The History, Means, and Effects of Structural Surveillance

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THE HISTORY, MEANS, AND EFFECTS OF STRUCTURAL SURVEILLANCE

Jeffrey L. Vagle*

ABSTRACT
The focus on the technology of surveillance, while important, has had the unfortunate side effect of obscuring the study of surveillance generally, and tends to minimize the exploration of other, less technical means of surveillance that are both ubiquitous and self-reinforcing—what I refer to as structural surveillance—and their effects on marginalized and disenfranchised populations. This Article proposes a theoretical framework for the study of structural surveillance which will act as a foundation for follow-on research in its effects on political participation.

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* University of Pennsylvania Law School. Thanks to Khiara Bridges, Max De La Cal, Mary Anne Franks, Seeta Peña Gangadharan, Woody Hartzog, Sarah Igo, Meg Leta Jones, Karen Levy, Jennifer Lynch, Dorothy Roberts, David Robinson, Stuart Shapiro, and Christopher Yoo for comments on earlier drafts.
I do really take it for an indisputable truth, and a truth that is one of the cornerstones of political science—the more strictly we are watched, the better we behave.

Jeremy Bentham

Activities which seem benevolent or helpful to wage earners, persons on relief, or those who are disadvantaged in the struggle for existence may be regarded as ‘subversive’ by those whose property interests might be burdened thereby. . . Some of our soundest constitutional doctrines were once punished as subversive.

Justice Robert Jackson

I. Introduction and Framework

There is nothing particularly new about surveillance. It is a concept that is as old as humanity itself. As our earliest societies discovered, without the ability to make disobedience of social norms difficult or costly through some means of social control, communities of any size would be impossible to maintain. But how do we discern between surveillance necessary for healthy, inclusive, and successful communities, and those means that exercise social control to an extent that ultimately endangers community viability? There does not appear to be a bright line that clearly separates these regimes.

To blandly refer to surveillance as the pursuit of societal stability through the encouragement of adherence to social norms, however, does not give full voice to history’s violent efforts to impose or resist these means of social

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1 The manuscripts of Jeremy Bentham in the Library of the University College London, Box cliib, 331.
3 See note 66, infra, and accompanying text.
control.⁴ Political, economic, religious, and other social institutions all rise and fall through the assertion of social control within a localized universe of competing and cooperating social units, and through these periods of instability and struggle, social institutions emerge.⁵ These social units then sustain themselves by minimizing instability through means selected for their ordinariness and relative invisibility.⁶ Social units beyond the scale of smaller groups, such as families or isolated autonomous communities, require powerful central administrations and armies of personnel to raise revenue, ensure public safety, provide for national security, and the multitude of other functions critical to the life of the modern state.⁷ In the shift to modernity and the information

⁶ “Faced with the problem of securing compliance from a mobile, anonymous public, any regime must do its best to develop techniques to replicate the functions of gossip and face-to-face acquaintance in small-scale social settings.” Rule, Social Control and Modern Social Structure 23.
⁷ “The administrative system of the capitalist state, and of modern states in general, has to be interpreted in terms of the coordinated control over delimited territorial arenas which it achieves....no pre-modern states were able even to approach the level of administrative coordination developed in the nation-state.” Anthony Giddens, The Consequences of Modernity 57 (1990). See also Weber, Economy and Society 48.
society, these institutions developed new regimes of surveillance and information management using the technological advances that emerged in rapid succession starting in the late 19th century.⁸

Too often, however, we rely solely on the use of these of advances in technology to identify “good” surveillance from “bad” surveillance. An explosion of innovation has led us to frame the surveillance debate in terms of intrusions specific to a particular use of technology, from the early 20th century (“Can they really listen in on my telephone conversations?”) to the late 20th century (“Can they really read my email?”) and beyond (“Can they really build a permanent database of my location data?”).⁹ But as new technologies inevitably become established as integral parts of our daily lives, our comfort with—or grudging acceptance of—advanced surveillance methods tends to stabilize, and the bulk of the surveillance debate turns to the realm of the newly possible.

This expansion was not without its early critics. Weber himself described the “order...now bound to the technical and economic conditions of machine production which today determine the lives of all the individuals who are born into this mechanism” as an “irresistible force” and an “iron cage.” Max Weber, The Protestant Ethic and the Spirit of Capitalism 123 (1992).

⁸ As Beriger points out, “even the word revolution seems barely adequate to describe the development, within the span of a single lifetime, of virtually all of the basic communications technologies still in use a century later: photography and telegraphy (1830s), rotary power printing (1840s), the typewriter (1860s), trans-atlantic cable (1866), telephone (1876), motion pictures (1894), wireless telegraphy (1895), magnetic tape recording (1899), radio (1906), and television (1923).” Beriger, The Control Revolution at 7.

The exploration and analysis of potential surveillance abuses of new technologies is, of course, an important discussion that needs to take place. But when we put too much focus on the future, we tend to lose sight of the important surveillance issues of the past and present, a phenomenon prevalent in popular media.¹⁰ This problem manifests itself in two related ways. First, it tends to mask surveillance means that, over time, fade into the background noise of life to the point that they become essentially invisible to all but the most careful observers. These means, which I collectively refer to in this Article as structural surveillance, are technology agnostic, tend to remove the traditional observer from the surveillance equation through an autonomic presence, and are remarkable only in their ordinariness.¹¹ Second, due in large part to their meta-invisibility, these means often provide an excellent blunt instrument of social control, and are therefore prone to abuse.¹² This misuse, of course, can increase the visibility of these means, so they are often reserved for use within

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¹¹ See Section II.B, infra.

¹² See Section III, infra.
marginalized or otherwise disenfranchised segments of the population, who are less empowered to resist them.\textsuperscript{13}

One example of this phenomenon (which I will explore further elsewhere in this Article) can be found in the history of the Fourth Amendment to the U.S. Constitution.\textsuperscript{14} The fundamental precept of this text—forbidding all types of unreasonable searches and seizures—is deceptively simple in its ambiguity, yet the amendment clearly forbids the use of general warrants.\textsuperscript{15} The promiscuous government searches under the general warrant originated under early English law, and were well established as structural surveillance by the time members of Parliament began to protest their use in the 17\textsuperscript{th} century.\textsuperscript{16} The source of the MPs' consternation arose out of the Crown's use of the general warrant against "gentlemen and dissenting Protestants" (two politically powerful demographics), when their only appropriate use (according to the MPs) was on "vagrants and Catholics."\textsuperscript{17}

The American colonists of the 17\textsuperscript{th} and early 18\textsuperscript{th} centuries did not immediately inherit this distaste for the general warrant and other structural

\textsuperscript{13} See Section IV, infra.
\textsuperscript{14} Amendment IV, "The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized." U.S. Const. amend. IV.
\textsuperscript{15} See Akhil Reed Amar, Fourth Amendment First Principles, 107 Harv. L. Rev. 757, 758 (1994).
\textsuperscript{16} See Cuddihy at 134-140.
\textsuperscript{17} See Cuddihy at 22-23.
surveillance, mainly because the articulate elites of these regions were the beneficiaries of these programs, through the collection of revenue and the suppression of insurrectionists in the colonial North, to slave patrols of the colonial South.\textsuperscript{18} It was not until England transformed in the eyes of elite colonists from Mother Country to Foreign Presence that American political leaders turned fully against the unreasonable searches and seizures of the Crown.\textsuperscript{19} In fact, revolutionary America presented something of a paradox with respect to structural surveillance. On the one hand, by the late 18\textsuperscript{th} century, the existing constitutions of a majority of the original thirteen colonies contained some sort of provisions against unreasonable search and seizure, with opposition to such searches fading in intensity as one traveled further south.\textsuperscript{20} On the other hand, the revolutionary governments saw fit to ignore these prohibitions when this structural surveillance presented expedient means to suppress dissent, control trade, crush slave rebellion, generated revenue, or control undesirable populations.\textsuperscript{21} Resistance to general warrants as structural surveillance was finally articulated when antifederalists, recognizing the negative

\textsuperscript{18} See Cuddihy at 371-75.
\textsuperscript{19} One of the earliest—and most forceful—arguments against British general warrants and writs of assistance arose out of Paxton’s Case (1761), where Massachusetts lawyer James Otis denounced the practice as “instruments of slavery” and reflected an absolutism that “cost one King of England his head and another his throne.” James Otis, Against Writs of Assistance, Address Before the Superior Court, February Term (1771), reprinted in 3 The Massachusetts Spy Or, Thomas’s Boston Journal, Apr. 1, 1773.
\textsuperscript{20} Cuddihy at 603-13.
\textsuperscript{21} Cuddihy at 613-34.
implications of an overly powerful central government, resulted in the drafting and ratification of a Bill of Rights.  

So what drives political or social tolerance—or intolerance—for structural surveillance? It is not as if the means of structural surveillance always go unchallenged. While researching the history of claims challenging U.S. Government surveillance programs, I had begun work examining the near insurmountable obstacle of Article III standing facing these claimants. In nearly every one of these cases, courts held that plaintiffs had failed to show injury sufficient to bring a claim in U.S. Federal Courts. For a plaintiff to establish Article III standing, current jurisprudence requires the plaintiff to be able to show injury that is “concrete, particularized, and actual or imminent; fairly traceable to the challenged action; and redressable by a favorable ruling.” Under this doctrine, an injury is not sufficient if it is based on a “speculative chain of possibilities,” a difficult evidentiary obstacle to overcome if you are

24 See Laird, 408 U.S. at 13-14 (the Court holding that “[a]llegations of a subjective ‘chill’ [due to knowledge of surveillance program] are not an adequate substitute for a claim of specific present objective harm or a threat of specific future harm.”)
challenging the constitutionality of a secret program.\textsuperscript{26} Even a showing of a high probability of injury is not enough to meet this requirement.\textsuperscript{27} The Supreme Court has even pointed out that, even if a denial of standing would mean that the constitutionality of a government program could never be foreseeably or meaningfully challenged, that fact alone is not enough to find standing.\textsuperscript{28} A high bar indeed.

My initial research thus began as an exploration of the question of injury in surveillance cases, testing current jurisprudence against the claims of surveillance plaintiffs.\textsuperscript{29} While reading these cases, it began to occur to me that the vast majority of the challenges were to programs that were either highly technological in nature or otherwise exotic or sui generis. But the concept of surveillance is neither bound to a particular technology nor is it peculiar to a time or place—surveillance is as common as humanity itself. And while advances in technology can change the nature of surveillance, why does scholarship and case law tend to focus almost exclusively on recent programs that rely on sophisticated telecommunications networks and advanced computing technologies? Perhaps we are focusing on the wrong subjects when we ponder surveillance harms. Our attention is naturally drawn toward the new

\textsuperscript{26} Amnesty cite
\textsuperscript{27} Whitmore v. Arkansas
\textsuperscript{28} Valley Forge Christian College ("the assumption that if respondents have no standing to sue, no one would have standing, is not a reason to find standing.")
\textsuperscript{29} ACLU v. Clapper; Amnesty v. Clapper.
and unique, often to the exclusion of the old and common. So what do we call surveillance that no longer meets these criteria?

This research—beginning with this Article—is an attempt to closely examine the means of surveillance that have been outpaced by technology, yet still remain, if only as nearly-invisible background noise, and to quantify the individual and societal harms that stem from these common methods and programs. This surveillance, which I describe herein as structural surveillance, includes those measures that have, through legislation, codification, or cultural habit, have developed or calcified into systems that fit neatly within our accepted societal institutions, and have become so commonplace to become virtually indistinguishable from the backgrounds of our everyday lives.

My research can be divided into two components. First, through this Article, I will lay out exactly what I mean by structural surveillance, describing its history and means, and beginning an exploration of its effects. From there, my research will turn toward an empirical study of these effects, the results of which will be described in future Articles.

II. The Concept and History of Structural Surveillance

A. Structural Surveillance and Structural Violence
In his 1969 paper *Violence, Peace, and Peace Research,* Johan Galtung took on the difficult task of articulating a useful definition of violence. As a basis, Galtung started with the concept that “violence is present when human beings are being influenced so that their actual somatic and mental realizations are below their potential realizations.” Violence, then, “is that which increases the distance between the potential and the actual, and that which impedes the decrease of this distance.” Galtung’s definition operates within the context of influence relations, where the definition assumes an influencer (the subject), an influence (the object), and the mode of influence (the action). But how do we reason about violence when there is no direct subject in the standard relational triangle? Does it make sense to consider the case where someone is the object of violent action that is not directly attributable to a specific actor? Galtung reasoned that such a scenario must be accounted for, since there are clear instances of this type of violence that manifest as unequal power and unequal life opportunities.

The term Galtung coined to describe this category is *structural violence*—violence built into societal structure that is just as meaningful as any other category of violence, yet becomes less visible due to its missing subject-action-

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31 Id.
32 Id.
33 Id at 169.
34 Id at 171. Galtung points to instances of institutional racism as examples of this subjectless violence, citing Stokely Carmichael’s work on
object relationship. Structural violence becomes associated with a certain stability, and its deceptively “tranquil waters” attract less notice than the overt action (and actors) of personal violence. Within a stable society, personal violence—a stabbing, a shooting, a riot—stands out as an aberration, a deviation from the static social order, whereas structural violence is the order. Structural violence may indeed be understood and accepted by some as simply the price of stability, even if the costs are borne unequally across social divisions.

Giddens’s work provides a link between state violence (in the sense Galtung was describing) and state surveillance under a general theory of the sources of power. Giddens describes a society’s sources of power (and, ultimately, violence) using a container metaphor, where power is generated and stored through the concentration of resources, and is strongly influenced by the technologies available to that society. This power creation and “containment” is accomplished via surveillance in two senses. First, surveillance can enable the collection and, more importantly, storage of “coded information” relevant to the administration of the population in question. The introduction of digital communication has, of course, vastly expanded the possibilities for the collection of coded information, and has opened up new universes in the storage

35 Id. See also Slavoj Vivik, Violence.
36 Id at 173-74.
37 Id.
38 See Section XX, infra.
39 Anthony Giddens, Nation-State at 12-14.
40 Giddens at 13.
41 Id. at 14.
and analysis of that information. Second, surveillance is employed in the “classical” sense, where the activities of one group are directly supervised by another. These methods can be useful within small societies without the aid of any particular organizational structure, but can only be scaled to larger societies, e.g., the modern nation-state, through the integration of advanced bureaucracies and network infrastructure, factors which are also greatly enhanced through the deployment of advanced technologies.

The piece of Giddens’s work that is most relevant to this research is his linking of surveillance to an organization’s control over the “timing and spacing” of human activities. Surveillance—specifically, the coding of information describing these activities—is critical to the state’s power/violence monopoly, because it provides a framework for effectively scaling direct supervision to nation-state sizes. This expansion of surveillance capabilities, as tightly integrated into our modern concept of governance, is thus both the vector

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42 A topical example of this can be found in the recent (and secretive) construction of the NSA’s massive data center near Bluffdale, Utah. See James Bamford, The NSA is Building the Country’s Biggest Spy Center (Watch What You Say), Wired, Mar. 15, 2012. Details about the facility are, of course, speculative, but experts have estimated the data storage capacities of the facility to be anywhere from 12 exabytes to 5 zettabytes. Kashmir Hill, Blueprints Of NSA’s Ridiculously Expensive Data Center In Utah Suggest It Holds Less Info Than Thought, Forbes, Jul. 24, 2013. For reference, 1 zettabyte = 1,000 exabytes = 1 billion petabytes = 1 trillion terabytes.

43 Giddens at 14.

44 See Eugene Litwak, Technological Innovation and Theoretical Functions of Primary Groups and Bureaucratic Structures, 73 Am. J. of Sociology 468 (1968).


46 Id.
through which the modern large-scale bureaucracy is made possible, as well as the institutional means through which the state builds and contains power.\textsuperscript{47}

B. The Characteristics of Structural Surveillance

Based in part on Gultung’s theory of structural violence, and Giddens’s links between power/violence and surveillance, I will consider the proposed concept of structural surveillance. As discussed supra, links between the state, violence, and surveillance are well established in the literature, and provide a foundation upon which to build this conceptual framework. My goal with this Article is twofold. First, I will develop a theoretical history and language through which one can reason about the means and effects of social control regimes that have become calcified within institutional structures to the point of normalcy. Second, I intend to use this theoretical framework to develop empirical explorations of these systems and their effects on the objects of surveillance.

I define structural surveillance through two core characteristics—self-reinforcement and ubiquity. By self-reinforcing, I mean those surveillance systems that have, through legislation, codification, or cultural habit, developed (or calcified) into systems where there is no easily identifiable watcher, and which seem to operate on their own, outside of normal means of control. By ubiquity, I do not necessarily mean that the system is uniform across all communities or populations, but instead refer to systems that have become commonplace to the

\textsuperscript{47} Id. at 47-49.
extent that those outside its gaze either endorse or ignore its existence, and those under its gaze eventually accept it as woven into the fabric of reality. Together, these two characteristics create surveillance systems that appear to violate the usual subject-action-object power relationship, and fade into the background of our daily lives.

Perhaps the best way to illustrate the concept of structural surveillance is through an example. The concept of city planning in America grew out of the demands of rapidly increasing populations, and the associated sudden need for transportation, commerce, public health, and public recreation facilities. Following an extended period of instability and unrest in American cities in the mid-19th century, Frederick Law Olmsted, a landscape architect and journalist, proposed the creation of parks and other public spaces within cities to act as “social safety-valves,” where people from all socioeconomic classes could meet not only to enjoy common recreational pursuits and escape the stresses of the burgeoning city, but also to engage in civic society with minimal institutional control. The idea of public spaces has long had a place in the urban setting, but the concept experienced a rebirth in the Victorian city. Haussmann’s Paris provides another example of this philosophy, where public urban innovations such as the boulevard expanded access to all of a city’s inhabitants, and

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49 See Mike Davis, City of Quartz (1990).
50 See Peter Goheen, Public Space and the Geography of the Modern City, 22 Progress in Human Geography 479 (1998).
democratized the public sphere in ways that existing institutions had little control over, a fact that made the governing class somewhat uncomfortable.\textsuperscript{51} The public sphere had turned from an exclusive space to an inclusive space, both figuratively and literally.\textsuperscript{52}

It was not long before concerns over public safety and public health began to temper enthusiasm for public spaces.\textsuperscript{53} These concerns, both real and imagined, found fertile ground in the 19\textsuperscript{th} century theories regarding the working classes and the poor generally.\textsuperscript{54} These “dangerous classes” were described as a persistent threat to the established social order, and attempts to alleviate poverty or ignorance were seen by social and economic philosophers as wasted efforts, as it was well understood that the lower classes were victims of their own defects, and accommodations such as increased access to public spaces would only serve to “raise the worthless above the worthy.”\textsuperscript{55}

It was, of course, true that controlling crime and otherwise maintaining order in public spaces posed a nontrivial challenge for 19\textsuperscript{th} century governments, due in part to the fact that the concept of modern policing was only just

\textsuperscript{51} See David Harvey, The Political Economy of Public Space.
\textsuperscript{53} See Henry Mayhew, London Labour and the London Poor: a cyclopaedia of the condition and earnings of those that will work, those that cannot work, and those that will not work (1851).
\textsuperscript{54} See Malthus quote in Lydia Morris, Dangerous Classes at 10-11.
\textsuperscript{55} Morris at 12.
beginning to take shape. The notion that a professionalized administrative body could be established not only to react to crimes already committed, but could proactively enforce social control on the streets to ensure “the general organization of city life” was something of a revolution. The introduction of regular police patrols in 19th century cities, along with the creation of related political and administrative mechanisms at all levels, reestablished social order and initiated the concept of modern policing.

This concept—a revolutionary and not uncontroversial innovation at the time—has become a permanent part of the fabric of modern governance, and with it, the Olmstedian concept of the minimally controlled public space has become increasingly enmeshed in structural surveillance. City squares and downtown streets now offer few, if any, spaces not visible to the gaze of closed circuit television (CCTV) cameras. Fear of crime, or more recently, terrorist activity, has driven an increased police presence which includes such recent innovations as portable watchtowers, arrays of microphones to triangulate the source of gunfire, electronic communications collection vans, and a general militarization of tactics, weaponry, and other equipment, which has all become

56 Cite notes from Victorian policing folder
57 Ogborn 507
surprisingly commonplace in the relatively short time since the tragic events of September 11, 2001.\textsuperscript{60}

Thus, in the space of about 150 years, the public space has experienced a gradual introduction to surveillance means of widely differing levels of technological sophistication, with a rather sudden increase in methods in the years since 9/11. What we have witnessed in these changes is the establishment of structural surveillance in a particular public sphere. When these means—from the first establishment of regular police patrols to the installation of automated CCTV cameras—were first introduced, they were often noteworthy, if not controversial.\textsuperscript{61} But they were eventually accepted as unremarkable fixtures of everyday life (ubiquity), and were established through legislative or regulatory processes that effectively removed the easily identifiable watcher from the surveillance equation (self-reinforcement).\textsuperscript{62} As I will explore later in this Article, these means of structural surveillance, in our public spaces and

\textsuperscript{60} For a general discussion of this topic, see The New Politics of Surveillance and Visibility, Haggerty and Ericson, eds. (2006); Radley Balko, Rise of the Warrior Cop (2013); Daryl Meeks, Police Militarization in Urban Areas: The Obscure War Against the Underclass, 35 The Black Scholar 33 (2006); Samuel Nunn, Police Technology in Cities: Changes and Challenges, 23 Technology in Society 11 (2001); Fassin, Enforcing Order: An Ethnography of Urban Policing (2013).


\textsuperscript{62} See Section II.B, supra.
elsewhere, often place a substantial burden on the “dangerous classes” while the benefits tend to flow to the upper and governing classes.63

C. Structural Surveillance as a Natural Result of the Information Society

Of all the innovations that emerged from the industrial revolution, the advent of modern bureaucracy may well be the most successful, both in terms of longevity and scope.64 A defining characteristic of bureaucracy, and in turn, a strong inclination of modernity, is surveillance.65 Surveillance itself is, of course, nothing new, and it is important to separate the concept of surveillance from any particular era or technological phenomenon.66 In fact, social control and the

63 See Section XX, infra.
65 See Anthony Giddens, The Nation-State and Violence (1985); Ulrich Beck, Risk Society and the Provident State, in Risk, Environment and Modernity: Toward a New Ecology, Scott Lash et al., eds. (1998). Beck describes the need for increased surveillance as a direct result of industrial society, when the “social, political, ecological, and individual risks created by the momentum of innovation increasingly elude the control and protective institutions of industrial society.” Id. at 27. When these new or expanded risks outstrip the existing capacities of analysis, policy, or regulation to understand or cope with the issue, pressure is created to develop new methods of surveillance and control.
66 The need for any society to regulate itself according to a set of values and principles is achieved through some form of social control. See Morris Janowitz, Sociological Theory and Social Control, 81 Am. Journ. of Sociology 82 (1975). Societies and civilizations have long used surveillance as a means of effecting social control through relatively simple means, including tax collection, census, and the apprehension of criminals. Higgs argues that the early origins of what
associated means of surveillance have advanced and adapted—often quite radically—over the millennia, in response to cultural and technological changes.\textsuperscript{67} Evolutions in social control become part of a feedback loop with the very structures of the society from which they emerge, a phenomenon I will return to in later sections of this Article.\textsuperscript{68} As communities became societies, as artisans turned to enterprises, as religious groupings emerged and morphed, and as markets emerged and expanded, values and principles evolved, and along with them the means—voluntary and coercive—of enforcement.\textsuperscript{69}

In the period from the mid-18\textsuperscript{th} through mid-19\textsuperscript{th} centuries, as industrialization in western nations began to create increasingly complex systems of interdependencies between manufacturing, capital, energy production, labor, and markets, new means of communication and control were

\textsuperscript{67} See Beniger, Control Revolution, supra at 61-64. Sociobiologists argue that the proto-organization and technology of self-replicating proteins and the molecular ordering of DNA initiated this process. See, generally, Richard Dawkins, The Selfish Gene, 2d. ed. (1986).

\textsuperscript{68} For example, rural life in pre-industrial England was made up of three classes: landowners, farmers, and laborers. Bertrand Russell, Freedom versus Organization: 1814-1914 51 (1934). Industrial life required only two classes—owners and laborers. Id. at 67. While industrialization flattened somewhat the complex class relationships in England and elsewhere, social norms and values increased in complexity, attracting a new generation of political, economic, and social theorists to the tasks of making sense of changes to social order and reestablishing control over existing social structures. See, e.g., Thomas Malthus, An Essay on the Principle of Population (1798); Jeremy Bentham, A Fragment on Government (1776); James Mill, Elements of Political Economy (1821); David Ricardo, On the Principles of Political Economy and Taxation (1817).

required to take full advantage of new economies of scale and realize productivity levels unheard of under earlier forms of management and organization.  

Technological innovations in manufacturing and transportation brought with them new paradigms in social and economic thought and behavior, bringing an end to thousands of years of predominantly agricultural society, and therefore displacing the traditional means of social control without providing an immediately obvious replacement. The resulting dramatic increases in transactional speeds inevitably outpaced the existing modes of social control and interaction, and began to threaten the viability of incumbent institutions and structures.

I should note here what I mean when I use the term *control* within the scope of this Article. Here, I refer to control in its most general sense—to influence or direct behavior toward some predetermined goal. This definition is informed by the sociology literature, which examines the social relationship, the organization, voluntary or compulsory social participation, and consensual and imposed order. Hence, control, in this sense, is primarily concerned with the two elements of influence and purpose, and control theory—in both the

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70 See Beniger, Control Revolution, supra.
71 Id. at 169-172.
72 Beniger characterizes this phenomenon as a “crisis of control,” a period in which a society’s organizational, information processing, and communication capabilities are outpaced by manufacturing and transportation technologies, resulting in a systemic loss of political and economic control which threatens existing social and governmental institutions and structures. See Beniger, Control Revolution, supra at 7-9.
73 See, e.g., Weber, Economy and Society supra., 46-53.
sociological and mathematical senses—require facilities for the communication
and processing of information in order to manage behavior through feedback.\textsuperscript{74} I
will introduce refinements to this definition in later sections, but for the time
being, it will suffice to say that control here refers to any influence guided by
purpose, however small.

The 19\textsuperscript{th} century crisis of control was not limited to industrial and
commercial spheres.\textsuperscript{75} Societal and governmental institutions were also
experiencing their own growing pains due also to the transformative effects of
industrialization.\textsuperscript{76} The levels of communication and information processing
necessary for control in preindustrial institutions could be generally be obtained
through in-person interactions, and without the need for advanced technologies
or extensive communications infrastructures.\textsuperscript{77} These methods did not work at
the scales driven by industrialization, and institutions at most levels were
seeking a means to restore the levels of control they once enjoyed.\textsuperscript{78}

\begin{footnotesize}
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\textsuperscript{74} See Richard Bellman, Control Theory, 211 Scientific Am. 186 (1964); J.W.
Forrester, Industrial Dynamics: A Major Breakthrough for Decision Makers, 36
Harvard Bus. Rev. 37 (1958); William T. Powers, Behavior: The control of
perception (1973).
\textsuperscript{75} Franklin F. Mendels, Proto-Industrialization: The First Phase of the
\textsuperscript{76} See Giddens, The Nation-State and Violence. Giddens argues that the crisis of
control brought about by industrialization required a dramatic change in the way
the state viewed its citizens, as “no pre-modern states were able even to
approach the level of administrative co-ordination developed in the [modern]
\textsuperscript{77} See Beck, supra at 28.
\textsuperscript{78} As Higgs points out, using the census as an example, “The older, parochial
system was seen as inadequate” in its protection of property rights during
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Correlative to the search by industrial, commercial, and governmental institutions for restored levels of control came the (re)emergence of the modern bureaucracy. The increasing amounts of information deemed necessary to efficiently operate the complex systems newly created by the modern state and commercial enterprise required an overhaul and expansion of the age-old concept of centralized administration, and the importance of bureaucracy as an essential tool in dealing with the modern crisis of control is difficult to overstate. Further, even with the benefit of an organized and centralized bureaucracy, a society is ultimately hamstrung in its ability to build and contain power by the limits of the technology available to that society. The limitations on an organization's ability to gather and analyze Giddens's coded information is

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79 Acknowledging the existence of bureaucracies and similarly organized administrative bodies prior to industrialization, Weber identifies the modern bureaucracy as a significant point of departure from these institutional types. Weber, Economy and Society, supra at 217.

80 Reinhard Bendix notes that any study of modern bureaucracy must acknowledge both the challenges to and protections of individual freedoms: "[T]he modern critics of the 'service state' tend to forget that governmental 'interference' has increased individual freedom by promoting social security, just as the earlier governmental aid in the development of corporate enterprise and western expansion increased the freedom of the business man." Bendix, Bureaucracy and the Problem of Power, 5 Public Administration Review 194, 195 (1945).

81 Beniger at 9.
directly dependent upon its ability to communicate, store, and process that information, a characteristic described by Weber’s concept of rationalization.\textsuperscript{82}

The core idea behind rationalization is the proposition that a society’s creation and containment of power through control can increase either through increasing the society’s capability to process coded information, or by limiting the amount of that information to be processed.\textsuperscript{83} The modern state has modified this concept by maximizing both precepts: increasing information processing capability \textit{in order to} effectively decrease the amount of information that is processed.\textsuperscript{84} The resulting organizations, processes, and technologies must therefore become part of the state’s evolved infrastructure, much as cooperative organ systems became integral to complex organisms. This description should not convey any sort of malign intent on the part of the state or its institutions—it is meant to be descriptive rather than normative, and merely illustrates the functions necessary for an administrative body of scale to operate and survive.\textsuperscript{85}

\textsuperscript{82} Id. at 15-16.
\textsuperscript{83} Id.
\textsuperscript{84} Cite list of refs in notes on big data analytics
\textsuperscript{85} “[L]et all these enterprises be managed in bureaucratic ‘order,’ introduce state-supervised syndicates, and let the rest of the economy be regulated on the guild principle with innumerable certificates of competency, academic and otherwise; let the citizenry in general be of the rentier paisible type—then, under a militarist-dynastic regime, the condition of the late Roman Empire will have been reached, albeit on a technologically more elaborate basis. “Max Weber, GAzSW at 277, English translation quoted in Economy and Society at LVIII-LIX.
In fact, the state and similar social structures have emerged out of a natural desire to protect and promote societal institutions and their members.\textsuperscript{86} The role of surveillance in these structures is to realize the goals of these structures in practice, taking such early forms of censuses and revenue collection in order to support social order through public safety, public health, and providing for the general welfare of its citizens or members.\textsuperscript{87} The ambiguity surrounding surveillance—especially structural surveillance—is in its dual nature: it acts both as means for a state to enforce rights and privileges granted to its citizens, while at the same time, providing the capabilities for states to use that same infrastructure to curtail those rights.\textsuperscript{88} This ambiguity over surveillance as a means of social control, and its effects as an integral part of our governmental systems, is what this research will explore.

III. The Means of Structural Surveillance

The explicit or implicit establishment of structural surveillance programs can in almost every instance be traced to benign social control mechanisms initiated for the benefit of (most of) the community. Challenges arising from growing populations, technological advances, the spread of disease, and external and internal threats to general order act as forcing functions on societies to

\textsuperscript{86} See Weber, Economy and Society at 217-241.
\textsuperscript{87} See Mary Ann Glendon, Rights Talk: The Impoverishment of Political Discussion (1991).
\textsuperscript{88} Nicholas Abercrombie, et al.
establish means of meeting these challenges, or at least attenuating unmanageable fluctuations. The modern state arose in large part as an organized response to these challenges, building within itself the administrative and political power necessary to both achieve legitimacy and establish and enforce order within the community.  

The late- and post-modern periods are marked by significant socioeconomic and political changes, beginning with western reconstruction efforts following World War II. This seismic shifting brought with it a growing sense of insecurity and fear of risk, a defining characteristic that Beck dubbed the “risk society.” The pathology of this outlook can be found in its self-feeding concept of risk, in which the “social, political, ecological and individual risks created by the momentum of innovation increasingly elude the control and protective institutions of industrial society.” Thus, unstoppable progress has its own “systematically produced hazards” that will forever be beyond the current capabilities of protecting from these hazards. This outlook, along with the modernist quest for scientific and industrial innovation, combined to form a social control system that is forever chasing its own tail.

89 Max Weber, Economy and Society, 31-35.
92 Id.
93 Id.
The examples that follow are not meant to be an exhaustive list of all forms of structural surveillance used today. Rather, I present a list of items to best highlight the range of structural surveillance means addressing an array of public concerns. An ongoing portion of this research will continue to catalog surveillance programs and methods to better understand the effects of these programs.94

A. Public Safety

Among the earliest societal needs to be addressed by the revolutionary strains of social and economic thought that emerged alongside Western industrialization in the 18th and 19th centuries was that of public safety.95 As populations increasingly migrated to cities in search of work, the resources of metropolitan areas immediately began to feel the strain of such rapid growth.96 Existing social control mechanisms were no longer effective at the scales required by burgeoning cities, and there was a deep concern among the upper classes with political disorder, criminality, and threats to the existing social

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94 See Section V infra.
95 See Policing the Victorian Community, Policing the Victorian Community (2015); C L Brace, The Dangerous Classes of New York: And Twenty Years' Work Among Them (1880).
order. These concerns were often conflated into a general fear and dislike of the “dangerous classes” as the primary source of social disruption.

Social reformers such as Bentham identified criminality and similar anti-social behaviors as symptoms—addressing these issues would not solve the ultimate problem of regulating the growing instability of industrialized city life. Rather, social order would only be restored by ensuring that the working classes were encouraged to adhere closely to the preexisting social norms. This encouragement was described in terms such as “inspection,” “regulation,” and the “general prevention” of undesired conduct. Short of calling in the military, however, states did not have a secure monopoly on the means of violence, which made policing this conduct messy and difficult.

Robert Peel became England’s Home Secretary in 1822, and brought with him experience in policing, having set up the Dublin “Peace Preservation Force”

97 Id.
98 See Joe Soss, Richard C Fording & Sanford F Schram, Disciplining the poor: Neoliberal paternalism and the persistent power of race (2011).
100 See Lydia Morris, Dangerous classes: the underclass and social citizenship (1994).
101 Id.
in 1814. While there were various police units operating in London at the time, these forces focused mainly on the protection of property, and did not have the resources or organization to engage in the sort of preventive policing Bentham and others had in mind. Peel argued that the primary goal of his organized police force should be crime prevention and moral order, with a focus on subduing the “dangerous classes,” and by consolidating the authority within a centralized administrative body, could pursue this goal far more efficiently than the existing models.

Here, we see the beginnings of a system of structural surveillance at work. By institutionalizing a public safety role that had largely been left to private interests, ad-hoc local governments, or the Crown (via the military), a consolidated and professionalized preventive police force replaced the identifiable object (watcher) in the surveillance equation with the society (via

103 Galen Broeker, Robert Peel and the Peace Preservation Force, 33 J. of Mod. History 363 (1961). It should be noted here that the Peace Preservation Force, which later become the Royal Irish Constabulary, was a thinly disguised paramilitary body created largely to subdue Irish Catholics.

104 Steedman, Policing the Victorian Community.

government) itself (self-reinforcement). Further, a regulated police force ensured a uniformity—in action, purpose, and aesthetic—that could not be achieved under the existing systems, which aided public acceptance of the system and ensured its integration into everyday life (ubiquity). And as we will see, this system of modern policing, while allowing for effective scales not possible under earlier regimes, encouraged wholesale increases in information collection and management, which increased efficiency while at the same time, enabled abuse.

To illustrate these concepts in contemporary terms, I will build upon the public space example I outlined earlier in this Article.\(^{106}\) The Olmstedian philosophy of public space as democratized geography, where open access to all classes of society was not only allowed, but encouraged, was not without its problems. Crime was certainly present, but there was a deeper concern (held principally by the upper classes) regarding general social disorder.\(^{107}\) From this general public safety concern arose four interrelated systems of structural surveillance: broken windows policing, widespread CCTV use, suspicionless stop and frisk policies, and algorithmic policing.

In 1982, Wilson and Kelling published their influential “Broken Windows” article, which suggested that police could more efficiently address crime by targeting social disorder and nuisance crimes directly, thereby breaking

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\(^{106}\) See Section II, supra.

\(^{107}\) See Peter G Goheen, Public space and the geography of the modern city, 22 Progress in Human Geography 479–496 (1998).
the cycle of localized community decline. The basis for this thinking can be found in what has been called the incivilities thesis, which proposes that social disorder in a community leads to an increased fear of crime in that community’s residents, which in turn leads to a general civic withdrawal from the community. The theory concludes that this withdrawal feeds into a cycle of general community decline in the levels of social control, which leads to increased localized crime and disorder.

The broken windows policing concept took hold quickly among the police departments of major American cities, and is arguably one of the most important changes to policing in recent decades. Implementations of broken windows policing have varied in tactics from department to department, adopting different strategic approaches ranging in aggressiveness, the most

109 Taylor 1999
110 Wilson and Kelling.
visible example of which was adopted by the New York City Police Department.\textsuperscript{112} The “New York style” of broken windows policing was initiated in 1993 as the “quality of life” initiative, focusing on nuisance offenses that had been ignored under earlier regimes, including turnstile jumping, panhandling, and public drinking.\textsuperscript{113} Within a relatively short period of time after the introduction of the new initiative, New York City’s overall crime rate began to drop, an occurrence almost universally attributed to the “smarter policing” of the broken windows theory.\textsuperscript{114}

The perceived success of broken windows policing in New York City initiated a wave of adoption of the practice in other major cities, including Chicago, Los Angeles, Baltimore, and Boston, which soon began to attribute their own success stories to the new approach.\textsuperscript{115} Proponents of the broken windows policing method pointed to a key component of its success: the full integration of widespread data collection, information technology, and statistical


\textsuperscript{113} Harcourt at 292.


analysis to policing.\textsuperscript{116} This analytical approach was viewed as an ideal solution to the crisis of control then affecting law enforcement, and was just the sort of enhancement desired (or required) within an information society.\textsuperscript{117} The data collection effort did not necessarily require any advanced technologies. Simply saturating a particular neighborhood, subway stop, or park with police patrols would generate a massive amount of actionable information, a benefit highlighted by broken windows proponents:

\begin{quote}
Our experience is that most citizens like to talk to a police officer. Such exchanges give them a sense of importance, provide them with the basis for gossip, and allow them to explain to the authorities what is worrying them.... You approach a person on foot more easily, and talk to him more readily, than you do a person in a car. Moreover, you can more easily retain some anonymity if you draw an officer aside for a private chat. Suppose you want to pass on a tip about who is stealing handbags, or who offered to sell you a stolen TV. In the inner city, the culprit, in all likelihood, lives nearby. To walk up to a marked patrol car and lean in the window is to convey a visible signal that you are a “fink.”\textsuperscript{118}
\end{quote}

A (possibly unexpected) enhancement of the information collection process came directly from the aggressive pursuit of nuisance crimes. Police departments soon discovered that their overall surveillance efforts would benefit from the creation of informants through misdemeanor arrests.\textsuperscript{119} Not only were

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\textsuperscript{117} Policing New York Style at 341. Arrests for petty offenses jumped more than fifty percent during the early stages the broken windows policing roll-out in New York City, which, due to the associated increase in data collection, in turn led to a nearly forty percent increase in arrests on outstanding warrants. Id.
\textsuperscript{118} Wilson and Kelling, Broken Windows at 34.
\textsuperscript{119} Policing New York Style at 342.
\end{flushright}
those arrested possible sources of information on others, their biometric data (fingerprints, DNA) could be collected for indefinite storage and analysis in other investigations. These methods were seen as so successful and necessary that they quickly became the driver of broken windows policies rather than a mere by-product.

Coinciding with the rise of broken windows policing policies came the technological innovation of closed circuit television (CCTV) deployment.

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Rapid improvements in digital camera and information processing technologies made widespread CCTV deployment attractive as a low-cost means of augmenting or replacing police patrols.\textsuperscript{123} Widely adopted by London authorities in the early- and mid-1990s, the CCTV system was hailed as the “Friendly Eye in the Sky” to skeptical London residents, targeting only those who acted suspiciously.\textsuperscript{124} Two high-profile events—the unsuccessful bombing assassination attempt against then-Prime Minister Margaret Thatcher, and a grainy CCTV recording of a London toddler being lured away by his 10-year-old killers—fueled general anxiety in England over public disorder, and led to a flood of government spending on the installation of CCTV systems throughout England and Europe generally.\textsuperscript{125}

Cities in the United States were slower to adopt CCTV, with only sporadic deployment in the late 1990s, and then only using them “primarily to monitor pedestrian traffic in downtown and residential districts.”\textsuperscript{126} A combination of technological advances, dropping costs, and the events of 9/11 finally drove U.S. cities to adopt CCTV in a wide variety of public safety

\textsuperscript{123} See B J Goold, CCTV and policing: public area surveillance and police practices in Britain (2004).

\textsuperscript{124} Guardian, Jan. 1, 1995. See also Bulos and Sarno: “The most neglected area of training consists of how to identify suspicious behaviour, when to track individuals or groups and when to take close-up views of incidents or people. This was either assumed to be self evident or common sense.”


\textsuperscript{126} Nieto
spheres. A renewed focus on public safety post-9/11 created an environment where almost all cities have become more frightening to their inhabitants, albeit with the fear often out of proportion to the reality. Increasing mobility of criminals means that no area is safe from crime. Attempts are being made to shield areas and make them as safe as possible, sometimes by cutting them off or controlling them through closed circuit television systems.

The growth of first generation CCTV systems was still hindered by the fact that these cameras still required a human being to monitor, interpret, and act on their data. This created a number of other potential problems, including questions of access, voyeurism, and other potential CCTV abuses. A post-9/11 flurry of video- and image-processing research yielded a second generation of CCTV systems, capable of automating the intelligence gathering process through advanced analysis algorithms. Not only did these second generation CCTV systems increase the amount of information that could be gleaned from real-time video, but it also addressed some of the other concerns posed by

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127 “Technological advances, declining costs, and heightened security concerns following the September 11, 2001, terrorist attacks have led to rapid diffusion of both CCTV surveillance and biometric technologies. For example, CCTV video surveillance is widely used in public schools to monitor student movement and detect illegal activity, and at street intersections to catch cars running red lights.” Nieto at 5.
128 Landry and Banchi at 7.
129 The Thinking Eye
131 The Thinking Eye.
human-in-the-loop monitoring.\textsuperscript{132} The deployment of advanced CCTV systems gave police departments an inexpensive new source of information for collection and processing as well as other, unrelated benefits, such as revenue generation, making their ubiquitous adoption a foregone conclusion.\textsuperscript{133}

Despite these advances, CCTV still had its limits. CCTV systems could watch, unblinking, for unlimited amounts of time, but even the most advanced systems could not replace the surveillance value of a police officer on the street. Under the broken windows policing model, police departments found that a great deal of useful information could be gathered from the subjects of nuisance crime arrests.\textsuperscript{134} As police departments’ information systems demanded additional data from its officers, however, new sources of that information had to be found. In New York City and elsewhere, police departments began to employ an expanded use of the Terry stop as part of their broken windows toolkit.\textsuperscript{135} These stops, which came to be known as “stop and frisk” searches, fell under a policy of “non-arrest approaches” to citizens, and blended well with an increase in “gun-oriented policing” in multiple departments.\textsuperscript{136} The

\begin{itemize}
\item \textsuperscript{132} Id.
\item \textsuperscript{133} Cite automated traffic and speeding camera articles
\item \textsuperscript{134} Harcourt, Reflecting on the Subject at 305-08.
\item \textsuperscript{135} Terry v. Ohio, 391 U.S. 1 (1968).
\end{itemize}
performance-measurement system employed by Compstat incentivized police departments and officers to aggressively employ stop and frisk practices, and effectively lowered the bar for such stops, allowing for an expansive definition of an officer’s “reasonable suspicion.”

Of course, once data generated by structural surveillance begins to arrive in increasing amounts, police systems such as Compstat must find a way to make sense of this information. There are two aspects to this process: dynamic analysis, where information is collected, organized, analyzed, and the results disseminated in real-time (or near-real-time), allowing for direct action and deployment; and static analysis, which takes advantage of the fact that digital data storage has become an effectively no-cost operation, and performs pattern analysis retroactively to direct and adjust police deployment strategy. Neither of these tasks are revolutionary by themselves, but the increased data flows and information processing capabilities that have followed in the wake of broken

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windows policing strategies have made available to police departments unheard of levels of analytical tools and have enabled the use of algorithmic policing.\textsuperscript{139}

Generally speaking, algorithmic policing is nothing more than an automated version of the approach described in Wilson’s and Kelling’s original article.\textsuperscript{140} But instead on relying on human-centered processes of surveillance and analysis, it uses information technology to integrate massive amounts of intelligence data from multiple sources, including police reports, arrest records, DNA and fingerprint data, CCTV, and license plate readers, and provide automated, rapid situational analysis to police and other government agencies.\textsuperscript{141} Algorithmic policing is a relatively new addition to the broken windows policing repertoire, aided in large part through the increasing numbers of “fusion” operations between traditional law enforcement and national security and terrorism agencies.\textsuperscript{142} The resulting blurring of lines between traditional policing and national security concerns has led to skepticism over these new programs, but such operations have continued to grow in the current post-9/11 public safety environment.\textsuperscript{143}

Here we see the transformation of broken windows policing and associated programs into structural surveillance. By making the information

\begin{itemize}
\item \textsuperscript{139} See Jane Bambauer, The Lost Nuance of Big Data Policing.
\item \textsuperscript{140} Wilson and Kelling.
\item \textsuperscript{142} Id.
\item \textsuperscript{143} See Didier Bigo, Security, Surveillance and Democracy, in the Routledge Handbook of Surveillance Studies.
\end{itemize}
processing system—known as Compstat in New York and emulated elsewhere—the primary and direct consumer of surveillance data, police departments effectively removed the watcher (object) from the surveillance equation. Police officers were encouraged to gather intelligence information not for their own immediate purposes, but to be fed into Compstat for analysis and dissemination. This incentivized the individual police officer to act more like a surveillance collection device and less as a professional, trained in crime detection and prevention. Further, the Compstat system required ever increasing amounts of information, which drove police departments to increase patrols and nuisance crime arrests, a strategy that generated dramatic increases in the sizes of police departments, an ironic result for a policy meant to make more efficient use of static or shrinking numbers of available officers. When the system required more information, departments turned to high-tech solutions like CCTV as well as additional low-tech solutions, like stop-and-frisk policies. And as the information flow became larger, departments implemented increasingly sophisticated analysis systems, such as algorithmic policing, to manage the increased bandwidth.

146 Id.
Superficially, this approach appears valid because the underlying concerns appear valid, but there is a problem with the theory’s asserted essentialism with respect to the perception of disorder. Signals of social disorder are not unambiguous, and there is no agreed-upon natural meaning of disorder.\(^{147}\) This is not to say that there are not certain signals of social disorder, such as rotting garbage, litter, discarded drug paraphernalia, graffiti, and abandoned cars, that are posited by broken windows theorists as objective measures of disorder or decay, but perceptions of disorder often carry with them an implicit bias, and will directly affect who benefits from broken windows policing, and who bears its burdens.\(^{148}\) Studies of the effects of broken windows policing and its associated means of structural surveillance on poor and minority populations over the past decade have generated a strong body of empirical evidence showing that these populations bear a significantly disproportionate amount of the burden of these systems.\(^{149}\) There are a number of reasons behind these results, but chief among them is the implicit linking of social disorder with a limited number of certain kinds of criminal behavior—the majority of which

\(^{147}\) See Sampson and Raudenbush, “Seeing Disorder.”


\(^{149}\) See id.
tended to exist only in minority or poor neighborhoods—along with a “zero tolerance” approach to these selected behaviors.\textsuperscript{150}

The result of this policy created a system of structural surveillance with the notional goal of dynamically preventing crime and improving the quality of life and access within a city, but with the ironic result of establishing permanent or static means of surveillance in certain “bad” neighborhoods, containing rather than eliminating disorder, and reinforcing the growth of private or semi-public spaces which curtail the Olmstedian view of public access.\textsuperscript{151} These contemporary policies are often justified using many of the same rationales (albeit with carefully softened language) as those found in the 19\textsuperscript{th} century policies designed to control and subdue the “dangerous classes.”\textsuperscript{152} We thus find ourselves with a growing system of structural surveillance, created in the name of public safety, that certain portions of the populations see as necessary and/or nearly invisible, while other portions of the population—those forced to live under its perpetual gaze—are left to choose between grudging acceptance or outright hostility, both of which result in negative individual and societal effects.\textsuperscript{153}

[Possibly address national security angle here]

\textsuperscript{151} See id.
\textsuperscript{153} See Section IV, infra.
B. Social Programs

The management of government services and public welfare programs is as old as government itself. The crisis of control that arose with the rapid population growth and urbanization of 18th and 19th century industrialization inspired governments to seek methods to manage their burgeoning underclasses. The pseudo-sciences of social Darwinism and eugenics gained fast traction in Europe and the United States, bolstered in large part by the widely shared opinion among the governing elites of those nations that the “dangerous classes” were made up of physically, psychologically, and morally inferior beings. This gave governments—and their increasingly efficient bureaucracies—the moral cover they needed to begin the promulgation of social engineering programs on a large scale, meant either to improve those few among the lower classes who could possibly be redeemed through education and hard

154 One of the chief problems faced by early governments was the provision and management of social services. Records from the ancient societies of Mesopotamia, China, India, Egypt, Greece, Persia, and Rome identify multiple methods—some more successful than others—to manage economic, financial, and social aspects of public welfare. See, e.g., Salvador Carmona & Mahmoud Ezzamel, Accounting and accountability in ancient civilizations: Mesopotamia and ancient Egypt, 20 Accounting, Auditing & Accountability Journal 177–209 (2007). In 9th century England, William I’s Domesday Book was an explicit attempt to record the identities and assets of the entire kingdom, thus categorizing his subjects by wealth (and worth). See Paul Henman & Greg Martson, The Social Division of Welfare Surveillance, 37 Journal of Social Policy 187–205 (2008).


156 See id. at 23-26.
work, or in the alternative, somehow separate this “residuum” before it could further corrupt the morally and physically superior “flower of the population.”157

Early efforts to ameliorate the problem of the underclass in an organized way can be traced to the Poor Law Act of 1601, signed by England’s Queen Elizabeth I to organize a structure to support local overseers to tax property for the express purpose of aiding the poor.158 The effect of these laws was to clearly separate local members from the community from outsiders so that local parishes could satisfy the edict by aiding the poor within their community while being legally—and morally—justified in denying relief to strangers.159 This legal divide, along with a later set of laws that separated the “deserving” from the “undeserving” poor, set a precedent that our social programs still contain, to varying degrees, today.160 But this ability for governments to use the structural components of social welfare to alienate based on gender, race, religion, or other categorizations did not scale well beyond the parish until the control revolution

157 There were very few among 19th century elites who could muster any sort of sympathy for the growing underclasses. The language found in discussions regarding how to deal with the poor were most often less about providing assistance, and more about ways to make the problem go away—often through brutal means. One does not have to look far in the literature to find words such as “worthless,” “indolent,” “filthy,” “dishonest,” “politically disruptive,” “surplus” or “redundant” population, “degenerate,” “repugnant,” “animalistic,” “savage,” “violent,” “mercilessly cruel,” “shameless,” “unfit,” “small, ill-formed, disease-stricken, hard to kill,” and “hopeless.” See id. at 20-25.
159 Id.
160 Id. at 85-87.
brought on by industrialization brought important advances in structural surveillance techniques and technologies.

As societies and politics evolved throughout the 20th century, reform movements drove early versions of what we would now recognize as modern social welfare programs, while still retaining elements of the deserving/undeserving distinction of earlier regimes.161 The United States, taking a federalist approach based somewhat on the local, parish-based British model, organized most of its social welfare structure at the state and local level.162 Federal government agencies took a more active role during the Great Depression and through the programs of the New Deal, but these efforts largely became support mechanisms for state and local social service programs.163 And apart from a brief moment of optimism in 1964 when the federal government expressed its intent “not only to relieve the symptoms of poverty, but to cure it and, above all, to prevent it,” the chief goal of government social welfare was, at best, a means of managing the problem of poverty, and later, to act as a service

163 Id.
conduit for the low end of capitalism, providing labor on the employer’s terms, and freezing out those unable to satisfy these “work first” requirements.  

A key component of managing the poor—as opposed to managing poverty—was the continuous monitoring of those applying for or receiving welfare benefits. Notionally beneficial to the continued improvement of government program efficiencies, these data were also quite useful in the pursuit of social control and the conferment by government of individual identity. Recipients—or “clients”—of these systems were required to become open books for government inspection in exchange for services. This meant that the government’s “friendly visitor,” acting as both counselor and investigator/inspector, was to be given a free hand to complete the required “searching examinations.” To support this goal, elaborate systems—both technological and otherwise—of structural surveillance were implemented to enforce work requirements, spot fraud, and often stigmatize, humiliate, and

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166 Id.


alienate social services recipients. The methods include “suitable home” inspections, “man in the house” searches, means testing, labor testing, residency checks, and random drug testing, all without a warrant, and all in the name of social ordering and social control.

Modern social welfare systems have taken an especially disciplinary turn since the late 20th century, which has had an especially deleterious effect on minority populations, especially African Americans. And while it is obvious that large scale information collection and record keeping is a critical part of any government social service program, current structural surveillance systems also provide the means to stigmatize, scrutinize, and otherwise manage population segments who are least able to resist such methods. This goes to the heart of structural surveillance—a complex system of information collection and record keeping that, over time, becomes a part of the background noise of society,

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171 See Id. at 59; Sanford F Schram et al., *Deciding to Discipline: Race, Choice, and Punishment at the Frontlines of Welfare Reform*, 74 American Sociological Review 398 (2009).

visible only to those who administer it or who have the misfortune of being under its gaze. As I will show in the following section, these systems can cause significant damage to subsets of society, even when those systems are notionally in place for the benefit of all.

IV. The Effects of Structural Surveillance

As I described earlier in this Article, the self-reinforcement and ubiquity of structural surveillance allows for its uneven application across population segments, which often results in unequal effects across society. As we have seen, these unequal effects are often borne by vulnerable, disenfranchised, or stigmatized populations, which can lead to lasting—and very real—societal, economic, and civic harms. This section is an attempt to characterize and categorize these harms by examining the existing literature relevant to the structural surveillance examples described above. It is not meant to be an exhaustive cataloging of such effects. Rather, I intend it as a springboard for the next phase of this research.

A. Enforcement of Social Ordering

Among the chief (ab)uses of structural surveillance throughout history is the practice of establishing and maintaining otherwise artificial social

\[173\] See Section XX, supra.
\[174\] See Section XX, supra.
The aggressive attention paid to the “dangerous classes” in Victorian societies is not much abated in today’s environment, although the supporting language has softened somewhat, and the uses of structural surveillance more subtle. As discussed above, in the late 19th and early 20th centuries, modernist optimism toward social control through scientific methods combined with existing fears of a growing underclass and contemporary scholarship which regarded the poor and working classes as fundamentally flawed, to create social control mechanisms oriented toward the preservation of existing social ordering. Many of these policies were removed or changed through the social reforms of the 1960s and 1970s, only to reappear, dressed in slightly different clothing, in the 1980s.

Gandy referred to the contemporary commercial version of this mechanism the “panoptic sort,” which used consumer surveillance to sort people based on their value to the marketplace, and suggested that this analysis

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176 See Joe Soss, Richard C Fording & Sanford F Schram, Disciplining the poor: Neoliberal paternalism and the persistent power of race (2011).
178 Gilliom, Overseers of the Poor.
could be applied to other social spheres. The technological advances of the late 20th century made social ordering through structural surveillance a particularly serious problem, especially following the increased focus on public safety following 9/11—the ordering could be economic, political, racial, or based on any sort of slicing and dicing one could do with the growing amounts of available data. The effects of this ordering can be very real, limiting economic and spatial mobility, social and political opportunities, and civic engagement much more effectively than the Victorian legacy methods, due to the speed and mobility of these structural surveillance systems.

Returning to my ongoing example of public space, one can see the effects of social ordering by examining the regulation or closing of public spaces as it relates to the homeless population. As I discussed earlier, the Olmstedian idea of open access public spaces in cities began to slowly erode throughout the latter half of the 20th century, as American city planners shifted from the (Olmstedian) “planned” city to the “entrepreneurial” or “post-industrial” city. Open access

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182 Hall
public spaces were often redesignated “private” or “quasi-public,” and the introduction of broken windows policing and associated methods led to increased monitoring of these spaces and police (and private) patrolling of de jure and de facto borders.\textsuperscript{183} Homeless people—defined loosely here as those who do not have access to their own private space or home—are forced to live their lives in public spaces.\textsuperscript{184} As these spaces disappear or become more tightly regulated and patrolled by authorities, the options for the homeless population dwindle.

The effects of social ordering can also be seen in the increased use of stop and frisk and investigatory stops under broken windows policing and the war on drugs.\textsuperscript{185} Both of these methods are widely used when a police officer develops a “reasonable suspicion” about the person to be stopped, often supported by an officer’s opinion that the person “looked out of place.”\textsuperscript{186} This often meant that the subject of surveillance was either poor or a racial minority (or both)


\textsuperscript{184} Any discussion of the controversy over the concept of homelessness is beyond the scope of this paper. If you wish to look into the topic further, I recommend the following sources: Stephen P Walker, Accounting, paper shadows and the stigmatised poor, 33 Accounting, Organizations and Society 453–487 (2008); Joe Doherty et al., Homelessness and Exclusion: Regulating public space in European Cities, 5 Surveillance \\& Society (2008); Bernard E Harcourt, Reflecting on the Subject: A Critique of the Social Influence Conception of Deterrence, the Broken Windows Theory, and Order-Maintenance Policing New York Style, 97 Michigan Law Review 291 (1998).

\textsuperscript{185} See Jeffrey Fagan & Garth Davies, Street Stops and Broken Windows: Terry, Race, and Disorder in New York City, 28 Fordham Urban Law Journal 457 (2000).

\textsuperscript{186} Id.
observed in a largely white or upper class community, a not-so-distant relative of the illegal redlining policies that were once used to contain the poor and minorities within certain neighborhoods outside of wealthier, whiter areas. The investigatory stop has avoided the racist stigma of redlining—at least in a legal sense—due to the gradual institutionalization of the practice under broken windows policing. The practice has since become a fixture of structural surveillance, and is now considered routine practice among police departments. The irony of these policies, often touted as means of “reclaiming open spaces” for the safe enjoyment of all, can be found in the resulting reclaiming of spaces for some to the exclusion of others.

A recent example of this institutionalized practice can be found in Arizona law S.B. 1070, which, under the veil of immigration control, required local and state police officers to determine the immigration status of anyone stopped, detained, or arrested when the officer. This requirement, affectionately deemed the “show me your papers” provision, was upheld by the Supreme Court as constitutional in 2012, with the proviso that officers must first have has a “reasonable suspicion” that they are not in the United States

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188 *Pulled Over at 9-12.*
189 *Pulled Over.*
190 *Zero Tolerance at 173.*
Like similar investigatory stops, the Arizona provision is likely to incentivize police officers to base their surveillance inquiries on the ethnicity and socioeconomic status of the subject.\textsuperscript{193}

There is strong empirical evidence that these “out of place” stops are more likely to happen to “out of place” minorities than “out of place” whites.\textsuperscript{194}

The effect is to convey strongly to poor and minority populations that their place in society is below white and upper class populations.\textsuperscript{195} Studies have shown that the subjects of these stops are often made to feel like second-class citizens whose lives are under the constant scrutiny and judgment of a capricious state.\textsuperscript{196}

\textsuperscript{192} Arizona v. United States.
\textsuperscript{193} Pulled Over.
\textsuperscript{196} See Reed Collins, Strolling while poor: How broken-windows policing created a new crime in Baltimore, 14 Geo. J. on Poverty L. & Pol’y 419 (2007); Pulled Over.
This effect is also clearly visible through government social relief policies, especially since the wave of welfare reforms initiated in the 1980s under the Reagan administration, and again in the 1990s under the Clinton administration. These policies were written to be punitive to existing recipients of public aid, and discouraging to potential applicants, through practices such as means testing, stigmatization, warrantless searches, residency requirements, and even through the enlistment of informants. Recipients of welfare under these programs describe feeling as if they were in prison, as powerless, and as not worthy of basic human dignity. They describe themselves as defenseless subjects of a faceless an often-hostile bureaucracy, stripped of basic privacy rights, and powerless to complain about any of this, as it would likely incur the risk the loss of benefits.

Another, more subtle, yet no less corrosive result of these policies is a growing fear and mistrust of our fellow citizens. The modern idea of the public sphere depends heavily on our ability to have “ubiquitous and uncontrolled encounters of people and groups” in our shared areas without barriers—both literal and figurative—erected to enforce an artificial social order. Hypervigilant concern for matters of ethnic identity and socioeconomic strata

197 See Joe Soss, Richard C Fording & Sanford F Schram, Disciplining the poor: Neoliberal paternalism and the persistent power of race (2011).
198 See Gilliom, Overseers of the Poor.
199 See Gilliom.
200 Id.
201 See Peter G Goheen, Public space and the geography of the modern city, 22 Progress in Human Geography 479–496, 480-82 (1998).
has, time and again, led to a fear for physical security that leads to a feedback loop of ordering. Structural surveillance programs in the form of “crime control” very often target racial minorities or the economic underclass largely for the benefit of wealthier citizens. These programs and policies will pit citizen against citizen, leading to fear-based discriminatory choices in education, social services, corrections, and the availability of economic opportunities. Even—or perhaps especially—within the quasi-public sphere of the workplace, the deployment and use of structural surveillance creates an atmosphere of mistrust that can prove ultimately counterproductive to the employer.

B. Fear and Mistrust of Institutions

One of the most dangerous effects of structural surveillance is its role in the loss of trust in societal institutions. An extensive body of literature has been

202 Id. at 485.
204 As societies increasingly industrialized throughout the 19th century, the growth of larger businesses and concerns required an accompanying growth of employee rolls. The theories of Weber and others that fueled the control revolution gave employers both the tools and motivation to surveil their workforce as a means of tracking productivity, spotting efficiency bottlenecks, and identifying underperforming employees. These practices have expanded and matured to a point where they have become part of organizational doctrine, and are reflected in many employment laws and regulation schemes. See, e.g., J Luff, Surrogate Supervisors: Railway Spotters and the Origins of Workplace Surveillance, 5 Labor: Studies in Working-Class History of the Americas 47–74 (2008); Kirstie Ball, Workplace surveillance: an overview, 51 Labor History 87–106 (2010); Susan Hansen, From “Common Observation” to Behavioural Risk Management: Workplace Surveillance and Employee Assistance 1914–2003, 19 International Sociology 151–171 (2004).
written over the past few decades on the topic of political trust, with a renewed interest following the events of 9/11. Much of this work has concentrated on macro-level studies of confidence in government at its uppermost levels, and the overall effects this has on public support for government action and the allocation of resources. For the purposes of this Article, however, I wish to focus on the issue of trust in a wider set of institutions, including the police, public health, and public assistance organizations, which ultimately affects citizens’ general attitudes toward government in general. The societal dangers of intense and prolonged cynicism and feelings of alienation are, I believe, best examined from the bottom-up rather than the top-down, since grassroots disaffection can be a slow burning flame, often ignored at the macro level until things go horribly wrong.

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205 Citrin; Chanley, Rudolph, & Rahn; Citrin and Green; Citrin and Luks; Miller.
A recent article by African-American journalist Nikole Hannah-Jones describes an example these effects in detail.\footnote{208} While celebrating the July 4 holiday with her friends and family on Long Island, Hannah-Jones and a few others decided to take a walk on the beach. The pleasant evening was interrupted by the sound of gunshots. The shooter quickly disappeared, and Hannah-Jones quickly checked to see if anyone was hurt, and noted that the high school intern who was staying with them at the time was on the phone with the police. This shocked the four adults in the group, who were all journalists with advanced degrees, and also happened to be black—none of them had considered calling 911 due to the “very real possibility of inviting disrespect, even physical harm.” The group “feared what could happen if police came rushing into a group of people who, by virtue of our skin color, might be mistaken for suspects.”

Hannah-Jones points out that her thoughts on this topic are not unique within the African-American and Latino populations, for whom policing and structural surveillance have been a means of social ordering and control. These means have been well documented in the literature concerning the Jim Crow South, and black experiences in Northern cities during the Great Migration.\footnote{209} As Hannah-Jones’s experiences illustrate, however, the structural surveillance mechanisms that remain can still serve these purposes. Not long after Hannah-

\footnote{208} Nikole Hannah-Jones, Yes, Black America Fears the Police. Here’s Why. ProPublica, Mar. 4, 2015.  
\footnote{209} See note xx, supra, and accompanying text.
Jones’s guest began her 911 call with the police that July 4, the conversation turned accusatory and adversarial, with the officer asking her “Are you really trying to be helpful, or are you involved in this?” Hannah-Jones describes the frightening and humiliating effects of being under constant suspicion by a system of structural surveillance that is viewed as benign and/or invisible by the white population, and concludes that, while African-American communities desire a healthy and respectful relationship with the police and the state, the “countless slights and indignities” that stem from our system of structural surveillance will “build until there’s an explosion.”

These effects are not limited to minority populations, of course. We see these same outcomes whenever structural surveillance is deployed to suppress or control marginalized populations.210 For example, Gilliom’s work on the surveillance of the poor provides an excellent illustration of the consequences of alienation.211 He describes a population of “frightened, often lonely, women and children who live on the edge of hunger and homelessness and in fear of their caseworkers and their neighbors,” who “live in a time when the poor are vilified by local and national political leaders,” and are “stuck in a cycle of powerlessness.”212 Due to the nature of the structural surveillance arrayed against them, this population fears the institutions that govern their lives, because of their learned helplessness within a system that will only make things

210 See Gilliom, Overseers of the Poor.
211 Id.
212 Gilliom at 90.
worse if they raise questions.\textsuperscript{213} This state, often accompanied by a Foucauldian “internalization of the gaze” of structural surveillance, is the natural consequence of a system notionally instantiated to provide a benefit, but oriented toward punishment and control.\textsuperscript{214}

C. Civic Disengagement and Other Chilling Effects

Fear or mistrust of institutions can often lead to the complete disengagement from society by segments of the population. This behavior can be viewed as an ongoing struggle between the desire by governments to assess, analyze, audit, order, and discipline its citizens, and the resistance by those segments of the population who are forced to bear the costs as subjects of these structural surveillance programs. One of de Tocqueville’s principal observations about the nascent United States was the centrality and importance of civic life, attributing this important feature to citizen participation and cooperation as “self interest rightly understood.”\textsuperscript{215} This concept was further observed in post-World War II America as the population’s “belief that people are generally cooperative, trustworthy, and helpful.”\textsuperscript{216} The ability for people to work with one

\begin{footnotesize}
\begin{itemize}
\item[\textsuperscript{213}] Id. at 87.
\item[\textsuperscript{214}] Id.
\item[\textsuperscript{215}] Alexis de Tocqueville, Harvey C Mansfield & Delba Winthrop, Democracy in America (2002) 122-23.
\end{itemize}
\end{footnotesize}
another and with our institutions requires a base level of trust that can be easily
damaged under inequality enforced under structural surveillance regimes.\footnote{217}

Among the chief goals behind the implementation and administration of
structural surveillance regimes is the maintenance of social order, but this
power exercise has people on both sides of its equation. Those population
segments on the losing side can view themselves as shut out of the realms—
physical and otherwise—normally occupied by “respectable classes,” with the
obvious implications that go along with that reality.\footnote{218} These experiences can be
physical, and even violent, as is the case with police interaction, or can be more
subtly oppressive, as with the case of demeaning questions from social or health
services case workers, but they all accumulate to erode the sense of trust in our
institutions and one another.\footnote{219} The explicit goals of these structural surveillance

\footnotetext{217}{E M Uslaner,  \textit{Inequality, Trust, and Civic Engagement}, 33 American Politics Research 868–894 (2005).}
\footnotetext{218}{See Miles Ogborn,  \textit{Ordering the city: surveillance, public space and the reform of urban policing in England 1835-56}, 12 Political Geography 505–521 (1993).}
systems and policies may not be intentionally discriminatory (although they sometimes can be), their effect can nonetheless be to alienate certain population segments from the mainstream. The results can manifest themselves in a multitude of ways, from decreased political and civic participation, to chilling speech, diminished educational opportunities, and limitations on access to quality health care, just to name a few. Those most likely to feel these deleterious effects are those segments of the population that are most vulnerable to stigmatization—minorities (especially African Americans) and the poor. The means of these effects are often invisible to those not targeted, and


See Reinhard Bendix, Bureaucracy and the Problem of Power, 5 Public Administration Review 194 (1945).


See William J Chambliss, Policing the Ghetto Underclass: The Politics of Law and Law Enforcement, 41 Social Problems 177–194 (1994); Torin Monahan,
even when they are not, these structural surveillance programs become accepted as a necessary part of society, and henceforth become ignorable by this privileged group. This is, at its core, the reason we cannot allow the effects of structural surveillance to be overshadowed by its more technologically advanced—and more visible—cousins.

V. Next Steps: Political Participation and Structural Surveillance

Perhaps one of the most insidious and damaging forms of structural surveillance in the history of the United States can be found in the racist systems put in place following the abandonment of Reconstruction policies by the federal government in 1877.\textsuperscript{223} Implemented across the southern United States through a wide array of “Jim Crow” laws, this system was intended to roll back the rights gained by African Americans following the end of the Civil War and Reconstruction.\textsuperscript{224} Structural surveillance under Jim Crow was intended to enforce a de facto system of racial segregation and discrimination, which often flew in the face of federal law, but was largely ignored by an apathetic (or


\textsuperscript{223} See Eric Foner, Reconstruction (2011).

\textsuperscript{224} Id.
sympathetic) federal government.\textsuperscript{225} Central to the aims of Jim Crow was the wholesale disenfranchisement of African Americans.\textsuperscript{226} Through an array of poll taxes, literacy tests, character tests, and grandfather clauses, southern states erected a maze of structural barriers for black voters and continued to do so through 1965, when the Voting Rights Act was passed.\textsuperscript{227}

Since that time, however, new, more subtle systems of structural surveillance are being implemented in various “voter ID” programs.\textsuperscript{228} Like so many systems before it, these new laws are presented both as fair reevaluations of voter rights in a post-racial America, and as a necessary system to prevent voter fraud.\textsuperscript{229} Time and again, however, it has been demonstrated that the true intent of these programs is to disenfranchise minority populations through

\begin{itemize}
  \item \textsuperscript{225} Id.
  \item \textsuperscript{226} See Mary Fainsod Katzenstein, Leila Mohsen Ibrahim & Katherine D Rubin, \textit{The Dark Side of American Liberalism and Felony Disenfranchisement}, 8 Perspectives on Politics 1035–1054 (2010). It should be noted here that, while African Americans bore the brunt of Jim Crow’s unjust laws, other minority groups, such as Hispanics, and Native Americans also suffered, and continue to suffer from discriminatory policies. See, e.g., Jeanette Wolfley, \textit{Jim Crow, Indian Style: The Disenfranchisement of Native Americans}, 16 American Indian Law Review 167–202 (1991).
  \item \textsuperscript{227} Gary May, \textit{Bending Toward Justice} (2013).
\end{itemize}
structural surveillance systems aimed at communities at risk.\textsuperscript{230} The next phase of this research will focus entirely on these laws and their effects, taking into account the nascent, but growing, body of research in this area, as well as through new empirical studies and ethnographies.

\textsuperscript{230} Id.