issues which relate to social and economic inequality and implicit unfairness in otherwise neutral-seeming law. *See*, *e.g*., Linda Sandstrom Simard, Cassandra Burke Robertson & Charles W. "Rocky" Rhodes, *Ford's Hidden Fairness Defect*, 106 CORNELL L. REV. ONLINE 45, 45-46 (2020); Lewis L. Maltby & David C. Yamada, *Beyond Economic Realities: The Case for Amending Federal Employment Discrimination Laws to Include Independent Contractors*, 38 B.C. L. REV. 239, 239-42 (1997); John Infranca, *Differentiating Exclusionary Tendencies*, 72 FLA. L. REV. 1271, 1287 (2020); Roni Amit, *No Refuge: Flawed Status Determination and the Failures of South Africa's Refugee System to Provide Protection*, 23 INT'L J. REFUGEE L. 458, 459-64 (2011); Katharine G. Young, *The Right-Remedy Gap in Economic and Social Rights Adjudication: Holism Versus Separability*, 69 U. TORONTO L.J. 124, 124-27 (2019); Michael Hasday, *Ending the Reign of Slot Machine Justice*, 57 N.Y.U. ANN. SURV. AM. L. 291, 298-300 (2001); Margaret Drew, *It's Not Complicated: Containing Criminal Law's Influence on the Title IX Process*, 6 TENN. J. RACE, GENDER, & SOC. JUST. 191, 193-96 (2017); Elizabeth Bartholet, *Differential Response: A Dangerous Experiment in Child Welfare*, 42 FLA. STATE U. L. REV. 573, 574-82 (2015).

21. NYCHA 2020 FACT SHEET, NEW YORK CITY HOUS. AUTH. (2017), https://perma.cc/47ES-ZZKS.

22. Nolan Hicks, *NYCHA Head Says 1M People Live in City's Public Housing*, N.Y. POST (Feb. 4, 2019, 7:31 PM), https://perma.cc/Y75W-MFJQ.

which occur through cooperative action between the two organizations. And the institution of policing and of public affordable housing are structurally linked, with the social role of each increasingly blurred over time. Spillover effects from job and housing precarity and family disruptions to over-policing, police violence, and mass incarceration are well-documented and woven into the fabric of public housing. For residents, the existence of this relationship daily brings into their domestic spaces interactions with police, security guards, building managers, and representatives of the public housing administration.

The camera feeds from police surveillance cameras are available directly to law enforcement. One attorney I interviewed, who primarily represents public housing tenants, stated that the relationship between the housing administration and the police is so close that the housing administration often knows about criminal charges brought against residents before the residents themselves are notified. One study terms this "the police-to-public-housing pipeline of information."[23]

Statutorily, nobody with a criminal conviction may qualify for or live in public housing; however, searches, arrests and the effects of mass incarceration have focused disproportionately, even accounting for race, on the residents of public housing.[24] Additionally, when it comes to feeling under the thumb of the police, it can seem like there is nowhere to hide, especially when the downsides of interaction with police such as arrest followed by harassment from housing authorities are so steep. The presence of police within public housing spaces is steadfast, with the symbols of police presence and indications of "being watched" around every corner. These indications condition residents to the omnipresent[25] possibility of being watched while at the same time inflaming concerns about personal safety as they signal that public housing is a fundamentally dangerous space. Because of an outsized concentration of surveillance, residents interact more often with police, with such police encounters often being negative.[26]

The buildup of surveillance began in the U.S. following the September 11 trade center attacks and the associated, generalized fear of terroristic events in

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23. Jay Holder, Ivan Calaff, Brett Maricque & Van C. Tran, *Concentrated Incarceration and the Public-Housing-to-Prison Pipeline in New York City Neighborhoods*, 119 PROC. NAT'L ACAD. SCIS 2, 2 (2022).

24. Alexis Karteron, *When Stop and Frisk Comes Home: Policing Public and Controlled Housing*, 69 CASE WESTERN RESERVE L. REV. 3, 673-74 (2019); *see* Sarah Miller, *Reconceptualizing Public Housing: Not as a Policed Site of Control, But as a System of Support*, 8 GEO. J. ON POVERTY L. & POL'Y 95, 103 (2020).

25. Holder et al., *supra* note 23, at 3 ("In 2014, NYCHA and NYPD implemented Omnipresence—a policing strategy relying on an enhanced system of surveillance technology—at 15 low-income NYCHA developments. Under Omnipresence, surveillance of NYCHA developments intensified with bright spotlights flooded the grounds throughout the night, while mobile police tower units hovered above.").

26. *Id.*

urban centers which permeated the first decade of the 21st century.[27] Put in place to surveil all, but also for a particular few, the applications for such cameras quickly grew to include neighborhoods with reputations for crime and low-income areas. In New York City, the vast majority of public housing developments are outfitted with security cameras. These cameras are most often not monitored—i.e., they do not and cannot stop crime in progress. Rather, their gaze is retrospective and cameras gather data which is stored for unspecified amounts of time. This affords governmental agents an expansive retrospective gaze into the everyday lives of residents with no warrant required.[28]

The risk of falling victim to criminal elements is of great concern for residents. Police are tasked with delivering a safe environment, free from violence, for the residents of public housing. But tenants feel the police have an "us versus them" mentality, as if the residents of public housing, for whom police are supposed to be maintaining a safe environment, are themselves viewed as the obstacle to safety.

Surveillance in public housing is part of this, and the lack of empowerment residents experience in regard to surveillance regimes relates to not receiving either adequate protection by the police from crime or being the recipients of the benefits of surveillance data. Unlike other aspects of policing, surveillance exists in a gray, undefined area in which police are the final arbiters of who is surveilled and what surveillance footage data matters. As of 2021, New York City police had access to at least 15,000[29] publicly owned and maintained cameras across the city. Earlier reports show that at least 10,810 of those are situated in public housing complexes within the city, though initiatives to place more security cameras in public housing are ongoing and the number is likely higher.[30] Generally, cameras are concentrated within neighborhoods with primarily residents of color.[31] Thus, surveillance cameras in public housing could make up

27. Shoshanna Zuboff, for example, has written about the relationship between 9/11 and the era of permissiveness around surveillant technologies that followed it. ZUBOFF, *supra* note 2; *see generally* Lawrence Friedman & Renée M. Landers, *Domestic Electronic Surveillance and the Constitution*, 24 J. MARSHALL. J. COMPUT. & INFO. L. 177 (2006), *reprinted in* INTELLIGENCE SURVEILLANCE LAW, AMICUS BOOKS (Jilla Ramakistaiah, ed., 2009).

28. In *Carpenter*, the Court said that cell-site location information (CSLI), or cell phone pings, "give the Government near perfect surveillance and allow it to travel back in time to retrace a person's whereabouts, subject only to the five-year retention policies of most wireless carriers." *See* 138 S. Ct. 2206, 2210 (2018). It is unknown how long the NYCHA stores footage, though the system of requesting footage on demand for court proceedings suggests that the horizon is quite long.

29. Derick Waller, *Exclusive: Hundreds of NYC Public Housing Buildings Still Lack Security Cameras*, ABC 7 (Dec. 8, 2021), https://perma.cc/SC4U-RY49.

30. *See* Michael Gannon, *More NYCHA Security Cameras Are Coming: Officials Want More Surveillance for Public Housing Project Safety*, QUEENS CHRON. (Apr. 17, 2014), https://perma.cc/EEW4-XS6M.

31. Waller, *supra* note 29.

at least 67% of all police-accessible and maintained cameras in the city, corresponding to, at most, 7% of the city's population living in public housing.[32]

Additionally, public housing buildings are often delineated by commercial job site lights, marked "Property of NYPD [Police]," that shine through the night hours with enough wattage to render the yards and common spaces of public housing as bright as a site of midnight highway roadwork, or, frankly, a prison yard. When the lights were first installed outside of her building, one tenant said she thought maybe it was a movie set and was shocked when she was told "no," in fact, "this is the NYPD." Xeroxed fliers with surveillance camera stills of "banned" individuals line community bulletin boards. Moreover, the NYPD often uses moveable towers that can be extended for a bird's-eye view to gather data near—and on—public housing complexes, and drive cruisers down sidewalks. Inexplicable scaffolding tacked onto the sides of many public housing buildings, covering windows and impeding sidewalks, remains for years with no construction preceding or planned for. There is also a consistent police presence, constantly recording and gathering data through use of body cameras: "[T]he officers now stand on street corners like sentries."[33]

A sense of safety is central for residents of any neighborhood.[34] The common understanding of surveillance is straightforward and matter of fact: Surveillance gathers data that is ironclad and uncontradictable. Thus, surveillance is protective, making environments safe from not only human wrongdoing, but also human error in the policing of that wrongdoing. There is, however, also a latent meaning attached to the surveillance object within public housing, premised by social context.

For example, the surveillance of public housing is defined by conspicuous cameras and lights which convey a militaristic aesthetic and are heavily associated with policing. This contrasts with the aesthetic of policing at other highly surveilled spaces. The Moynihan Train Hall, opened in midtown Manhattan in 2021, is a highly surveilled and policed space. However, this surveillance is accomplished stealthily—through hidden or barely visible cameras and technology. Police are present in the Moynihan Train Hall, but they are confined to a small blue square in the far corner of the building, with walls which conceal them to the tops of their heads, and which blend into the smooth walls of its surroundings. It is in fact hardly noticeable unless you are looking for it. There are no signs linking surveillance or even policing to the "NYPD,"

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32. The population of NYC is approximately 8.4 million. If a maximum of 600,000 people live in public housing, that equals just under 7% of the city's population. *Quick Facts New York City, New York*, U.S. CENSUS BUREAU, https://perma.cc/HCN4-QQUL (archived Jan. 27, 2023).

33. Joseph Goldstein, *'Stop-and-Frisk' Ebbs, But Still Hangs Over Brooklyn Lives*, N.Y. TIMES (Sept. 19, 2014), https://perma.cc/G2H3-2QQD.

34. EVA ROSEN, THE VOUCHER PROMISE: "SECTION 8" AND THE FATE OF AN AMERICAN NEIGHBORHOOD 211-13, 231 (2020) (finding, in her study, that "[o]ne of the most common catalysts for moving [one's residence] was violence in the neighborhood").

although police at Moynihan are members of the NYPD. Rather, there is a small backlit sign on a post with a neutral stick-figure police officer sitting at a desk and no other signage or explanation.

In terms of both aesthetics and the number of publicly owned law enforcement accessible cameras, as well as that the data produced by them is directly available to at least two governing bodies—the housing authority and NYPD—surveillance camera usage is substantively different. After a short explanation of methodology and the characteristics of the social scientific data analyzed in this Article, I will show in the next subparts how the experience of surveillance deprives residents of a meaningful shelter of privacy analogous to the deprivation articulated in *Carpenter*. Compounding the experience of a lack of personal safety, the analysis highlights the relationship between surveillance and a history of over-policing, mass incarceration, and police violence.

B. The Main Finding: Who is Interpreting the Data

In this Part, I explore the eminently complex relationship between public housing residents, location, and movement data collection via surveillance cameras and policing. Generally, in relation to the data collected by surveillance cameras, residents felt deep seated anxiety about how the data they gathered would be used.

Narratives imposed on images from, for example, camera feeds on police body cameras are highly subjective and tend to be controlled by police.[35] Malik, a young Black man, professed to fear that the cameras would capture an image of a crime being committed, and that authorities would assume that it was him, even if it was not. He stated, "I get worried . . . you could have someone that looks exactly like me, my doppelgänger." Malik's risk assessment is rational given his own experience, the historical fact of racially biased policing, and the scientifically confirmed present reality of race bias in eyewitness identification and among police officers.[36] This is also reason to justify a requirement that police access to this data constitute a search which requires a warrant and showing of probable cause.

Several residents reported being both appreciative of the surveillance in the buildings and being deeply affected by it—changing their posture or movements once they were aware of being in the presence of surveillance cameras so as to appear less suspicious. Malik stated that he himself also regularly constrained himself so it "does not look like I'm not doing anything that's not right" when around the surveillance cameras of his building. Another resident, Tom, spoke

35. STUART, *supra* note 13, at 236.

36. *See generally* Maurice R. Dyson, *Excessive Force, Bias, and Criminal Justice Reform: Proposals for Congressional Action*, 63 LOY. L. REV. 27 (2017); Bruce W. Behrman & Sherrie L. Davey, *Eyewitness Identification in Actual Criminal Cases: An Archival Analysis*, 25 LAW & HUM. BEHAV. 475 (2001).

of changing his own behavior in small ways when he is aware of cameras in his residence, "maybe petty things, not saying I'm a criminal . . . but things like minor misdemeanors, like talking too loud in the streets." Other residents reported feeling compelled by the presence of surveillance cameras to stand in different ways or in different places. Only a surveillance which penetrates deeply within social life could compel individuals to lower their voice or conform their body. Additionally, the likely presence and duration of this data collection multiplies the potential for distortion of the data which is captured and further deprives individuals and groups of a shelter of privacy that even vulnerable populations in the past could rely on, if in limited fashion.

Surveillance cameras have an impact based on the relationship between the camera and the powers behind it—in this case the police and public housing authority. Malik professed a fear of being victimized by the violence present in his neighborhood and, on one level, appreciated the presence of police in his public housing complex. He stated that "[police] are always passing by making sure, you know, everything is okay . . . and they seem to be very involved, you know, yeah just very involved, . . . always around . . . the building, whatever." However, Malik also reflects on how his body automatically reacts to a police officer walking by. For example, he described sitting on the steps of his building one evening, though he understood the police "didn't really want" him to do so. He reported that when he sensed a police officer entering his peripheral vision, his mind immediately thought: "Let me just stand up," and that he then indeed stood. Often, neighborhoods which are over-policed are also over-surveilled.

Were Malik, for example, to translate his experience of surveillance and how to remedy it in terms of constitutional doctrine, he would have to articulate a Fourth Amendment right to privacy understood as warrant requirements which mediate access to the data that he fears may confuse him with a doppelgänger. As it stands, he articulates an understanding that, because of the cameras and their connection to governmental authorities such as police, he is at risk in some important way, connecting this through the way he controls his own body when he is aware of the presence of law enforcement. Both in terms of the effect of the camera on Malik in the present, and deepened by the possibility of racial profiling or being targeted by police in retrospect, Malik's shelter of privacy is certainly and fundamentally impaired by the surveillance cameras and their data which, unlike police, are omnipresent.

Malik might feel the data being gathered on his location and movement by surveillance cameras was a great deal less risky if the data were not immediately accessible to law enforcement, such as if police needed a warrant to view it. Additionally, when surveillance is deployed by police in residential areas with primarily residents of color, as are the residential areas of public housing, additional concerns come into play. A lack of recourse or protection at the level of the judiciary translates into a regime of surveillance which, functionally, has no check or balance. This is especially concerning when it coordinates with

historical and contemporary systems of discrimination, such as those that intersect in public housing.

Andrew, a Black and Hispanic college graduate who lived with his mother in a public housing apartment, described it another way. He claims he is not afraid of the police who are ever-present in his public housing block, but that he resents them—their constant presence, their power, the deference they demand, and the disrespect he observes (described as more of a "fuck you kind of thing"). Nevertheless, Andrew says, you should look out for the police, with "your ears, eyes, and everything," and have to be ready to "high-tail it out at a moment's notice, pretty much." Additionally, Andrew feels that if he stops to talk with people in the hallway he could be observed by cameras and/or police, and even if he thinks they are "genuinely cool," he could become associated with them and any known or unknown criminal misdeeds they're involved with. He describes that he keeps to himself as a great deal, believing developing friendships within his public housing development might "put me into a situation. . . . I just foresee things whereas, maybe that's probably not going to happen, but I just think a lot."

For Andrew, the cops and their cameras feel omnipresent, which he links to a risk of negative consequences. He thinks about the "malarkey, bad stuff" that could happen if he engages with friends "within seconds" of being presented with opportunities for social engagement. "I'm afraid," Andrew said, of:

> Jail, death, getting beaten up, or worst-case scenario, it spilling over onto my Mom's place because, like, certain things that happen in [public housing] can have you evicted and whoever is staying there is evicted.

Once, Andrew recalls becoming acutely aware of the cameras on the rooftop of his building—of being watched—when a woman offered to have sex with him for money. He refused the deal, flustered and panicking at the fear of being caught engaging in a criminalized activity, telling the woman, "I'll give you money, I mean just go." Accusations of criminality can have powerful ramifications for families which increases precarity at the intersection of housing inequality (a type of social and economic inequality), over-policing, and mass incarceration. In this situation, Andrew is aware of being watched by cameras even on his own rooftop, and fears that his own behavior will be caught on camera—a possibility that could have immediate effects not only for his own risk of criminal justice system contact, but also for his family's access to housing.

Both Malik and Andrew demonstrate an understanding of cameras as an extension of policing that reaches deep into their domestic environments, disrupting aspects of their everyday life that a shelter of privacy would protect, and that the Court sought to protect in *Carpenter*. In particular, Malik feels that cameras may create footage that he is unable to control and given the history of racial profiling and discrimination by the NYPD, the presence of the cameras and the data they may be gathering exposes him to specific risks. Additionally, Andrew articulates an understanding of the relationship between housing

precarity, policing, and the cameras that surveil him in his building, on his rooftop, and when associating with friends in his building.

C. Second Finding: Safety

The primary justification for surveillance cameras in public housing is that they promote increases in safety and security.[37] In this subpart, I will show that residents indeed welcome surveillance cameras expressly because they should increase safety and security, but that they are often frustrated that the cameras do not seem to curtail the types of concerns that impact their daily lives. This frustration of the ineffectualness of surveillance systems accompanies experiences like that of Malik and Andrew discussed in the previous subpart, showing the impact of surveillance in their domestic experience and the trade-off in terms of privacy. The disparity in experiences highlights that, although residents may be willing to trade privacy for "safety and security," the benefits of camera do not seem to accrue in their favor.

Furthermore, this contrast indicates again that the creation of on-demand data from a concentration of police-owned surveillance cameras maps on to current and historical regimes of over-policing (increasing incarceration rates, criminal justice contact, and police violence). Additionally, it sheds further light on the way that the Supreme Court's articulation of conventional and new technology contributes to the further entrenchment of social and economic inequality by failing to extend protections that could mitigate the effects of this incursion into a resident's shelter of privacy.

Residents often pointed out that although they were aware of cameras, they didn't perceive them to do much to prevent crime, and thus they didn't really help them feel safer. (One resident, Darnell, points out that "[c]ameras didn't stop the cops from whooping Rodney King.") This is accurate in the sense that most camera feeds are not monitored, and they will not prevent a crime from happening except, perhaps, through deterrence. This perception speaks to a failure of surveillance systems in terms of their trade-off: The public good (increasing safety and security) which they are intended to accomplish is not felt, by and large, by residents. Interaction between surveillance cameras and residents demonstrates the invasion of privacy—and lack of recourse—felt by residents, which is brought into relief through understanding that the cameras can't actually protect them.

"The cameras, the lights, shake people up a little bit, but they don't prevent much," one resident, Aikira, explains. Her impression is that even though police presence is everywhere, for the mostly young men selling drugs and carrying

37. Press Release, New York City Hous. Auth., NYCHA Announces New Safety and Security Upgrades at Manhattan Developments (Dec. 20, 2018), https://perma.cc/8KPS-YD77.

guns who are adept at avoiding police, it is incredibly easy to slip out of view. Drugs are sold in the shadows of playgrounds outside of buildings, where the lights aren't bright enough, and the cameras don't reach. The stairwells don't have cameras either—you might find someone passed out in the stairwell, and sometimes that's where drugs are sold. Even though there are cameras in the elevators, they don't seem to stop revelers and vagrants from relieving themselves there—a problem that was reported by many tenants as being something that impacted their daily life and informed them about the effectiveness of policing more generally.

The fact that these concerns did not seem to be addressed was generally attributed by residents to three reasons: either cameras appear to be "broken" and not recording, police do not adequately use feeds to address matters they are concerned about, or the camera coverage is insufficient. Several residents I interviewed suggested that more or better cameras might also be desirable. I bring this up to point out that, even as the presence of surveillance cameras and other technologies are a desired means of increasing safety and security, their use includes implicit risks in having one's personal data gathered by and available directly to law enforcement. Arguing for protection of the location and movement data gathered by these cameras on par with cell phone location and movement data is not an argument against surveillance cameras per se.

Azani, 24 years old at the time we spoke, is a Black woman and a practicing Muslim living in the Bronx. She reported that she likes the bright, jobsite lights—moveable and marked "Property of the NYPD." The lights are associated with the surveillance regime and police presence, and because they light up the yards of her housing and cameras in her complex, they make her feel safer because of the increased visibility. However, she also observes that they don't substantively curtail the negative things going on in the buildings where she lives. Additionally, she regrets the imposition of the intense lighting in particular because she feels the lights contribute to lower quality of sleep and migraines. First, she said, "[w]e're in the 'hood, so [some other people] didn't like it [when the lights were installed] because they're gang bangers and it's exposing them." She also stated that increased visibility just made drug dealers and users, who she said are "everywhere" in her building, move further into the hallways and the staircases, where they knew they wouldn't be observed by outsiders. Similarly, Zariah, a tenant living in Brooklyn, says that she doesn't know if surveillance measures have helped or if they've "driven people more into the darkness." To Azani and Zariah, concerns which most affect daily life—primarily substance sale and abuse—and the potential for violence which sometimes accompanies these, are not being adequately addressed even despite the extra lights and cameras.

Andrew comments that the presence of a camera "helps scare crime away but doesn't help stop crime." Rather, "[i]f you wanted to commit a crime, you'd just go to where the camera's not pointing." The only point of the cameras is

"deterrence," but crime is just going to "occur somewhere else." This points to the false "choices" of surveillance. It is just as easy to conduct illegal activity in the "shadows" as it is to leave your cell phone at home. However, robust participation in social life means you don't feel coerced into leaving your phone at home—that surveillance does not so permeate your environment that it becomes something you attune your body and habits to.

Azani once spent a week selling drugs, narcotics as well as then-illegal marijuana, in her neighborhood. She laughs, "I'm too scared really, I was too scared so I couldn't do it." At the time we spoke, Azani worked in an office building in downtown Manhattan. When she was selling drugs, she describes feeling like she was unable to hide what she was doing from anyone around her, as if they could "see it right in [her] face." Drugs, especially narcotics, are a big influence in her neighborhood and, she reports, her neighbors are too scared to even whisper about the sale of narcotics in her building because the police, cameras, drug sellers and "fiends" are everywhere. When she was both selling small amounts of drugs and smoking then-illegal marijuana, she felt "paranoid" that she was going to be arrested because she always felt the cops could be "watching" her either in person or through the cameras.

On one hand, Azani always felt under the watchful eye of police and their cameras. On the other hand, however, after Azani was robbed in the yard of her public housing complex she didn't bother calling the cops because she had no faith that they would be able to identify her assailant despite the cameras. She wasn't badly hurt, but she was scuffed up a little and her smart phone was taken. She lamented, in seeming contradiction to her experience of the "paranoia" of "being watched," that the police presence in her neighborhood was actually too rare, and that while things were more visible in some ways, there was never anybody around to do anything about crimes that might occur. For Azani, like many other residents, surveillance fails in its promise to deliver a safe environment even as it introduces risks which shape understanding and habits. In short, Azani wants a safe residential space where reasonable steps are taken to prevent crime, but currently does not even have enough faith in the ability of police to accomplish this to call them after being assaulted and robbed. Her experience is enough to tell her that the police don't care enough about crimes that victimize her to spend time taking descriptions, or looking for suspects, or reviewing surveillance camera footage. Additionally, it is because she understands implicitly that the balance of power and usage of surveillance footage skews against her.

While Azani does not feel police are willing to review footage for suspects when she's been victimized, she nonetheless feels, at times, as if she is the one being "watched" directly. Like Malik in the previous subpart, were Azani to articulate her concerns in terms of constitutional doctrine, she may choose to articulate a Fourth Amendment right to privacy understood as warrant requirements which mediate access to her own data. Without such requirements

to limit direct access of her data to law enforcement, she cannot experience a meaningful shelter of privacy outside of the gaze of governmental authorities. Furthermore, a central understanding that the contradictions in Azani's experience of policing indicate is that a warrant requirement for surveillance data would not completely ameliorate Azani's mistrust of police and their policing methods. Nevertheless, such a requirement would shield her from some of her concerns specific to the use of data produced by surveillance cameras.

To be sure, there is a discursive cleft between the articulated concerns of residents about cameras in residential spaces which add legal precarity to everyday life, and the arcane points of constitutional argumentation which this Article explores. In terms of law and social and economic inequality, the contradictions which residents experience become interesting especially in terms of risk assessment and the tradeoff between a shelter of privacy and a safe environment achieved through imposing technological surveillance—surveillance which are unrestrained, unlike if the data was cell phone tower pings, through the creation of dichotomy between new and conventional. It is further compelling in this case that the tradeoff of a safe environment deprives individuals of a basic shelter of privacy within their residential spaces, both because of the data gathering possibilities of such technologies, and also because these technologies and the data they gather is an extension of a historical and contemporaneous system of over-policing and mass incarceration. That the benefit of a safe environment achieved through a system of surveillance does not seem to materialize while leaving intact the "trade-off" highlights further the injustice of the matter and the depth of the problem.

D. Assessing the Data in Light of Doctrine

Residents often expressed a dichotomy between believing that the surveillance would lead to their own contact with the housing authority and with the criminal justice system, and that there was not enough surveillance (or policing) such that they were at risk of personal victimization from others. Legal scholars and practitioners must sort through these dichotomies. Likewise, we do want our mobile phones to be efficiently connected to towers, but don't want the state to be able to on-demand tap the information resulting from that.[38] In *Carpenter*, the Court understood and processed this nuance. Why couldn't it do the same for public housing residents, who are differently impacted by surveillance camera technology which is in many ways analogous to the cell phone data pings of *Carpenter*? Instead, the Court went out of its way to make an artificial distinction between surveillance technologies in terms of what is conventional and what is new.

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38. In terms of justification for surveillance systems, law enforcement and governmental authority often point to residents' desire to include surveillance cameras in their residential areas in order to prevent crime.

Nuances and contradictions notwithstanding, this data shows how surveillance cameras are metabolized by public housing residents, including how surveillance is integrally associated with over-policing and the injustices of mass incarceration, and is experienced as invasive by residents. Residents must live their domestic lives under intensive surveillance, with no realistic way to maintain a shelter of privacy to an ever-present relationship with police and policing. Additionally, a recent body of scholarship describes in particular the marginalizing risks and carceral experience of surveillance in the context of subsidized or public housing at the community level.[39] But how should this knowledge be utilized in terms of legal analysis? What does it mean when the "surveillance camera" means something different to those who are more socially vulnerable?

As protection for those targeted for investigation—or disparate government attention—various interpretations of Fourth Amendment protections have been associated with "places" which can be private, and not with places which can be considered public. In the past, it has been held that privacy can simply not be an expectation in public.[40] The exception to this is when technology is involved which amalgamates data to the extent that a "detailed chronicle of a person's physical presence is compiled every day, every moment" and possibly, to lesser extent, if a substantial enough amount of data also reveals the intricacies or privacies of everyday life.[41]

In many circumstances, the Supreme Court has shied away from entertaining this understanding, seeking instead to emphasize other problems inherent in the provision of justice: efficiency, enforceability, officer safety, crime control, and judgment of officers on the ground. However, perhaps its most striking departure from this essential understanding of the Fourth Amendment (as a safeguard from disparate government attention) is in the Court's differentiation between surveillance cameras and other types of technology. Essentially, the Court reasons in *Carpenter*, such cameras may be used for warrantless surveillance, because they are not new.

I consider the Court to have erred in this assessment not just because it is difficult to understand the newness requirement—cell phones, cameras, and the

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39. *See generally* Talja Blokland, '*We Live Like Prisoners in a Camp': Surveillance, Governance and Agency in a US Housing Project*, *in* CLASS, ETHNICITY, AND STATE IN THE POLARIZED METROPOLIS: PUTTING WACQUANT TO WORK 53 (2020) (John Flint & Ryan Powell eds., 2020); Cayce C. Hughes, *From the Long Arm of the State to Eyes on the Street: How Poor African American Mothers Navigate Surveillance in the Social Safety Net*, 48 J. CONTEMP. ETHNOGRAPHY 339 (2019) (documenting the effect of surveillance associated with receiving welfare benefits on under-resourced Black mothers in Texas); Sandjar Kozubaev, Fernando Rochaix, Carl DiSalvo & Christopher A. Le Dantec, *Spaces and Traces: Implications of Smart Technology in Public Housing*, CHI '19: PROCEEDINGS 2019 CHI CONF. ON HUM. FACTORS COMPUTING SYS., May 2019, at 1.

40. *See* Katz v. United States, 389 U.S. 347, 351-52 (1967).

41. Carpenter v. United States, 138 S. Ct. 2206, 2220 (2018).

internet were all born decades ago, and their current usage is dependent on gradations of improvements and modifications over many years. Yet, surveillance cameras, arguably because they are already heavily employed by police and are generally accepted by the public as necessary and useful, are thought to be 'not new.'

To the Court's implicit concern that video surveillance without a warrant is too commonly used as a policing method (and changing the requirement would disrupt several practices and ongoing investigations), in many U.S. cities, municipal buildup of security cameras did occur with the understanding that non-targeted surveillance (i.e., cameras in subway stations) was not considered a search. A case of this specific nature—one that challenges camera placement in public places—has never made it to the Supreme Court. However, this concern fails to account for the extraordinary difference in the way that camera surveillance is applied, especially to low-income neighborhoods and subsidized or public housing residents.

What separates this data from, for example, cell phone tower pings? The Court found that cell phone tower pings painted a nuanced picture of the individual whose cell phone was emanating a signal which bounced across cell towers. Such data was not out of the purview of police in investigating an individual criminally; rather, using cell phone tower pings in the particular manner it was used was found to violate privacy because it painted a full picture of the defendant. Would, then, the data gathered from surveillance cameras of the type found in public housing be subject to a warrant requirement if police were to target (disparately, necessarily) a resident of public housing for whom the cameras were ostensibly placed to protect? The cameras could paint a picture of such a resident which is nuanced and, certainly, without meaningful consent.

The scenario of surveillance in public housing illustrates well a general concern that some are more surveilled by the government than others, and that this has real, quantifiable, and observable ramifications for those who may be disparately targeted by surveillance. Certainly, those who are subject to extraordinary surveillance which impairs a shelter of privacy deserve a process by which their interests are assessed before revealing the entire history of their movements in more and less private areas of their homes and neighborhoods.

If the case for requiring a warrant to mine data gathered above and beyond the typical is straightforward, necessity also will merit consideration of other types of cases in which surveillance camera data is used by law enforcement. In the paragraphs below, I will consider some of these cases. A first, very prominent use of surveillance cameras, comes in the apprehension of the Boston bombing terrorism suspect, Dzokhar Tsarnaev, which required law enforcement to tap on an existing network of surveillance cameras found throughout the city. This application may have justified the use and placement of a network of surveillance, including one that can be accessed in exigent circumstances, such as in the pursuit of a criminal who may be in the process of harming people.

Other legal niceties and safeguards, as noted above, were also waived that day in the name of exigency—Tsarnaev's first confession to the crime came in a hospital bed interview before he had been read his *Miranda* rights. However, barring such circumstances or other exceptions not anticipated here, what are the grounds for targeting an individual in such a fashion without first seeking a warrant?

In recent cases deliberated in the lower courts concerning the targeted use of surveillance, a camera was placed outside of a suspect's home which recorded comings and goings of a suspect, the suspect's family and the suspect's guests.[42] The camera recorded 24/7 for many weeks, creating a record of data which was available for analysis retrospectively. In such a case, the considerable effort and expense of erecting a camera outside of the suspect's home and analyzing the footage, the interest itself, derived from considerable existing evidence which police already possessed. If the police had been required to apply for a warrant to place the camera, most likely, it seems they would have most likely gotten one.[43] Nevertheless, police did not seek one as it was not required.

The point of the Fourth Amendment has never been to prevent the apprehension of criminals or the application of the rule of law. In short, it has never been meant to inhibit the pursuit of criminal suspects by police, but to protect individuals from disparate, unwarranted, or unjust attention from police, no matter the *modus* behind the pursuit. In a case where established criteria for warrants are met—including in the exceptions, for example, exigent circumstances—there is no problem for searches to continue. However, it is when criteria are not met that the value of this protection emerges. Those experiencing police harassment, systematized or merely individual, must then find in the Fourth Amendment and judiciary who interprets it, a weapon of resistance. Nevertheless, in choosing to assert a narrow ruling which excludes surveillance camera footage, the Supreme Court deprives a portion of the population, significantly those who are socially and economically vulnerable like the residents I've described in previous sections, of relevant rights.

The consideration of the cost of differentiating *or not* surveillance camera personal data from other types of personal data in terms of the protection of individual rights is one that must be conducted outright, and not implicitly. Case in point, the *Riley* Court, in insisting the data stored on a cell phone require a warrant to be searched, admitted that "[p]rivacy comes at a cost."[44] In the *Riley* case, it was not that information on cell phones should be excluded from searches, but, barring any exceptions, it was necessary for a phone to be searched only with a warrant.[45] This decision understood that a warrant was not merely

42. United States v. Moore-Bush, 963 F.3d 29, 33-34 (1st Cir. 2020); Commonwealth v. Mora, 150 N.E.3d 297, 302-03 (Mass. 2020).

43. *Moore-Bush*, 963 F.3d at 47; *Mora*, 150 N.E.3d at 313.

44. Riley v. California, 573 U.S. 373, 401 (2014).

45. *Id*. at 401-03.

"an inconvenience to be somehow 'weighed' against the claims of police efficiency."[46] However, the *Riley* case noted that technological advances had not only changed the experience and governance of privacy, but also the process of obtaining a warrant.[47] That warrants were more efficiently obtained for such searches mitigated claims that requiring a warrant would be overly burdensome.[48] I believe this sentiment can and should be applied in future deliberations concerning the division between new and conventional technologies and Fourth Amendment protections.

II. CARPENTER RIGHTS AND SURVEILLANCE DATA: A REAPPRAISAL

In this Part, I will explore the requirements in *Carpenter* in terms of the data produced by surveillance cameras. The requirements for determining whether state action constitutes a search that requires a warrant in *Carpenter* are deeply rooted in Fourth Amendment doctrinal evolution from protection of places and tangible objects to the protection of legitimate expectations of a shelter of privacy and help to shed light on the artificiality on which the decision ultimately bases the limitation of its scope.[49]

In response to *Carpenter*, scholars and courts have worked to develop a uniform test such as the one relied upon ever since the *Katz* decision. For example, to describe one of these tests, Orin Kerr develops a "New Expectation of Privacy Test" (NEPT) which has three prongs, namely: (1) the kind of records sought, (2) whether the records are created with meaningful choice, and (3) whether the records reveal the privacies of life.[50] Additionally, Matthew Tokson, in analyzing 857 federal and state judgments citing *Carpenter* from June 2018 to March 2021, finds a nascent test among the jurisprudential trends identified.[51] The test which Tokson identifies augments *Katz* but, as he argues, does not fully replace it. Similarly, this "*Carpenter* Test" identifies three factors for analysis: (1) the revealing nature of the data captured, (2) the amount of data captured, and (3) whether the data was disclosed to a third party automatically.[52] There are

46. Coolidge v. New Hampshire, 403 U.S. 443, 481 (1971).

47. *Riley*, 573 U.S. at 401.

48. *Id.*

49. Carpenter v. United States, 138 S. Ct. 2206, 2217 (2018).

50. KERR, *supra* note 8, manuscript at 18-29.

51. Matthew Tokson, *The Aftermath of Carpenter: An Empirical Study of Fourth Amendment Law, 2018-2021*, 135 HARV. L. REV. 1790 (2022). Tokson derives a "test" based on an averaging of commonalities in the application of *Carpenter* across several jurisdictions. Yet, he does not justify why the results of this averaging method would therefore constitute a test. It is unlikely that, but for Tokson's own analysis, each of the disparate jurisdictions under which the decisions were made would have an interest or ability to coordinate their decision-making under *Carpenter* and it seems unlikely that a test that merely reflects the average of many disparate decisions, without considering a multitude of nuances, could exist as described.

52. *Id.* at 1795.

other scholars who have developed or identified other tests; however, but for the wording and, in some instances, applicable scope, of the factors, these tests are mostly analogous and derive directly from the text of *Carpenter*. To understand the artificiality of the central distinction between conventional and new technology in *Carpenter*, it helps to break the doctrinal discourse of the decision into three themes, which broadly correlate to each factor: (1) the digital nature of the data, (2) the choice and/or automaticity through which such data is communicated, and (3) invasion of privacy.[53]

A. The Digital Nature of Data

Carpenter concerns itself with location and movement digital data that meets certain threshold requirements. Importantly, *Carpenter* is concerned additionally with the application of the third party doctrine,[54] which involves searches of information shared with third parties and presumed to have a lesser expectation of privacy than other information.[55] It is a holistic view of data—the amount, breadth, and depth of data made available in digital formats—that, for the Court, makes such data fundamentally different from other data communicated to third parties. It is this "fundamental" change in the possibilities of data which can only be viewed holistically that the Court asserts to be under review. The data in question represents the "seismic shifts in digital technology that made possible the tracking of not only Carpenter's location but also everyone else's, not for a short period but for years and years."[56] The data magnifying and recording possibilities opened up by digitalization technologies create the ability to make known the past and present in a way that mere human observation could not, even as we are reminded of the contestable nature of both, subjected as they are to interpretive frames and social meaning structures.

These concerns reflect previous judicial statements to the effect that the authors of the Constitution intended to "place obstacles in the way of a too permeating police surveillance."[57] The Court reaffirms this in its rejection of a "mechanical interpretation" of the Fourth Amendment.[58] Indeed, as technology has substantially changed the experience of a shelter of privacy and the relationship between the government and individuals, the Court sees itself seeking to "assure[ ] preservation of that degree of privacy against government

53. *Id.* at 1831.

54. In regard to information shared through third parties, it states that "there is a world of difference between the limited types of personal information addressed in *Smith* and *Miller* and the exhaustive chronicle of location information casually collected by wireless carriers." *Carpenter*, 138 S. Ct. at 2210.

55. *Id.*

56. *Id.* at 2219.

57. United States v. Di Re, 332 U.S. 581, 595 (1948).

58. *Carpenter*, 138 S. Ct. at 2214 (quoting Kyllo v. United States, 533 U.S. 27, 35 (2001)).

that existed when the Fourth Amendment was adopted."[59] For example, in *Kyllo* it held that using a thermal imaging device which could detect heating radiation inside of constitutionally protected spaces captured potentially legally sensitive data and therefore was a search requiring a warrant granted on a standard of probable cause.[60] Additionally, in *Riley*, the Court recognized that smartphones hold an immense amount of data and that a warrant should be required before searching the contents of the phone.[61] This was, notably, an exception to the general allowance of a warrantless search following an arrest.

As these few but representative examples show, new technology consistently provokes re-evaluation of the means to materialize the principles of privacy conferred by the Fourth Amendment. The heat sensors in *Kyllo* that could sense where heat was emanating within the walls of a home was considered a new technology at the time, as much as the precise location and movement data accessible by CSLI, or cell phone pings, was considered new technology in *Carpenter*. According to the *Carpenter* Court, the newness of the technology it examines hinges on the functionality of that technology to compile information in a "detailed, encyclopedic, and effortless" manner.[62] In contrast to *Kyllo*'s heat sensors and *Carpenter*'s cell phone tower pings, data gathered through surveillance cameras in public housing is not considered to consist of a search which requires a warrant.[63]

In its reasoning as to whether government access to a cell phone's contents constituted a search requiring a warrant supported by probable cause, the *Riley* Court noted that the data on the phone as such "endanger no one" and that a warrant requirement in the context of an arrest could only be dispensed if the safety of police officers or bystanders required it.[64] In that case the Court also noted that contemporary telephones had an immense storage capacity and "are in fact minicomputers that also happen to have the capacity to be used as a telephone. They could just as easily be called cameras, video players, rolodexes, calendars, tape recorders, libraries, diaries, albums, televisions, maps, or newspapers."[65] The phone's data was thought to "reveal much more in combination" with other records.[66] Additionally, a person was unlikely to carry around a "trunk" of documents that revealed much about their lives, though the Court considered such a "trunk" to be analogous to the cellular telephone.[67] It therefore created a privacy interest analogous to an old one, but many times over,

59. *Kyllo*, 533 U.S. at 34.
60. *Id.* at 39.
61. Riley v. California, 573 U.S. 373, 386, 393-97 (2014).
62. *Carpenter*, 138 S. Ct. at 2209.
63. *See Kyllo*, 533 U.S. at 29-30; *Carpenter*, 138 S. Ct. at 2211-13.
64. *Riley*, 573 U.S. at 386-88.
65. *Id.* at 393.
66. *Id.* at 394.
67. *Id.* at 393-94.

magnified. The Court notes that there is a "pervasiveness" which characterizes cell phone records.[68] As in, "nearly three-quarters of smartphone users report being within five feet of their phones most of the time, with 12% admitting that they even use their phones in the shower."[69] Thus, the key difference that the Court in *Riley* found persuasive revolved around scale and routineness of the information to which police access to cellular telephone data would give access.[70] That data could "reconstruct someone's specific movements down to the minute, not only around town, but also within a particular building."[71] Furthermore, the phone contains a number of datapoints which may formerly have been located within the home.

It should be clear by now that differences between new and conventional data may not be reduced to neat analogies. Learned Hand pointed out (quoted in *Chimel v. California*, 395 U.S. 752 (1969), and then *Riley*) that it "is a totally different thing to search a man's pockets and use against him what they contain, from ransacking his house for everything which may incriminate him."[72] Thus quoting, the *Riley* Court points out that this is true unless the man's pocket "contain a cell phone."[73] And yet, round the clock compelled camera surveillance in one's residential areas effortlessly compiles detailed data which may reveal the identity and patterns involved in one's relationships and potentially revealing legally sensitive location and movement data of residents and guests. Puzzlingly, such data in the same space would be protected from on-demand access and use by the government if telephone related, but not if captured by government cameras. Why? To what effect? How does the artificiality of the distinction between new and conventional technology connect with patterns of social and economic inequality in America?

The Fourth Amendment identifies four loci—places, persons, papers and effects—as where an expectation of privacy is attached.[74] The conventional approach to the Fourth Amendment emphasizes places as where the expectation attaches, especially places like the home. Previous cases decided by the Supreme Court have found that looking at the bottom of electronics for serial numbers inside of the home, or the use of data emanating from a beeper inside of the home constitute an abrogation of the privacy expectation concerning the interior of a house.[75] The same beeper data emanating from a public highway, however,

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68. *Id.* at 395.

69. *Id.*

70. *Id.* ("Allowing the police to scrutinize such records on a routine basis is quite different from allowing them to search a personal item or two in the occasional case.").

71. *Id.* at 396.

72. United States v. Kirschenblatt, 16 F.2d 202, 203 (2d Cir. 1926).

73. *Riley*, 573 U.S. at 396.

74. U.S. CONST. amend. IV.

75. Arizona v. Hicks, 480 U.S. 321, 327-28 (1987); *see also* United States v. Karo, 468 U.S. 3296, 3298 (1984).

would not have an expectation of privacy, even if it were emanating from inside a private vehicle.[76] On the other hand, Katz had an expectation of privacy within a phone booth, based on an expectation which attached to Katz even in a place far less private than the interior of a home.[77] In *Katz*, as well, it was key that the phone booth itself was understood as a place of relative privacy, an expectation which "society is prepared to recognize as reasonable."[78] The Court differentiates in *Katz* that "the Fourth Amendment protects people, not places"[79] because Katz was in a protected space, an effort he made personally to shield his conversation from outside observation.[80] If a person makes such an effort to hide their activities, and society is prepared to recognize an expectation of privacy, then the Fourth Amendment may be invoked.

Carpenter, however, takes a first step in detaching the Fourth Amendment from these loci. Orin Kerr characterizes this shift as one from places and things to one of "information transfer."[81] The change in the Fourth Amendment enacted by *Carpenter* must contemplate the extensive abilities of metadata and data amalgamation, enabled by new technology and internet connectivity. In *Carpenter*, the Court notes that the location tracking which Carpenter was subjected to was altogether common—all cell phone carriers are subject to the same kind of tracking. However, instead of asking whether Carpenter had a reasonable expectation of privacy related to a particular place (i.e., public roads)[82] or thing (i.e., a cell phone)[83] the Court shifted. *Carpenter* asked, "[h]as technology changed expectations of *what the police can do*?"[84] The Court concedes that just because the technology exists, doesn't mean that the government should be able to take advantage of it (at least, not without a warrant) if usage of a new technology would violate a reasonable expectation of privacy. Thus, the question of technological change is central to the Court's holding in *Carpenter*.

Whereas *Riley*'s cellphone was treated as a new technology, *Carpenter* specifically describes surveillance cameras, taken to mean all kinds of cameras whether used by police, private citizens, and no matter their orientation, genesis or capability, as being an old technology.[85] Thus, using a surveillance camera, even if targeted, is not considered to be a violation of the expectation of privacy

76. United States v. Knotts, 460 U.S. 276, 285 (1983).

77. Katz v. United States, 389 U.S. 347, 351 (1967).

78. *Id.* at 361 (Douglas, J., concurring).

79. *Id.* at 351.

80. *Id.*

81. KERR, *supra* note 8, manuscript at 18-29.

82. *United States v. Knotts* found that obtaining information on beeper signals emanating from public roads did not require a warrant. 460 U.S. 276, 285 (1983).

83. *Riley v. California* found that the contents of a cell phone required a warrant before being searched. 573 U.S. 373, 403 (2014).

84. KERR, *supra* note 8, manuscript at 7.

85. *Riley*, 573 U.S. at 385; Carpenter v. United States, 138 S. Ct. 2206, 2214 (2018).

by the Court.

In *Carpenter*, the "world of difference" which justifies separate considerations for digital records is thought not to apply to the data produced from conventional surveillance cameras.[86] However, a similar "chronicle" of information can be produced by these merely conventional surveillance technologies, disrupting the experience of a meaningful shelter of privacy, perhaps especially in places where they are deployed in the context of over policing or when targeting an individual of interest to law enforcement. In the three subparts following, I articulate this through several important aspects relating to analysis of technology and its data under *Carpenter* including an exploration into the timeline of the development of surveillance technologies, the networked nature of surveillance cameras, the amount of data produced by surveillance cameras, and how surveillance camera data may be analyzed in comparison to other types of surveillance data.

1. A Timeline of Novelty and Conventionality

Not including surveillance cameras as a new technology may seem straightforward on the basis of a timeline of the development of technology. Security cameras are an older technology than cell phones, first being used for policing purposes in the U.S. and elsewhere in the 1960s.[87] However, the technology and use of security cameras has expanded dramatically since their initial development. Advancement of "older" technologies has not gone unrecognized in other circumstances. In *Riley*, for example, the Court acknowledges the difference in smart phones and the first cell phones developed in the early 1970s—not long after the introduction of security cameras.[88] The internet as well was invented far earlier than its widespread and contemporary use in 1983. The surveillance security camera has changed dramatically since its first usage just as any technological approach to surveillance. The resolution of cameras and their ability to gather high quality visual and sound data have increased exponentially.[89]

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86. *Carpenter*, 138 S. Ct. at 2019.

87. Ben Yakas, *'These Videos Shouldn't Exist': Hours of Old NYPD Surveillance Films of Protests Have Been Digitized*, GOTHAMIST (Dec. 3, 2019), https://perma.cc/BJZ4-PULE (discussing video surveillance cameras used by the NYPD in the 1960s. Video footage from the 1960s captured by these cameras can be found on the website of the NYC Department of Records and Information Services. *NYPD Surveillance Films*, N.Y. CITY DEP'T RECORDS & INFO. SERVS., https://perma.cc/PX7D-G2TK (archived Jan. 23, 2023)); Chris A. Williams, *Police Surveillance and the Emergence of CCTV in the 1960s*, CRIME PREVENTION & CMTY. SAFETY 8, 12 (2003) (discussing video surveillance cameras used by London police in the 1960s).

88. *Riley,* 573 U.S. at 396; Yakas, *supra* note 87.

89. The examples of the increase in capabilities from early surveillance cameras are numerous. *See, e.g.*, Curt Nickisch, *Boston Marathon Surveillance Raises Privacy Concerns Long After Bombing*, NPR (Apr. 17, 2015), https://perma.cc/X8A7-2RA7 (discussing the

In terms of timing, surveillance cameras are only slightly less new than other technologies deemed to be new by the Court. They also possess attributes which are similar to other technologies discussed in this Part such as thermal imaging, cell phones, or cell phone tower pings. Often, security cameras do not target individuals as thermal imaging must and searches of an individual's cell phone must. However, there are cases in which surveillance cameras are installed precisely to target individuals. It would seem, then, that this targeting, as in *Kyllo* and *Riley*, could be instructive to the Court.[90] In lower court decisions, such as in the First Circuit's decision in *Moore-Bush*, this targeting is instructive.[91]

Additionally, in terms of surveillance cameras which are set up for general reasons, and not to target any particular person, the ability to target in retrospect may also be instructive. In *Carpenter*, one guiding factor of finding that the data generated from cell phone tower pings was invasive in a way that should be constitutionally prevented was that "police need not even know in advance whether they want to follow a particular individual."[92] *Carpenter* goes on to point out, in regards to cell phone tower pings that: "Whoever the suspect turns out to be, he has effectively been tailed every moment of every day for five years, and the police may—in the Government's view—call upon the results of that surveillance without regard to the constraints of the Fourth Amendment."[93] This is also the case with surveillance camera data in, for example, highly surveilled geographic areas. Surveillance camera data also gives police retrospective data which "gives police access to a category of information otherwise unknowable."[94]

Thermal imaging, such as was discussed by the Court as a new technology in both *Kyllo* and affirmed in *Carpenter*, was in use as early as the 1960s as well.[95] The thermal imaging as used by the police, however, was new, and it possessed the possibility of disturbing what the police could do in terms of the capabilities of police to see inside private spaces. Security cameras, and especially contemporary ones, also augment the capabilities of police. If used to target, their resolution can be as high as to "see" inside of windows, as well as to take data which can be analyzed algorithmically and also stored for an unlimited amount of time. Visitors can be identified, habits can be analyzed, and comings and goings can be noted as viewed by a singular surveillance camera. However, surveillance cameras exist in networks of technologies, and hardly ever operate

continual improvement to surveillance camera technology); Jennifer Pattison Tuohy, *How Do Home Security Cameras Work?*, U.S. NEWS (Apr. 1, 2021, 11:00 AM), https://perma.cc/ERX9-5SER (discussing some of the capabilities of modern home security cameras in the direct-to-consumer market).

90. *See* Kyllo v. United States, 533 U.S. 27, 34 (2001); *Riley*, 573 U.S. 393-96.

91. United States v. Moore-Bush, 963 F.3d 29, 43 (1st Cir. 2020).

92. Carpenter v. United States, 138 S. Ct. 2206, 2218 (2018).

93. *Id.*

94. *Id.*

95. *Id.* at 2214.

as single nodes. In the following section, implications for a network approach are explored.

2. *A Network Understanding*

Increasingly, it is understood in jurisprudence that it is not merely the capability of a single camera that needs to be considered in evaluating surveillance cameras' impacts. Surveillance cameras no longer exist as merely a single camera, they exist in a network of public and private cameras which may be accessed to show, one might argue much like the cell phone tower pings records of *Carpenter*, a full and clear picture of individuals and their movements.

In the city of Boston, federal grant money allowed governmental officials to steadily build a network of surveillance cameras across the metropole for the purposes of identifying and tracking down perpetrators of crime. This network, which intersected with privately owned cameras including ATM cameras, was tapped almost immediately by law enforcement on the afternoon of April 15, 2013, following the detonation of several bombs at the finish line of a major sporting and spectator event—the Boston Marathon.[96] The widespread analysis and interest in this event, and how the suspects were located make it a uniquely detailed fact pattern to discuss in terms of how surveillance cameras function.

In the search for the suspects in the Boston Bombing attack, exigent circumstances existed, and law enforcement involved in the initial stages of the Boston Bombing attack did rely on this essential understanding as it conducted itself. In the course of the case, several legal rules were suspended for exigent circumstances—for example, the suspect Tsarnaev first confessed to the bombings in a hospital bed without being mirandized, an interview which took place because law enforcement needed to understand if there were additional conspirators.[97] Although this case did involve exigent circumstances, a natural question to follow is, removing such exigent circumstances, whether the use of video cameras such as was completed should require a warrant under existing Fourth Amendment doctrine. It would seem that under existing case law (i.e., *Carpenter*), it would not. In its opinion in *Carpenter,* the Court states that it does not seek to "call into question conventional surveillance techniques and tools, such as security cameras."[98] However, this differentiation between conventional surveillance techniques and new is tenuous. Judge Gorsuch, in his concurrence, identifies this weak point in the Court's analysis to argue for a more originalist

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96. Jon Healey, *Surveillance Cameras and the Boston Marathon Bombing*, L.A. TIMES (Apr. 17, 2013), https://perma.cc/T4UN-HKUL; Carrie Johnson, *Boston Search Shines Spotlight On Surveillance Cameras*, NPR (Apr. 23, 2013) https://perma.cc/VQ5P-PQWV (indicating that privately owned surveillance cameras are tapped on by law enforcement).

97. Adam Goodman, *How the Media Have Misunderstood Dzhokhar Tsarnaev's* Miranda *Rights*, ATLANTIC (Apr. 22, 2013), https://perma.cc/V78A-GXFY.

98. *Carpenter*, 138 S. Ct. at 2220.

interpretation of the Fourth Amendment, asking "why those techniques would be okay even if they lead to 'permeating police surveillance' or 'arbitrary police power.'"[99] Whereas the conclusions of this Article about this weakness are different (Gorsuch advocates for an originalist interpretation which would further narrow the Fourth Amendment by, most likely, re-introducing considerations about trespass into privacy argumentation), the differentiation is difficult to work with.

Law enforcement relies on cameras which are widely available, sometimes monitored in real time, or with which analysts may comb through the records produced in retrospect. Video is also stored in databases, sometimes forever, meaning there is a database which can be tapped on not only across geography but across time. The Supreme Court has not addressed this in differentiating between conventional surveillance and new surveillance. Additionally, surveillance cameras don't just exist within networks of other cameras—they exist within networks of other data-gathering devices. Technologies such as facial recognition technology, GPS location, and license plate readers allow law enforcement to create a nuanced timeline of criminal events. When viewing the function of the surveillance camera in terms of a network, it becomes exceedingly difficult to differentiate between the fact of *Carpenter* representing "permeating police surveillance" and use of "arbitrary police power"[100] and not that data gathered by surveillance cameras. This especially includes government-owned surveillance cameras but, given the capabilities of cameras and data networks, it also includes privately owned and placed cameras.

3. *How Much Data is Too Much Data*

An important aspect for lower courts interpreting *Carpenter* is how much data is revealed. In an analysis of lower court data, Tokson found that the "amount factor" often prevails among courts when finding whether there is a "search."[101] Ironically, it may be precisely that cameras are so common that they have the potential to gather extraordinary amounts of data. Even one camera placed outside of a residence, for example, can show the daily schedule, comings and goings, acquaintances, family arguments, buying habits, and a myriad of other things. This data becomes particularly informative as it amalgamates across time. Unlike a human surveiller, a surveillance camera allows for long-term, precise, data storage of data gathered at all hours and every day effortlessly. Using such data, events and habits can be reconstructed (albeit while being subject to grafted-on narratives) in real time or in retrospect. Given this potential, surveillance camera data would seem to be deeply revealing on the basis of the

99. *Id.* at 2267.
100. *Id.*
101. *Id.* at 2212; *see* Tokson, *supra* note 51, at 1831.

amount factor. To reiterate, even one surveillance camera, outside of a network, has the potential to gather and store extraordinary amounts of data effectively, cheaply, and easily. This kind of data, accessed without a warrant, would seem to violate the basic principles of the Fourth Amendment, as well as the guidelines interpreted from *Carpenter*.

4. *The "Click of the Button"*

Data such as that gathered with surveillance cameras is different to analyze compared, for example, the cell phone tower pings of *Carpenter*. It may be the case that these differences do make a substantive difference for legal analysis as well. The *Carpenter* Court, in characterizing not just the data but the analysis of the data by the government stated that:

> [L]ike GPS monitoring, cell phone tracking is remarkably easy, cheap, and efficient compared to conventional investigative tools. With just the click of a button, the Government can access each carrier's deep repository of historical location information at practically no expense.[102]

What does the "click of a button" mean for analysis? Analysis of cell phone tower pings is relatively straightforward because the data is recorded in a standardized way. The pings between phones and cell phone towers record both the time that the tower is engaged, as well as the location. With this kind of data, very little cleaning will be needed, and data can easily be analyzed using a Geographic Information System (GIS). This means that extraordinary amounts of data, both historical and in real time, can be quickly and easily analyzed to reveal important information about individuals. In contrast, the data gathered from surveillance is not standardized. Hours of surveillance data require hours of viewing, at least without facial recognition and other algorithmic developments which recognize patterned behavior. With software advances that can analyze and "sort through" extraordinary amounts of data quickly, analysis of surveillance data from surveillance cameras becomes as quick and easy and efficient as analysis of that from standardized sources.

B. What is a Meaningful Choice?

When applying the *Carpenter* decision, if a lower court finds that data was voluntarily disclosed, they are unlikely to find that a search took place.[103] Voluntary disclosure hinges on whether an individual voluntarily "assume[s] the risk" of breaching the data. In *Carpenter*, the Court determined that Carpenter could not have meaningfully breached his own data because his choices were to disconnect from the phone data or not. Lower courts have also found that data

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102. *Carpenter*, 138 S. Ct. at 2217-18.
103. *Id*. at 2220.

given "automatically" and without choice or whether data is inescapable, the meaningful choice requirement is not met.[104]

It seems that even generally, individuals have very little meaningful choice over whether they are observed by surveillance cameras, both in terms of private surveillance cameras which they do not own and perhaps especially in terms of police or government owned surveillance cameras which may be placed in any publicly owned space, and under the current law may even gaze upon privately owned property. Benefits like public housing are often conferred under a regime of surveillance, including surveillance camera footage. Residents must accept the presence of police-owned surveillance cameras, the data to which police and other governmental authorities have direct access. While cell phones have become very much integrated into human life, they are not more integrated than a set of basic human needs like shelter, clothing, and nutrition. Ostensibly, one has much more choice in deciding whether or not to disconnect a cell phone than whether or not to remain in their home or leave and be observed by surveillance cameras. There is little choice exercised as to being made the subject of surveillance in such situations—where the balance of power between benefits seeker and benefits giver is mismatched.

In terms of the language which *Carpenter* uses to indicate a paucity of choice: "While individuals regularly leave their vehicles, they compulsively carry cell phones with them all the time. A cell phone faithfully follows its owner beyond public thoroughfares and into private residences, doctor's offices, political headquarters, and other potentially revealing locales."[105] This language leaves little doubt that some things, though technically a matter of choice, may be considered requirements or requirement-like by the Supreme Court.

1. Choice Without Adequate Choices

In *Carpenter*, the Court observes the cell phone tower pings as being not "truly 'shared'"[106]; however, there are certainly a number of alternative choices which Carpenter could have made to carrying and using a cell phone. It is common knowledge that cell phones are "trackable" for anyone who pays attention to the news or watches popular television shows. Carpenter could have left his phone at home, turned his phone off, or decided not to have a phone in general. However, the Court determined that requiring Carpenter to make this choice would be without rationale, and that it would be inconsistent with living life in the present time. Specifically, the Court states that data generated from cell phone tower pings is not given voluntarily because: (1) such phones are "a

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104. Tokson, *supra* note 51, at 1831-32.

105. *Carpenter*, 138 S. Ct. at 2218.

106. *Id.* at 2220.

pervasive and insistent part of daily life,"[107] and (2) the data is logged without any affirmative action on the part of the user. The result in *Carpenter* in relation to cell phone tower pings was that the Court determined that in no "real" sense did the user of the cell phone "voluntarily" assume the risk. It would seem, then, for these pervasive and insistent aspects of everyday life, the Court is willing to recognize a lack of voluntariness, even when strictly speaking the action is not a necessity of life.

A lack of voluntariness[108] and expectation[109] in exposing data does not exist in absolutes. Although the technology could be understood by laymen as holding certain possibilities, and the laymen continue to make choices to use the technology it does not mean that these possibilities do not violate an expectation of privacy. In the *Carpenter* case, it was decided that an individual could not possibly, in merely using a cell phone as is typically used, "assume the risk" of "turning over a comprehensive dossier of his physical moments"[110]—that this was beyond choice, and a realm in which the Constitution protected from government overreach.

C. The Privacies of Life and Physical Location

Carpenter acknowledges that the interest in privacy intersects with liberty. Previous cases have also interpreted a broad liberty interest in the Constitution: "In a Constitution for a free people, there can be no doubt that the meaning of 'liberty' must be broad indeed."[111] However, in order for data use to be a "search," it must be revealing. This quality is interrelated with both of the above factors, and there are several approaches to determining the revelatory nature of data. For example, the "amount factor" of data is important to understand whether data is deeply revealing or not. Additionally, the nature of the data can be a consideration as in *State v. Eads,*[112] when the Ohio Court of Appeals found, using *Carpenter* as precedent, that the results of blood and urine tests for alcohol and drugs were deeply revealing, though results did not go back into time.[113] The amount of data adequate to be revealing also corresponded to the content of data.

This language from *Carpenter* which addresses the expectation of privacy related to physical locations quoted above points out that a "cell phone faithfully follows its owner beyond public thoroughfares and into private residences,

107. *Id.*

108. Tokson, *supra* note 51, at 1831-32.

109. Kyllo v. United States, 533 U.S. 27, 34 (2001).

110. *Carpenter*, 138 S. Ct. at 2220.

111. Bd. of Regents v. Roth, 408 U.S. 564, 572 (1972).

112. State v. Eads, 154 N.E.3d 538, 548 (Ohio Ct. App. 2020); *see also* Tokson, *supra* note 51, at 1831.

113. And that the amount of data met the requirement of being "substantial." Tokson, *supra* note 51, at 1082.

doctor's offices, political headquarters, and other potentially revealing locales."[114] This seems to confirm that what can be considered private is beyond the private spaces of the home which enjoy a sacrosanct repose in the jurisprudence. The cell phone pings are called by the Court "near perfect surveillance" because of the record produced through a device that is "almost a 'feature of human anatomy'" that can go back in time and produce a record of geographic locations.[115] Furthermore, being so closely associated with the human to which it belongs, the cell phone travels into the home, into the doctor's office, etc. However, the Court fails to acknowledge that this "near perfect surveillance" does no more than show the location of the home or the doctor's office—not its inner contents. This is similar to, for example, a surveillance camera. However, the Court in *Carpenter* is also focused on the amount of physical location revealed.[116]

In *Knotts*, the Supreme Court found that a beeper planted by law enforcement did not constitute a warrantless search.[117] Law enforcement had hidden the beeper in a bottle of chloroform which was purchased by a co-conspirator and placed in a vehicle, which was then tracked. In their *Carpenter* opinion, the Court points out that "[s]ignificantly, the [*Knotts*] Court reserved the question whether 'different constitutional principles may be applicable' if 'twenty-four hour surveillance of any citizen of this country [were] possible.'"[118] Although the Court in *Knotts* found that because the car's location was also "voluntarily conveyed to anyone who wanted to look," the data generated from cell phone tower pings used in *Carpenter* was substantially more revealing.[119] While in *Knotts*, no privacy interest could be asserted, in *Carpenter* a privacy right could be asserted in terms of physical location.[120]

1. When Physical Location Becomes a Privacy of Life

In the past, from the *Katz* decision in the 1960s until *Jones* in 2012, Fourth Amendment cases were governed by a "reasonable expectation of privacy test" which rested on an understanding of certain spaces as having expectations of privacy associated with them.[121] Such a space might include the interior of a

114. *Carpenter,* 138 S. Ct. at 2218.

115. *See generally* Susan Freiwald & Stephen Wm. Smith, *The* Carpenter *Chronicle: A Near-Perfect Surveillance*, 132 HARV. L. REV. 205 (2018).

116. *Carpenter,* 138 S. Ct. at 2215.

117. United States v. Knotts, 460 U.S. 276, 285 (1983).

118. *Carpenter*, 138 S. Ct. at 2215.

119. *Id.* at 2211.

120. *Id.* at 2211; *Knotts*, 460 U.S. at 279.

121. Katz v. United States, 389 U.S. 347, 359 (1967).

phone booth,[122] inside a pocket,[123] or the underside of an electronic.[124] What may be observed from outside of private spaces, however, is not protected by the Fourth Amendment, at least under *Katz*, because a reasonable expectation of privacy is not being violated.[125] Thus, an individual's presence inside of a phone booth may be observed (assuming it were made of a transparent material), though the contents of their phone call would not be (assuming the material was also soundproof). Thus, the physical location protection asserted in *Carpenter* is relatively new ground.

When it is true that individuals live in a highly surveilled environment or are targeted by law enforcement for surveillance by surveillance cameras, they also produce a record of data of their physical movements and social interactions. A "near perfect" record of surveillance shows movements, visitors, when a person is in the home, and when they are not (and this does not take into account the networked nature of such data). This is a different picture than that painted by cell phone tower pings, but no less perfect—the amount of data is robust, and it also can reach far back in time, revealing physical location over a long period of time.

Physical location as a privacy of life is a specific discussion in *Carpenter*, not an inferred one.[126] The Court identifies two sources of the privacy interest in the case, this and the revelation of data to a third party. As discussed above, the beeper used in *Knotts* did not reveal a privacy of life because the location of the car, which was tracked on one trip only, was tracked only rudimentarily and the data gathered was such that anyone could have "viewed." This invokes the Court's concern for data which can look: (1) backwards, as well as (2) total, long term or superhuman (surveillance a human could not also do). *Carpenter* also invokes a third principle for when physical location becomes more compelling as a privacy of life: when it touches and concerns private spaces, such as the home.[127]

In the *Jones* case, GPS physical location tracking is also discussed by the Court.[128] In *Jones*, law enforcement had secretly placed a GPS tracking device in a vehicle.[129] While the Court decided the case based on the fact that trespass had occurred in order for the device to be placed in the car, the Court acknowledged that:

> Since GPS monitoring of a vehicle tracks "every movement" a person makes in that vehicle, . . . "[l]onger term GPS monitoring in investigations

122. *Id.*
123. United States v. Kirschenblatt, 16 F.2d 202, 203 (2d Cir. 1926).
124. Arizona v. Hicks, 460 U.S. 276, 324-325 (1983).
125. *See generally Katz*, 389 U.S. 347; *see also Carpenter*, 138 S. Ct. at 2215.
126. *Carpenter*, 138 S. Ct. at 2223.
127. *Id.* at 2214.
128. United States v. Jones, 565 U.S. 400, 402 (2012).
129. *Id.* at 403.

of most offenses impinges on expectations of privacy"—regardless whether those movements were disclosed to the public at large.[130]

The *Jones* decision, and the subsequent *Carpenter* decision confirm that it is the amount and length of data collection related to a physical location (which may even be outside of the home, including those spaces which are substantively "public" such as highways), but which may be related to the privacy interest.[131]

D. Applying *Carpenter*

The Fourth Amendment, most essentially, is about the balance of power between individuals, law enforcement and the state. It asks two questions which are at times considered together, and at times separately. They are: (1) To what extent does an expectation of privacy depend on where a search is conducted, and what a search reveals, and (2) When does a search become unreasonable? The interpretation of these questions provides the ultimate authority on what constitutes a "search." [132] Both the *Carpenter* and *Katz* Supreme Court decisions address these questions.[133] Residences and their surroundings hold particular sway in terms of places where privacy is a legitimate expectation, and the length and breadth of surveillance camera searches allow the consideration of surveillance camera footage under a Fourth Amendment analysis.

Nevertheless, the overall impact of the Court's decision in *Carpenter* is in flux.[134] In the immediate aftermath of the decision, there was a ripple effect across government agencies, with new policies being considered and investigational methodology coming under review.[135] Scholars and legal professionals believed the decision to be groundbreaking, deciding a number of ongoing conflicts at the circuit court level. *Carpenter* was also thought to be the beginning of a new Fourth Amendment jurisprudence. However, interpretation of *Carpenter* continues to evolve, with its application in the lower courts showing various departures.[136] Scholars point to the fact that *Carpenter* does not explicitly develop a "test" for courts to apply as one reason why lower courts differ in their application.[137] In part because of the inadequacy of the differentiation between new and conventional technology, application of *Carpenter*'s principles is

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130. *Carpenter*, 138 S. Ct. at 2215.

131. *Id*. at 2217; *see generally Jones*, 565 U.S. 400.

132. U.S. CONST. amend. IV.

133. *See generally Carpenter*, 138 S. Ct. 2206; Katz v. United States, 389 U.S. 347.

134. Tokson, *supra* note 51, at 1799.

135. Alfred Ng, *Homeland Security Records Show 'Shocking' Use of Phone Data, ACLU Says,* POLITICO (July 18, 2022), https://perma.cc/GR4S-BB3V (showing that DHS considered impacts of *Carpenter*).

136. Tokson, *supra* note 51, at 1830.

137. Some scholars have inferred a test, i.e., the "New Expectation of Privacy Test" derived from the principles stated in *Carpenter*. *See* KERR, *supra* note 8, manuscript at 6-10.

unwieldy for courts.[138]

The First Circuit in particular is divided on deciding whether the differential between old (conventional) and new technology should stand in certain cases,[139] with some arguing that *Carpenter* even goes beyond digital technology to fully replace *Katz*.[140] One example which illustrates this tension well is found in the conflicting decisions *Commonwealth v. Mora* and *United States v. Moore-Bush*.[141] Both cases involved the targeted use of surveillance cameras. In *Moore-Bush*, the First Circuit issued a fractured opinion that held that evidence gathered from a video camera placed outside of a residence was not created in violation of the Fourth Amendment.[142] However, in *Mora*, the Massachusetts Supreme Judicial Court turned to the state constitution and found that constant video surveillance outside of a residence was indeed a search which required a warrant in the state.[143]

In *Mora*, cameras were installed without a search warrant outside of the residences of a man suspected of being a "large scale drug distributor" and his associates.[144] The cameras were installed on public property and no trespassing was involved in their installation; as well, no audio was captured by the cameras and the footage was viewed in real time (not analyzed after the fact algorithmically or otherwise). In the case, the arguments of Mora that his expectation of privacy had been breached were found persuasive because the "pole cameras focused on their homes, and homes are a protection at the heart of the Fourth Amendment."[145] The court consciously took into account socio-economic difference and context when it refused to hinge the decision in the case on the ability of an individual to construct a physical barrier around the home, blocking the camera's view.[146] The court further stated its interpretation of *Carpenter* as remaining "open" in terms of whether such use of surveillance cameras should require a warrant under the Fourth Amendment.[147]

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138. *See* Tokson, *supra* note 51, at 1836-39.

139. *See* United States v. Moore-Bush, 963 F.3d 29, 40 (1st Cir. 2020); *id*. at 51 (Baron, J., concurring).

140. Paul Ohm, *The Many Revolutions of Carpenter*, 32 HARV. J. L. & TECH. 358, 385 (2019).

141. *See Moore-Bush,* 963 F.3d 29; Commonwealth v. Mora, 150 N.E.3d 297 (Mass. 2020).

142. *Moore-Bush,* 963 F.3d at 29-32.

143. *Mora,* 150 N.E.3d 297 at 313.

144. *Id*. at 302.

145. Memorandum and Decision on Defendants' Motions to Suppress Evidence Derived From Pole Cameras, Commonwealth v. Mora, No. 2018-00540 (Mass. Super. Ct. Nov. 4, 2019).

146. *Mora,* 150 N.E.3d at 306.

147. *Id*. at 305.

III. LAW, CAMERAS AND ENTRENCHED SOCIAL AND ECONOMIC INEQUALITY

Social and economic inequality are complex phenomena influenced by the intersection of factors such as geography, identity (in terms of categories like race, gender, sexuality, and religion, among others), and economic status. The ways in which these factors intersect with law and policy are no less complex. For example, it has been found that wage inequality at the bottom of the economic hierarchy is a central driver (and also indicator) of social and economic inequality in the United States. This is no doubt related at least partially to the pro-business judicial and political environment that prioritizes the rights of corporations over the well-being of less wealthy individuals.[148] Like those cases, *Carpenter* is more beneficial to those who do not live in impoverished, over-surveilled neighborhoods. Additional primary indicators of social and economic inequality include residential segregation and housing precarity, racial and immigration-status discrimination, racial gaps in education,[149] occupational sex segregation, gender pay gaps, child hunger and poverty, social mobility, and mass incarceration. All of these factors intersect in the highly surveilled realm of public housing.[150]

A. An Intersectional Approach to Understanding Surveillance

The decision in *Carpenter* was meant to expand rights.[151] The benefit of public housing is meant to expand access to social resources. And yet, in the extraordinary complexity of social and economic inequality, the *Carpenter* decision does not contemplate the realities of everyday life in public housing, and in tandem produces a relationship between the law and the continued entrenchment of social and economic inequality. Although I've illustrated this in certain ways above through the experiences of residents I've interviewed, the story of Kimberly, which I describe below, brings this phenomenon into relief.

Kimberly is a Black, middle-aged single mother of three children. She works hard at a steady job and is the only provider of her children's material and emotional needs. Additionally, having moved to public housing as a single

148. *See generally* Elizabeth Pollman, *The Supreme Court and the Pro-Business Paradox,* 135 HARV. L. REV. 220 (2021); Burwell v. Hobby Lobby Stores, 573 U.S. 682 (2014); Citizens United v. Fed. Election Comm'n, 558 U.S. 310 (2010).

149. For a robust description of how these are related, see generally, Eric Blumenson & Eva S. Nilsen, *How to Construct an Underclass, or How the War on Drugs Became a War on Education*, 6 J. GENDER RACE & JUST. 61 (2002).

150. *See generally* Blokland, *supra* note 39; Hughes, *supra* note 39; Kozubaev et al., *supra* note 39; VIRGINIA EUBANKS, AUTOMATING INEQUALITY: HOW HIGH-TECH TOOLS PROFILE, POLICE, AND PUNISH THE POOR (2018); Reuben Jonathan Miller & Amanda Alexander, *The Price of Carceral Citizenship: Punishment, Surveillance, and Social Welfare Policy in an Age of Carceral Expansion*, 21 MICH. J. RACE & L. 291 (2016); Torin Monahan, *Surveillance as Cultural Practice*, 52 SOC. Q. 495 (2011).

151. *See* Carpenter v. United States, 138 S. Ct. 2206, 2223 (2018).

mother of her oldest son decades ago, she tries to help the young mothers in her building by babysitting and offering advice and she volunteers at a local community center and in programming at her building; she is kind, organized, and generous. I spoke to Kimberly for an afternoon, during which she told me many stories about how surveillance and policing more generally have affected and continue to affect her life as a resident of public housing. In one story, she described how one evening, after a long workday, there was a loud banging on the door. Startled, she glanced at the clock. It was past 1:00 AM. "Open up," men's voices yelled as the banging continued. She described taking a deep breath, tightening her bathrobe, and opening the door.

For some background context, Kimberly's oldest son is now an adult and no longer lived with her; however, years before when he was a young teenager, he'd been caught smoking a (then illegal) joint in her apartment with some other boys. She thought that things would be okay because the matter had been turned over to a community justice program which gave the boys one day of community service each for their transgression. But then the housing authority's notice arrived: She and her children stood to lose their home because an illegal drug, marijuana, had been found there. Kimberly was given a choice: Sign a document allowing unfettered 24-hour access for the housing administration to search her apartment or leave. The condition would apply for as long as she lived in public housing. She had no choice, she gave permission, and now a decade on she wondered if this was what the knock on the door was all about. At any rate, she did not feel she could refuse this knock at the door, whether police, handymen, bounty hunters, or something else. She felt disempowered and without recourse.

This time, at Kimberly's door were neither the police nor public housing administrators. Rather, she found men from a maintenance company contracted by the City of New York to assess the state of her bathroom. She recalled that months ago she had filed a maintenance request to get some tiles fixed and never heard anything back. It wasn't proper, she thought, for these strange men to see her daughters in their night clothes, and to wake them from their beds, but she felt utterly without choice in the matter. She could not insist they leave—she feared they would report her as being an uncooperative tenant and that the threats of eviction would start. Her family was not harmed in this experience, but she felt the experience opened them up to a number of risks.

For Kimberly, the experience of over-policing, privacy violations, impositions, tenuous access to housing, and surveillance are related. She feared this knock was the police, and thought that perhaps they'd gotten the wrong apartment. In her experience, it was an expectation that police could visit apartments in her public housing block late at night. She recalled glancing at her daughter and thinking, if it was the police, would they think her hair dryer was a gun? Would they shoot and claim self-defense?

For Kimberly, vulnerability intersects at her gender, race, class, parental status, housing status, and in living in a hyper-surveilled, over-policed

environment. Kimberly feels that everyone who lives in public housing is a suspect for police, constantly under the gaze of surveillance, where every move is tracked and where anyone can be targeted by police—no matter how "innocent." Once, her door had actually been knocked down by the NYPD. She got wrapped up in a police raid when police swept her development, arresting several residents. She later learned they'd been building a case against people selling crack cocaine in her development for five years, surveilling them and gathering evidence on each person, mapping their relationships, and assigning charges to anyone they could. Kimberly wasn't arrested in the raid, but hers was one of many doors knocked down by "mistake" that day.

Kimberly is daunted by the myriad of risks she must navigate with building managers, maintenance workers, bounty hunters and land developers, the police-associated security cameras, and police themselves. She, like most public housing residents, lives without a safety net, and for all its flaws, she must accept this apartment as a benefit while simultaneously managing the risks it presents, including that it could be taken away.

Affordable housing is an essential part of the social safety net. Yet it can stigmatize and marginalize, making residents more likely to come into contact with the criminal justice system, making them less wealthy, and with fewer personal relationships and community ties than they might otherwise have.[152] Kimberly understands that being a public housing resident means having a unique relationship with police. While women and girls are not as likely to be targeted by police as young men, they still bear increased risk, as well as the psychological toll of living in a hyper-surveilled over policed environment while, at the same time, worrying about risks to personal safety.

Whereas, constitutionally, privacy rights related to one's home should at least start at the threshold of that home, as shown in *Mora*[153] and other cases like it, even outside the home there should be a presumption of privacy. However, Kimberly's apartment is not a private place. She fears invasion of her domestic calm, which comes again and again—the stress is chronic.

There are certainly real dangers for residents within public housing, some developments having higher crime rates than others. However, it is also true that the reputation of public housing as being "high crime" is related to data concerning non-violent, victimless crimes such as littering or loitering. This kind of data can offer a self-fulfilling prophecy. When police and surveillance are more present, more crime is likely to be recorded. The resulting data encourages more policing resources to be allotted which continues to increase available data—and so on and so on. It was this kind of data production that fueled the stop-and-frisk era, and which is happening again with use of electronic

152. Jay Holder, Ivan Calaff, Brett Maricque & Van C. Tran, *Concentrated Incarceration and the Public-Housing-to-Prison Pipeline in New York City Neighborhoods*, 119 PROC. NAT'L ACAD. SCIS. e2123201119, at 1-2 (2022), https://perma.cc/C9WR-9QQV.

153. *See* Commonwealth v. Mora, 150 N.E.3d 297, 306 (Mass. 2020).

surveillance in public housing.

Despite its reputation, the number of families currently waiting to be allotted public housing approaches 200,000 in New York alone—about the same as the official number of families that currently live there. There is a huge amount of pressure on the public housing administration to make sure that the families who receive housing are deserving. Every single tenant in public housing today could be evicted and there would be another family happy and ready to take their place. Unfortunately, this kind of pressure in a real estate market leads to an extraordinary amount of instability. In the private real estate market, landlords must at least deal with the possibility that attracting new tenants will be expensive, but this is not the case in public housing.

Policies which question the deservedness of public housing recipients are quick to punish them. Kimberly could very well have lost her apartment when her young son was caught smoking a small amount of then-illegal marijuana there.[154] Instead, an already weak hold on privacy rights was signed away as a requirement for her to stay.

The law as it is currently interpreted fuels over-policing of public housing. As with recipients of other kinds of welfare, the residents of public housing are controlled through rules that apply specifically to them, and for which there is little recourse. This is one element of what is referred to in the literature as poverty governance,[155] where people who are down on their luck are implicitly blamed for it. Often, this is measured in the differential outcomes and applications of seemingly neutral laws and policies on impoverished populations. All the systems for seeking help enforce moral requirements based on the idea that everyone should be independent and not need help in the first place. Before long, the system that is supposed to be offering a step up and, hopefully, out of poverty is so punitive that it further contributes to a person's inability to work themselves into better opportunities. That is, it prevents the very thing it is supposed to help achieve. It directly takes away chances that residents might otherwise have if they were in an affordable, stable, dependable housing situation which empowered them—the chance of a better job, a better school, a network that might help them with a boost up the ladder. Indirectly, the toll might even be greater: the toxic stress, the lack of sleep, the lead, the mold, the vermin, the partners who are in prison who might otherwise be able to contribute to

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154. Public housing administrators have taken a strict liability interpretation, upheld by the Supreme Court, to situations in which guests or relatives of tenants may be found with drugs on the premises. *See* Dep't of Hous. & Urban Dev. v. Rucker, 535 U.S. 125, 127-28 (2002).

155. Several studies examine the breadth and depth of poverty governance. *See generally*, *e.g.*, Josh Seim, *The Ambulance: Toward a Labor Theory of Poverty Governance*, 82 AM. SOCIO. REV. 451 (2017); Kelley Fong, *Getting Eyes in the Home: Child Protective Services Investigations and State Surveillance of Family Life*, 85 AM. SOCIO. REV. 610 (2020); Neil Gong, *Between Tolerant Containment and Concerted Constraint: Managing Madness for the City and the Privileged Family*, 84 AM. SOCIO. REV. 664 (2019).

household finances.

It has been argued that the high-rise buildings of New York City public housing are the last of their kind in the United States.[156] Other large American cities knocked down their high-rises in favor of sparser developments. This is one way to control public housing residents: If there is simply less of it, more people will be forced into private and often predatory lower-end housing markets. But in New York, other forms of control must be imposed. Especially as neighborhoods change and wealthier people move in, public housing residents are more and more confined to little islands within gentrifying neighborhoods. The phenomenon of gentrification walks hand in hand with the shift to a much more patriarchal, punitive, and visible approach to controlling public housing residents. A division between public and low-income housing and more expensive, private housing maps on to surveillance and policing regimes. Whereas cell phone tower pings (the type of data which *Carpenter* discusses) is something that anyone with a cell phone produces, it is only those living in public and low-income housing who produce surveillance camera data of all residential comings and goings.

Like other residents, Kimberly knows where the surveillance cameras in her building are and often wonders if they work. She asks herself: "Are they doing their job?" Since most cameras produce an unmonitored feed, they are practically useless for preventing petty crime, such as purse stealing, or for guarding against assault, which is what Kimberly is most worried about when it comes to her own personal safety. Rather, the database is retrospective, available by request (and without a warrant) to anyone involved in a criminal or administrative proceeding through a one-page form sent to the public housing administrator.[157]

Images taken with surveillance cameras and mugshots line the community bulletin boards of public housing buildings. They show images of mostly young men of color, announcing they've been seen on the premises and should be reported if seen again. It is drilled into residents that they are constantly being watched and evaluated, with little recourse should they be targeted. The risks are real for those living in areas with concentrated disadvantage, as well as measurable, and higher levels of policing are associated with mass incarceration and entrenchment of social and economic inequality. Surveillance has become the policing method of choice, and though policing methods change, "the same families have experienced the consequences of life in the most disadvantaged environments over multiple generations."[158]

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156. Mark Jacobsen, *The Land That Time and Money Forgot*, N.Y. MAG. (Sept. 9, 2012), https://perma.cc/NS2Z-7MSR.

157. *Request for CCTV Images for Court or Administrative Proceedings*, N.Y. CITY HOUS. AUTH., https://perma.cc/6NW8-QWZ2 (archived Jan. 27, 2023).

158. PATRICK SHARKEY, STUCK IN PLACE: URBAN NEIGHBORHOODS AND THE END OF PROGRESS TOWARD RACIAL EQUALITY 26 (2013).

B. Law & Inequality

Especially since the civil rights era, courts and lawmakers have focused on alleviating social and economic inequality through and within law through explicit civil rights legislation and through conscious lawmaking. However, gains in social equality have been slow-going following failures to enforce civil rights laws. The phenomenon of mass incarceration is central to the maintenance of social and economic inequality, especially along the lines of race.

Mitchell Duneier points out that in American neighborhoods where Black individuals are concentrated, unlike conventional "ghettos" characterized by relative autonomy, there is dense policing, surveillance, and control.[159] New York City public housing is racially segregated, which compounds stark gaps between allocation of resources and outcomes, as well as social isolation.[160] The relationship between public housing, surveillance and policing emerged from a history of segregation, discrimination, social and economic inequality, and stigma.[161] A direct piece of this larger phenomenon, the use of surveillance itself, is intertwined with a broader history of mass incarceration. Spillover effects from over-policing, police violence, and mass incarceration—all well-documented phenomena especially affecting urban communities of color, including the public housing communities of New York—are woven into the fabric of public housing.

Carceral logics are a "punishment mindset that views retribution and control, including by physical constraint (e.g., imprisonment), surveillance (e.g., electronic monitoring via ankle bracelet), or violence, as central components of a public safety system."[162] In public housing, the relationship between space, race and history interact to produce carceral logics, which shape environments and experiences. Public housing developments are residential spaces with stigmatizing histories that drive the carceral orientation of surveillance implemented by governmental authorities like police and public housing administrators. It is this orientation of surveillance cameras and the gathering of personal data which is not contemplated in *Carpenter*.

Since public housing was racially integrated in New York City in the 1960s, it has been associated with concerns about violence and disorder. Already suffering from disinvestment, the War on Drugs brought to public housing additional stigma and increased involvement from social services and police. Popularized originally during these years, stop-and-frisk policing targeted

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159. *See generally* MITCHELL DUNEIER, GHETTO: THE INVENTION OF A PLACE, THE HISTORY OF AN IDEA (2017).

160. Jessica Trounstine, *Segregation and Inequality in Public Goods*, 60 AM. J. POL. SCI. 709, 720 (2016).

161. *See generally* RASHAD SHABAZZ, SPATIALIZING BLACKNESS ARCHITECTURES OF CONFINEMENT AND BLACK MASCULINITY IN CHICAGO (2015); JOE SOSS, RICHARD C. FORDING & SANFORD F. SCHRAM, DISCIPLINING THE POOR: NEOLIBERAL PATERNALISM AND THE PERSISTENT POWER OF RACE (2011).

162. Christy E. Lopez, *Abolish Carceral Logic*, 17 STAN. J. C.R. & C.L. 379, 386 (2022).

disproportionately individuals and communities of color. This method, a result of the racist logic of law enforcement, led to the imprisonment of vast sums of primarily Black and Brown men, though, as mentioned above, the rates of incarceration among public housing residents outpaced non-residents, even controlling for race, income, and neighborhood.[163] Stop-and-frisk policing was a result of carceral logic at the intersection of race and place in New York City, and both fed off of and created additional anxiety about public safety. This often violent "over policing" of New Yorkers of color is popularly credited with bringing down crime rates and increasing public safety—with the cost being mass incarceration of people of color and related devastation to individuals, families, and communities.

Although stop-and-frisk policing has substantively ended, the anxieties about public safety created by it and contributing to it continue to exist. Furthermore, additional gaps in services, such as the opioid epidemic and society-wide dearth of mental healthcare, continues to impact public housing residents due to gaps in social services, disincentives which are built into public housing, and general lack of opportunity. Throughout, public housing has been a magnet for policing focus and experimental strategies, including surveillance, and for other social services.[164] Unfortunately, surveillance proliferates as a method of policing for which those observed have little recourse and, for that reason, is used in an unchecked and unregulated manner.

Social services extended under a punitive infrastructure which marries care and support with punishment, such as the one governing public housing in New York City, are a hallmark of the neoliberal approach to the management of social services.[165] In general, the involvement of police in delivering social welfare services has increasingly been accompanied by the use of electronic surveillance.[166] In part, responses to critiques of police violence have driven some of the investment in such surveillance tactics. In New York in particular, the end of stop-and frisk policing gave rise to an increased investment in and reliance on surveillance.

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163. Jeffrey Fagan, Garth Davies & Adam Carlis, *Race and Selective Enforcement in Public Housing,* 9 J. EMPIRICAL LEGAL STUD. 697, 722-23 (2012); *see generally* Alexis Karteron, *When Stop and Frisk Comes Home: Policing Public and Patrolled Housing*, 69 CASE W. RES. L. REV. 669 (2019).

164. Rivke Jaffe, *Speculative Policing*, 31 PUB. CULTURE 447, 449-51 (2019); Sarah MacQueen & Ben Bradford, *Where Did It All Go Wrong? Implementation Failure—and More—in a Field Experiment of Procedural Justice Policing*, 13 J. EXPERIMENTAL CRIMINOLOGY 321, 340-43 (2016).

165. FORREST, *supra* note 13, at 236; Chris Herring, *Complaint-Oriented Policing: Regulating Homelessness in Public Space*, 84 AM. SOCIO. REV. 769, 771-75 (2019); ISSA KOHLER-HAUSSMAN, MISDEMEANORLAND: CRIMINAL COURTS AND SOCIAL CONTROL IN AN AGE OF BROKEN WINDOWS POLICING 5-9 (2019); Anouk de Koning, '*Handled with Care': Diffuse Policing and the Production of Inequality in Amsterdam*, 18 ETHNOGRAPHY 535, 551-52 (2017).

166. *See, e.g.*, Hughes, *supra* note 39, at 365-68.

The electronic surveillance in public housing is distinctly tactical, not typically used in residential spaces, and heavily marketed to police forces by private companies specializing in defense-oriented tools.[167] It is top-down. That is, the police and public housing authorities conduct the surveillance. Although surveillance is quite common in residential scenarios, such surveillance is more typically conducted by individuals in their own homes using direct-to-consumer residential surveillance products. Consumer-oriented surveillance lends the resident ultimate control over their orientation and data gathered. For example, the "Ring" camera company which makes a popular version of household cameras states that in exigent circumstances, their own policy is to allow police to access data when they believe circumstances demand it;[168] however, when exigent circumstances do not exist they require a "valid and binding legal demand like a search warrant" before granting access.[169] No such requirement exists in public housing, where governmental authorities control surveillance. Perhaps because of widespread familiarity with such consumer-oriented products, the surveillance used within public housing spaces are also sometimes thought of and characterized as benign or neutral, or even empowering, and the expansive use of tactical, defense-oriented surveillance in neighborhoods with reputations for poverty and violence has enjoyed widespread acceptance among policymakers and residents, as well as within the judicial decisions and distinctions such as that made between conventional and new technology in *Carpenter*.[170]

Additional justifications concerning the use of surveillance point to its relative impartiality, its incapacity to do physical violence or to discriminate, and efficiency in crime control applications. However, surveillance has been associated with an intensification of disciplining and social control within already heavily policed communities, where residents:

> [S]ee the police as an "occupying force" or believe that they are constantly under siege by the NYPD. This feeling of being "occupied" by the NYPD is reinforced by the presence of police in the homes and schools of young

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167. ARIEL E. BELEN, NEW YORK CITY JOINT REMEDIAL PROCESS ON NYPD'S STOP, QUESTION, AND FRISK, AND TRESPASS ENFORCEMENT POLICIES: FINAL REPORT AND RECOMMENDATIONS 175 (2018); Elizabeth E. Joh, *The Undue Influence of Surveillance Technology Companies on Policing*, 92 N.Y.U. L. REV. 19, 33 (2017).

168. The company requests a form be filled out. *Emergency Law Enforcement Information Request Form*, RING, https://perma.cc/7LTP-XBPF (archived Jan. 27, 2023). It is a simple two-page form to be used only by "law enforcement agencies" in "emergency circumstances" which the Ring Company defines as "an imminent danger of death or serious physical injury to any person requiring disclosure of information without delay." All other information requests must be made through "normal [legal] channels."

169. Ry Crist, *Ring, Google and the Police: What to Know About Emergency Requests for Video Footage*, CNET (July 26, 2022, 11:37 AM PT), https://perma.cc/EKB6-Y5BS.

170. *See* Carpenter v. United States, 138 S. Ct. 2206, 2220 (2018).

people of color.[171]

In communities ravaged by social dissolution caused by long-standing conditions of inopportunity, over-policing and mass-incarceration, understanding the impacts of an intensified camera surveillance and a disrupted shelter of privacy is particularly salient. So, too, is articulating that the use of data gathered through surveillance cameras by governmental authorities ought to be considered a search under the Fourth Amendment, thus meriting a warrant requirement.

CONCLUSION

In *Carpenter*, the Court's use of the distinction between new and conventional technologies to anchor its doctrinal limitation of the protections it granted maps onto housing and employment precarity, family instability, over-policing, and contributes to mass incarceration factors. In addition to individual "suspects" which police may surveil, left out of the scope of the protections *Carpenter* afforded were the vulnerable populations who live in public housing and impoverished urban neighborhoods. That is, unless their location and movement is being tracked by their cellular phones location as opposed to through the government-installed cameras.

Through analysis of social scientific data gathered in New York City public housing alongside an autopsy of the distinction between new and conventional technology made in the Supreme Court's decision in *Carpenter*, this Article adds to the body of literature on the ways in which law contributes to the causes of social and economic inequality. Interviews of residents and observation of residential factors in public housing reveal the impact of surveillance cameras which disrupt the experience of a shelter of privacy. Illustrating the arbitrariness of the distinction between conventional and new data collection technologies, the Article shows how the application of law, and even laws and policies which intend to confer rights or benefits, are causally related, in complex ways, to entrenched social and economic inequality.

The decision in *Carpenter* failed to seize the opportunity to protect vulnerable citizens subject to targeted or concentrated surveillance, meaning that those such as the residents of public housing discussed here experience lesser protection under the law, with far-reaching potential for consequences.

Public housing residents ought to be entitled to a shelter of privacy as much as everyone who carries a cell phone following the *Carpenter* decision. Data collection about public housing residents and their guests through camera surveillance is viewed as a cost-effective mode of policing them; however, the use of surveillance produces consequences for residents which are detrimental to their prospects of breaking from the lack of opportunities and resources that lead

171. BELEN, *supra* note 167, at 345.

them and their families to public housing. Violence and personal risk within urban environments are of significant personal and governmental concern, and maintaining safe spaces is in the public interest. Nevertheless, the usage of surveillance within public housing presents significant added risks and decreased privacy without increasing the experience of personal safety. These risks are compounded when police, public housing administrators, and other state actors are authorized to access and use the data collected by surveillance cameras without affording residents the guarantees of the Fourth Amendment—again, unless they are being tracked through their cellular telephones. Furthermore, a complex picture of increasing income disparity, sky-rocketing real estate prices and housing instability in many urban areas, and a withering social safety net mean that individuals who rely on public housing have little power or recourse to challenge the coercive nature of a constitutional free-zone of surveillance within their residential space.

APPENDIX I. A NOTE ON METHODOLOGY & SITE CONTEXT

Social science data and methodologies are widely used by legal academics, attorneys, and lawmakers in understanding, creating and interpreting the law.[172] The principal research tool from which the data in this Article draws from is thirty-one interviews conducted with New York City public housing residents, as well as ethnographic observations of surveillance objects in public housing taken over an approximately six-month period. The data is used to explore social processes undertaken by individuals in relation to surveillance structures and to interrogate the use of surveillance in public housing.

Small qualitative social science data sets typically state the characteristics and shortcomings of their data as a matter of intellectual honesty. All data sets have flaws, whether qualitative,[173] quantitative, large or small, and the data set tapped on for this article is no different. Interviewees ranged in age from 18 to 60, with the age of the sample averaging at 39. Twelve of the residents identified as men, and nineteen as women, with no residents interviewed identifying as transgender or non-binary. Approximately 90% of residents interviewed were unmarried (single or divorced). Residents also were dispersed across the

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172. *See*, *e.g.*, MICHEL FOUCAULT, DISCIPLINE & PUNISH: THE BIRTH OF THE PRISON (1975); RONALD DWORKIN, LAW'S EMPIRE (1986); NIKLAS LUHMAN, LAW AS A SOCIAL SYSTEM (1993); FAISAL CHAUDHRY, *The Promise and Paradox of Max Weber's Legal Sociology: The "Categories of Legal Thought" as Types of Meaningful Action and the Persistence of the Problem of Judicial Legislation*, 20 S. CAL. INTERDISC. L.J. 249 (2011); Paulo Barrozo, *The Great Alliance: History, Reason, and Will in Modern Law*, 78 LAW & CONTEMP. PROBS. 235 (2015); Vlad Perju, *Dual Sovereignty in the European Union? A Critique of Habermas's Defense of the Nation-State*, 53 TEX. INT'L L.J. 49 (2018).

173. Qualitative researchers, though, are often very close to their data sources and data, unlike other researchers working with larger data sets, and are especially suited to being able to identify flaws in their data.

boroughs of New York City, with five interviewees from Manhattan, five from Queens, twelve from Brooklyn, and nine from the Bronx. There were no interviews conducted with residents from Staten Island. The residents I interviewed primarily self-identified as Black or African American (twenty-three residents). Additionally, three residents identified as White, two as Hispanic, one as Black and Hispanic, one as biracial, and one as Native American. Residents of traditional[174] public housing in New York City overwhelmingly identify as Black (43.75%) or Hispanic (44.53%).[175] By comparison, 5.2% identify as White, 5.48% as Asian, and 1.03% as other.[176] Over-sampling of Black and White residents in terms of the more general racial identification of residents and under-sampling of Hispanic residents was not intentional. I speculate that a lack of Hispanic/Latinx respondents may be related to the recruitment methods themselves and/or English language barriers. The organizations I worked with for recruitment may work with, or be familiar to, primarily Black residents. Also, the advertisements recruiting participants were in English only, which may have contributed to a lack of Spanish-speaking respondents within the Latinx public housing community.

All interviews were conducted personally and in-person in English, and in a private or semi-private space. Approximately (50%) of the interviewee sample was recruited through the use of online advertisements. The remainder of the sample was recruited through non-profit organization contacts who work with public housing residents in various legal and social capacities and through snowball sampling. Both samples were roughly similar in terms of demographic, geographic, and experiential characteristics. The typical interview lasted approximately one hour, with the longest interviews approaching two hours and the shortest concluding at around forty-five minutes. Most of the interview time was spent discussing particularities of life in public housing and relevant life experiences.

Consent was discussed with all interviewees and a consent form was signed. With explicit permission, the interviews were recorded. If the interviewee did not wish to have the interview recorded, I took notes. Recordings were transcribed and then entered, along with notes, into the qualitative research coding software "dedoose," coded, and analyzed. I first coded information according to themes that I noted throughout the interview process and in which I was interested in writing about. In later analysis of the data, I explored

174. "Traditional" public housing is the subject of this Article. The city also administers other affordable housing programs, such as Section 8 voucher programs which allow voucher holders to access private housing of various types. *See generally* ROSEN, *supra* note 34.

175. Notably, one cannot identify as both Black/White/Asian and Hispanic in this presentation of data. These numbers also do not include off-the-books residents, of which there are estimated to be thousands to millions. *See* RESIDENT DATA BOOK SUMMARY 2021, CITY OF NEW YORK (Jan. 1, 2021), https://perma.cc/9C2W-G42S.

176. *Id.*

additional themes and added new codes as patterns emerged in the data. The quotations featured here are representative of themes found in multiple interviews. Pseudonyms, chosen from a list of "related" names generated through a baby naming website that aggregates name data, have been given to participants in order to protect their privacy.

Ethnographic observations of surveillance objects took place over a six-month period. These observations included making site visits to various public housing communities across the five boroughs of New York City. During this time, I visited approximately thirty public housing developments, including all of the developments from which I interviewed residents. During these visits I noted the presence of surveillance objects, their appearance and possible function. These observations were strictly of surveillance objects visible to public view. These observations did not include "watching" residents or entering more private spaces which were off-limits to me as a non-resident.

At the time the interviews and observations were completed, marijuana was still illegal in New York City, though this changed in March 2021. Many residents discussed marijuana use, and several expressly differentiated between the use of marijuana and the use of narcotic drugs in terms of surveillance and risk. In the findings and discussions, where necessary, I note that marijuana was at that time illegal. Because marijuana is no longer illegal, it may change the impact or interpretation of certain statements in important ways.

At the time this study was conducted, from the years 2016 to 2017, the stop-and-frisk era of policing had recently ended,[177] and the Black Lives Matter movement in response to police violence was gaining traction. The deployment of surveillance filled the gap left by the withdrawal from police forces from patrols and stops, and this deployment was particularly visible in public housing, in stark contrast to surrounding areas. Going into the field, I expected that residents would disfavor the surveillance objects, including lighting and cameras, that were so starkly associated with policing. However, most residents embraced surveillance methods of policing, even while expressing discontent with them. Exploring this dichotomy sheds light on the nature and extent of the social and economic inequality entrenching aspects of the distinction between new and conventional technologies made in *Carpenter* in terms of the realization of benefits and trade-offs implicit to the use of surveillance.

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177. *Stop-and-Frisk Data*, N.Y. C.L. UNION, https://perma.cc/5PS5-T3UT (archived Jan. 27, 2023).