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SECTION 1

OPENINGS AND DEFINITIONS

How one defines surveillance is vital. Definitions inform the types of research one does and claims one can make. Although it may be true that the specific interests of scholars, which are disciplinarily conditioned, lead them to prefer some definitions over others, the early years of the field saw greater variation in definitions than is typically the case today. This is probably because scholars were dispersed and mostly working in separate areas with few opportunities to form a consensus about key definitions or concepts. With a few exceptions, though, participants in the field quickly agreed that surveillance signified more than passive observation; it was instead, or additionally, about the production of power relations.

One of the first scholars to consider surveillance as a singular phenomenon was James B. Rule (excerpted in Chapter 1). He and his colleagues defined surveillance as “any systematic attention to a person’s life aimed at exerting influence over it” (Rule et al. 1983: 223). This sociologically inflected definition depends on a liberal conception of personhood that sees individuals as sovereign agents shaped by external influences and interactions. Concerns emerge when these external forces might be destructive, unwanted, or unaccountable—as with the bureaucratic surveillance analyzed by Rule. Because this definition derives its potency from a view of individuals’ essential rights

under attack, this framing logically leads to appeals to the law to mitigate such harms.

The modifications that have been made to this type of definition have been predominantly influenced by a Foucauldian conception of power that decenters the individual and emphasizes the ways in which all people are caught in webs of power relations. So, instead of placing the individual human subject at the center, the focus of analysis could be on groups, societies, or even nonhumans. The introduction of the possibility of the nonhuman subject of surveillance has several implications. The first is that nonhuman creatures might be under surveillance, which has been considered at greater length by both Iruv Braverman (see Section 2) and Kevin Haggerty and Daniel Trotter (2013). The second implication is that it might not be human beings directly who are under surveillance, but rather situations, events, or a person’s indirect traces in data, which are the details of one’s “life” in Rule’s sense. This attention to information and personal data is at the heart of Rule’s book *Private Lives and Public Surveillance*, which was published in 1973—a few years before Foucault’s *Discipline and Punish*—at the beginning of what was then being called the “database society,” so clearly Rule was negotiating a few different approaches to power. Scholars such as Roger Clarke (see Section 9) and Oscar Gandy (excerpted in Chapter 2) would later pick up this focus on surveillance through

data (or "dataveillance") and develop it further. Even today, information and data remain central to most contemporary definitions of surveillance and to the field more broadly, as the selections in this reader testify.

By crafting definitions to emphasize populations or groups as the targets, one can focus analytic attention on issues of governance. For instance, in his influential book *Surveillance, Power, and Modernity* (1990), Christopher Dandeker defines surveillance as "the gathering of information about and the supervision of subject populations in organizations" (Dandeker 1990: vii). This definition seems to offer a rather wider sense of who or what is under surveillance—the term "subject populations" both strips out the requirement for the subject of surveillance to be an individual or even to be human at all. Through its explicit reference to subjection, it also draws attention to power, and with the last phrase of the definition, "in organizations," provides an institutional framework for that power. In some ways, one could argue that surveillance is about making and remaking both subject populations and organizations, often at the same time. William Staples (excerpted in Chapter 3) emphasizes this co-constitutive relationship in his investigation and theorization of "everyday surveillance."

Likewise, David Lyon's oft-quoted definition of surveillance—as "the focused, systematic and routine attention to personal details for purposes of influence, management, protection or direction" (excerpted in Chapter 4)—retains a focus on the person, but his analysis is further concerned with "sites" of surveillance (both actual and metaphorical) and with processes. Beyond simply "watching," Lyon's definition explicitly considers the purposes and qualities of attention that are needed for something to be "surveillance." One of the dangers inherent in a new transdisciplinary

field like surveillance studies is the "imperial urge" to redefine everything as surveillance, and while some, like Gary Marx (2016), do indeed argue for a maximalist definition that recasts casual observation or just "looking" as somewhere on a continuum of surveillance, a primary purpose of definitions is to clarify the object of study, as well as its social context. Lyon's highlighting of the "focused, systematic and routine" nature of surveillance separates out surveillance from other, more casual, occasional, and disorganized forms of attention. It does not, of course, say anything about the social significance or morality of either, merely that they are not the same. Gary Marx's own modus operandi, as demonstrated by his excerpt in this section, is to produce comprehensive lists of features and characteristics of surveillance, against which any particular thing can be assessed. He stresses key differences between earlier modes of surveillance and "new" digital surveillance.

These definitions offer different prisms for thinking about the various sites, forms, targets, and functions of surveillance. Some mechanism of control or regulation may be seen as necessary for surveillance to be taking place, but the theoretical frames adopted by scholars color their views of what else matters most (e.g., individuals, groups, contexts). While the goals of those implementing surveillance systems may seem like an obvious focal point, for some time the field has been concentrating instead on conditions, contexts, experiences, and negotiations of surveillance (e.g., Ball 2009; McCahill and Finn 2014; Saulnier 2016). Perhaps with the advent of big data and automated analytics, definitions will have to shift to emphasize the construction of emergent purposes in a society in which surveillance is ubiquitous and all data are collected as a matter of course.

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JAMES B. RULE

PRIVATE LIVES AND PUBLIC SURVEILLANCE

Social Control in the Computer Age

In a work that predates Foucault's recasting of Bentham's Panopticon, James Rule anticipates a comprehensive system of surveillance that amasses data on all individuals, stores those data indefinitely, has predictive capabilities for advance intervention, and fosters social control by eliminating possibilities for disobedience. He calls this system a "total surveillance society." While Rule is explicit in mobilizing the concept of a total surveillance society as a heuristic for analysis—against which to compare existing surveillance systems—and as a cautionary figure, today's emerging capabilities in predictive analytics and data fusion show just how prescient he was.

Why do we find the world of 1984 so harrowing? Certainly one reason is its vision of life totally robbed of personal privacy, but there is more to it than that. For the ugliest and most frightening thing about that world was its vision of total control of men's lives by a monolithic, authoritarian state. Indeed, the destruction of privacy was a means to this end, a tool for enforcing instant obedience to the dictates of the authorities.

And yet, such thoroughgoing, relentless social control represents nothing other than an extreme manifestation of one of the ubiquitous processes of social life. Ubiquitous and actually vital . . .

Those who seek to maintain social control must accomplish two sorts of things. First, they must maintain what one might call *powers of control*. This means, for one thing, that they need to be able to apply sanctions, or inducements sufficient to discourage the sanctioned person from repeating his disobedient acts. . . . Second, if the system is not to rely only on reward or punishment after the fact, it must possess means of excluding would-be rule-breakers from the opportunity to disobey, for example, by refusing in some way to deal with them. . . .

Neither of these two powers does any good, however, without . . . a system of

surveillance. In the first place, surveillance entails a means of knowing when rules are being obeyed, when they are broken, and, most importantly, who is responsible for which. In some instances these things may be easy to accomplish, e.g., a flagrant armed robbery by notorious criminals. In the case of other forms of disobedience, such as income tax evasion, it may be extremely difficult. A second element of surveillance, also indispensable, is the ability to locate and identify those responsible for misdeeds of some kind. Again, this may be simple in many cases... however, it may be the most difficult condition of all to fulfil.

In practice, it is often very difficult to draw boundaries between processes of surveillance and the application of what has been termed the powers of control... the same people and the same bodies are often engaged in the collection of information and in the application of sanctions. Nevertheless, when I want to emphasize those activities having to do with collecting and maintaining information, I speak of *systems of surveillance*. Where the concern lies more with the actual management of behaviour, through sanctioning or exclusion, I refer to *systems of control*...

[I]et me sketch a model of the most extreme possible development of mass surveillance, an ideal type of a social order resembling the one portrayed by Orwell, though perhaps even more extreme. This I call a *total surveillance society*.

In such a world, first of all, there would be but a single system of surveillance and control, and its clientele would consist of everyone. This system would work to enforce compliance with a uniform set of norms governing every aspect of everyone's behaviour. Every action of every client would be scrutinized, recorded and evaluated, both at the moment of occurrence and for ever afterwards. The system would collate all information at a single point, making it impossible for anyone to evade responsibility for his past by fleeing from the scene

of earlier behaviour. Nor would the single master agency compartmentalize information which it collected, keeping certain data for use only in certain kinds of decisions. Instead, it would bring the whole fund of its information to bear on every decision it made about everyone. Any sign of disobedience—present or anticipated—would result in corrective action. The fact that the system kept everyone under constant monitoring would mean that, in the event of misbehaviour, apprehension and sanctioning would occur immediately. By making detection and retaliation inevitable, such a system would make disobedience almost unthinkable.

One should never expect to encounter a real system like the one just described. That is just the point. The only usefulness of this paradigm is as a foil for comparison to real systems, as a case guaranteed to be more extreme than the real world could ever produce. True, some agencies may develop something like systems of total surveillance over very limited numbers of people, for short periods of time. Police may keep constant watch over a small group of conspirators, or the staff of a hospital may exercise something like total surveillance over those in the intensive care ward. But difficulties of staging, and especially prohibitive costs, rule out such techniques for larger clienteles over longer periods of time. No, the usefulness of the paradigm lies in its making it possible to compare systems of surveillance and control now in existence to this theoretical extreme and to one another in terms of their proximity to this extreme...

[A]ny real surveillance system is limited in size. This means, for one thing, limitation to the numbers of persons whom it can depict in its files. Second, there is always a limitation in the amount of information with which a system can cope, the amount which it can meaningfully use in its decision-making on each person. Indeed... the amount of *usable* information is often less than that which is theoretically available on

file. And such limitations on the amount of usable data kept per person correspond in turn to limitations in the amount of the subject's life depicted in the files. Third, surveillance systems also face limitations in what one might term the *subtlety* of their decision-making based on filed data. In the world of 1984 the authorities seemed to use information cunningly enough to know what their people were going to do even before they themselves did...

Second, real surveillance systems are limited in the *centralization* of their files... some are more centralized than others. Centralization of data is extremely important in the staging of social control, in that it prevents clients from escaping the effects of their past by moving from one place to another. If the single central record can be applied wherever the fugitive goes, such movement does no good. Thus, to be fully effective, any system of surveillance should be able to collect information on a person's behaviour from any point in a society, and use it to enact measures of control on the same person at any other point.

Third, real systems fall short of the total surveillance extreme, and vary considerably among themselves, in terms of the *speed of information-flow and decision-making* which they exhibit. In Orwell's world, all misbehaviour presumably was registered with the authorities immediately, and resulted in immediate retribution when necessary. The systems studied here, by contrast, are not nearly so sophisticated. They are slow, for one thing, in their intake of information: relevant facts may be available for some time before the system can bestir itself to incorporate them in usable form. Moreover, these systems vary in the speed of movement of data once it is incorporated in their files, and in the application of such data to decision-making about people. Limitations like these make it easier for the individual to escape the effects of his past, for example, in cases where the agency of surveillance and control cannot bring its

data to bear on a client quickly enough to act against him...

Fourth, and finally, real systems of mass surveillance and control are limited to varying degrees in what I term their *points of contact* with their clientele. This again involves several things. First, existing systems are limited in the numbers of points at which they can incorporate information on the people with whom they must deal. Whereas in 1984 the authorities could 'tune in' on virtually every moment of every person's life, real surveillance systems restrict themselves to limited points of intake—for example, through the courts and a few other junctures in the case of police surveillance, and through credit-granting institutions, in the instance of consumer credit reporting. Similarly, existing systems are limited in terms of their ability to 'get back at'—to locate, accost and apprehend—those who have broken the rules. Unlike Orwell's world, modern societies provide many opportunities for those who wish to avoid the attention of the authorities simply to drop out of sight. To be sure, systems of mass control have their own ways of countervailing against these opportunities...

A final and equally important element of contact between system and clientele is the ability of the former to identify individual clients... [T]he position of the agency of control suffers unless it can quickly and unerringly link any single client to his record. Since clients themselves often wish to avoid such linkage, the strength of identification systems represents one of the important elements of the hold of the system on those with whom it deals...

There are several distinct reasons for mistrusting the continuing growth of mass surveillance. One is simply the repressive potential which they confer upon the corporate agencies maintaining the surveillance, or upon whoever controls those agencies... any over-all response to these systems must take into account not only

their present impact, but also their future prospects. And this means accepting the possibility that, in the course of other political changes, the intent and political disposition of those who control these systems may change....

Another objection to the extension even of 'just' discrimination based on mass surveillance has to do with their effects on those discriminated against. The object of discriminations like those discussed here, after all, is to achieve the cheapest possible identification of those who have not or will not obey the rules. Often the idea is to exclude these people in advance.... [W]ith sophisticated manipulations of aggregate data, even tiny and seemingly irrelevant facts can represent significant predictors. The use of such discrimination procedures thus raises the question of what sorts of data should legitimately be usable in decision-making which may, after all, weigh very heavily upon the clients concerned....

What if, by collecting data on some extremely private area of people's behaviour, one could predict with virtual certainty the likelihood of their causing a fatal traffic accident in the near future? The predictive behaviour, presumably, would involve no direct and obvious connection with motoring, and obviously would not itself represent an infraction against motoring laws. To this extent, one would be inclined to resist compulsory surveillance over the behaviour in question. On the other hand, if prediction were really virtually perfect, the cost of forgoing it in terms of lives, would be excruciatingly obvious. At present such discrimination represents nothing more than

another heuristic, hypothetical case. But there is no guarantee that this will always be true. The growing sophistication of predictive techniques promises to make the choices implicit in these situations increasingly dramatic and difficult....

There is a final reservation about the growth of mass surveillance, more subtle than the preceding ones, but no less compelling. It has to do with the inherent value of choice in responding to the strictures of control imposed by the social world.... Total surveillance could theoretically provide limitless benefits in the way of compliance, but only at the expense of watching and controlling people so closely and constantly as to render misbehaviour out of the question.... Corporate participation in every moment of every individual's life, no matter how fair or how discreet or how benign, is simply too great a price to pay for obedience. Life in a highly imperfect social world is still infinitely preferable to life in a world offering no opportunities for imperfection....

Because of the beguiling appeal of fine-grained decision-making, it is hard to hope for any sweeping curtailment of mass surveillance and control. Certainly it is reasonable to expect public opinion to oppose measures seen as repressive or coercive towards the public at large. Certainly, too, one can realistically hope for the acceptance of reform measures like those already proposed, to make mass surveillance more open, accountable and just. Whether one can expect people to renounce altogether the benefit of practices felt to provide essential personal services is another matter.

OSCAR H. GANDY, JR.

THE PANOPTIC SORT

A Political Economy of Personal Information

Oscar Gandy's lifework has been in understanding systems of sorting and classification, particularly in regard to racial and other inequalities. He is one of the few scholars from whom we have two excerpts in this Reader because his work is both foundational and of direct ongoing contemporary relevance. This excerpt is from *The Panoptic Sort*, one of the books that defined what surveillance studies was to become both in its objects of study (the social and political consequences of contemporary systems of data gathering and analysis) and its theoretical influences, combining political economy (Marx), sociology (Weber, Giddens), the history of ideas (Foucault), and critical approaches to technology (Ellul).

In 1934, the Spiegel corporation was an industry leader in the development of a pointing system, which it used to evaluate applications for credit. Spiegel developed what it called the "vital question system," which gathered data in four critical areas that were then used as the primary factors in the decision to grant credit. The four questions were (1) amount of the order, (2) occupation of the applicant, (3) marital status, and (4) race of the applicant. Other data gathered in the rating process included an assessment of the importance of the geographic territory to the overall marketing plan. Although race and marital status are no longer legally permissible components of the credit authorization process, the

evidence is clear that a similar discriminatory process that sorts individuals on the basis of their estimated value or worth has become even more important today and reaches into every aspect of individuals' lives in their roles as citizens, employees, and consumers.

I refer to this process as the "panoptic sort," the all-seeing eye of the difference machine that guides the global capitalist system. Kevin Robins and Frank Webster have coined the phrase "cybernetic capitalism" to underscore the nature of the totalizing system of social control that depends on the ability of state and corporate bureaucracies to collect, process, and share massive amounts of personal information

to track, command, coordinate, and control each and every one of us to an extent we would not have considered possible. Other descriptive terms appeared over the years as I have gathered examples and insights about the nature of this process. One that still holds an attraction is the notion of triage. The popular understanding of the term is that associated with medical decision making: "the sorting and allocation of treatment to patients, especially battle and disaster victims, according to a system of priorities designed to maximize the number of survivors." The original meaning of the term, however, is derived from the French *trier*, meaning to pick or to cull, but the word emerged into the English language as having to do with the "grading of marketable produce," and more specifically, referring to "the lowest grade of coffee berries, consisting of broken material." Although some metaphors speak for themselves, let me be clear. I see the panoptic sort as a kind of high-tech, cybernetic triage through which individuals and groups of people are being sorted according to their presumed economic or political value. The poor, especially poor people of color, are increasingly being treated as broken material or damaged goods to be discarded or sold at bargain prices to scavengers in the marketplace....

In my view, this sorting mechanism cannot help but exacerbate the massive and destructive inequalities that characterize the U.S. political economy as it moves forward into the information age. It is a process that feeds on itself. Although there are already some signs of resistance that have emerged in some quarters, the response of the panoptic system is very much like that of a child's straw finger puzzle: Once you have placed your fingers in either end of the tube, the more you struggle to escape, the more it tightens its grip. I would like to suggest that these inequalities are emerging in an area that is critical to the maintenance of a democratic polity and to the operation

of an efficient market. These inequalities have to do with differential access to information that is necessary for informed decision making.

The operation of the panoptic sort increases the ability of organized interests, whether they are selling shoes, toothpaste, or political platforms, to identify, isolate, and communicate differentially with individuals in order to increase their influence over how consumers make selections among these options. At the same time that the panoptic sort operates to increase the precision with which individuals are classified according to their perceived value in the marketplace and their susceptibility to particular appeals, the commoditization of information increases the dependence of these interests on subsidized information. To the extent that the panoptic sort, as an extension of technical rationalization into the social realm of consumer and political behavior, depends on a reduction of the skills of individuals in the same way that automation reduces the skills of laborers in the factory or the modern office, the market and the political or public sphere as we understand them are transformed and are placed at risk.

As the panoptic sort matures and increases in scale and scope, a number of contradictory developments seem likely. First, because the sorting mechanism utilizes data about past behaviors, it tends to limit the options that are presented for individuals to choose. When the options concern choices about information, this tendency has the potential to increase the knowledge and information gap between the haves and the have nots. Also, to the extent that these conservative models aim at the lowest common denominator, the panoptic sort will contribute to a generalized lowering of the average level of public understanding. Second, because the sorting mechanism is based on theoretical models that reflect quite transitory fads or trends in social, economic, and

political thought, increasing instability in markets and political action will become the rule rather than the exception. Third, as people's awareness of the panoptic machine grows, some will find ways to resist, and others will attempt to withdraw. Both responses will invite further attempts at inclusion and containment within the panoptic sphere. The same technology that threatens the autonomy of the individual seems destined to frustrate attempts to reestablish community and shared responsibility because it destroys the essential components of trust and accountability....

The panoptic sort is the name I have assigned to the complex technology that involves the collection, processing, and sharing of information about individuals and groups that is generated through their daily lives as citizens, employees, and consumers and is used to coordinate and control their access to the goods and services that define life in the modern capitalist economy.

The panoptic sort is a system of disciplinary surveillance that is widespread but continues to expand its reach. The operation of the panoptic system is guided by a generalized concern with rationalization of social, economic, and political systems. The panoptic sort is a difference machine that sorts individuals into categories and classes on the basis of routine measurements. It is a discriminatory technology that allocates options and opportunities on the basis of those measures and the administrative models that they inform. The panoptic sort has been institutionalized. It is standard operating procedure. It is expected. It has its place. Its operation is even required by law. And where it is not, people call out for its installation. Its work is never done. Each use generates new uses. Each application justifies another. It is efficient, having largely been automated. Like a voice-activated recorder, it moves into action

Identification

The panoptic sort can be understood to involve three integrated functions or processes: identification, classification, and assessment. Although its operation is by no means limited to identifiable individuals, it depends to a large part on the ability of its users to reliably identify the objects to be controlled. The identification will never move to the level of personhood as we may understand the person as the subject of religion, philosophy, and idealized systems of justice. The attention of the panoptic sort moves only to levels of identification that have administrative and instrumental relevance. Here we refer to

the identification of persons with histories, records, and resources when those persons or agents of those persons present a card, form, signature, claim, or response, or when they present themselves at a particular place or time. Identification is associated with authorization and authentication of claims. Identification is associated with the assumption of responsibility for actions, transactions, interactions, and reactions, which may be recorded by the panoptic system. The level of identification required by the panoptic system is indicated by the importance of the transaction that is about to take place. As the level of risk increases, more sophisticated technologies are called into play. The signature gives way to the physical description, which gives way to the photograph, which gives way to the fingerprint, or the voice print, or the retinal scan. But that is not enough.

The panoptic sort frequently requires third-party validation. You may be who you say you are, but we need verification that you

are what you say you are. Are you old enough? Are you, perhaps, too old? Are you trained and certified; is your license currently in force? Are you creditworthy, reliable, stable, honest, entitled? Are you one of us? This form of identification, more often than not, involves some form of classification.

Classification

Classification involves the assignment of individuals to conceptual groups on the basis of identifying information. Class membership is based on measurement of one or more attributes of an individual's identifying array of attributes. As we have suggested with regard to identification, the data matrix may be infinitely complex, depending on the requirements and resources of the panoptic system brought into play at any given point of interaction. The identification of class membership will always be made on the basis of less information than is at hand or is readily available. As we have suggested with regard to preprocessing, information is thrown away so that more efficient means of control may be put in place . . .

The panoptic sort institutionalizes bias because the blind spots in its visual field are compensated for by a common tendency to fill in the missing with the familiar or with that which is expected. When the paradigmatic vision of the panoptic machine is linked with the futures of bureaucratic organizations and the individuals who stand at their helms, the incentive to find precisely what has been predicted is often too powerful to resist. A disciplinary profession that depends on treating a particular kind of problem has every incentive to calibrate its instruments to find ever more cases of the dysfunction that are in need of expert attention. The discovery of epidemics is very difficult to

separate from the interests of the agencies whose responsibility it is to keep them under control. Bureaucratic records reflect the local custom. The definition of what is a crime depends as much on the social status of the perpetrator and the victim as it does on the actions that have allegedly taken place. Troy Duster notes that "if one looks at the record in 350 years of U.S. history, no white man ever committed the crime of rape on a black woman in twelve southern states." Is this a statement about the violent sexual behavior of southern white males, or is it a statement about a racially biased system of classification? There are no objective standards; classification always includes an assessment, whether expressed or not.

Assessment

Assessment represents a particular form of comparative classification. Individuals are compared with others. Individuals are compared with hundreds and thousands of others whose measured attributes help to establish norms and the bounds of reasonableness and acceptability. Assessment involves the use of standards and assumptions about the normality and the independence of distributions. Social distributions are often highly skewed rather than normal. Social distributions are often highly correlated, because they share a common cause, rather than being independent.

Once classification has occurred, assessment frequently involves the examination of probabilities—that is, the likelihood that a person will act, react, or interact in a particular way to a situation or circumstance. Individuals may be classed and evaluated on the basis of the responses they give, as well as on estimates of how likely similar responses are to occur. As with the requirement for precision in identification,

the demand for precision in assessment is based on an assessment of the consequentiality of error. Given the tendency of humans to be risk averse, the privileging of avoidance over gain is not without a basis in fact . . .

The panoptic sort victimizes because it decontextualizes. Status is divorced from areas of social existence in even the most advanced industrial societies, the spread of panoptic technology is uneven and incomplete. However, the ways in which

context is misrepresented are not randomly distributed but reflect an institutionalized bias; a bias established by race, gender, age, class, culture, and consciousness.

Just as capitalism as a form of social organization has neither fully matured nor been extended to the same degree in all areas of social existence in even the most advanced industrial societies, the spread of panoptic technology is uneven and incomplete.

WILLIAM G. STAPLES

EVERYDAY SURVEILLANCE

Vigilance and Visibility in Postmodern Life

William Staples has been specifically concerned with everyday practices of surveillance and social control, neither the soft forms of social control that saturate our corporate-dominated urban environments nor the hard forms of access control and targeted surveillance of suspected criminals and terrorists, but that which is in between, which constructs our "normality." He argues that the "meticulous rituals of power" that characterize contemporary life are increasingly impersonal in nature, methodical, and technologically mediated, leading to more universal exposure to surveillance, even as forms of discrimination and inequality persist.

Between . . . soft and hard types of social control lies a vast array of techniques and technologies—exercised on and by people both inside and outside the justice system—that are designed to watch our bodies, to regulate and monitor our activities, habits, and movements, and, ultimately, to shape or change our behavior. These procedures are often undertaken in the name of law and order, public safety, the protection of private property, or simply "sound business practice"; other procedures are initiated for an individual's "own good" or benefit. But no matter what the stated motivation, the intent of social control is to mold, shape, and modify actions and behaviors.

[These] cultural practices . . . I will call "meticulous rituals of power." Most generally, I include those microtechniques of social monitoring and control that are enhanced by the use of new information, communications, and medical technologies. These are knowledge-gathering activities that involve surveillance, information and evidence collection, and analysis. I call them meticulous because they are "small" procedures and techniques that are precisely and thoroughly exercised. I see them as ritualistic because they are faithfully repeated and are often quickly accepted and routinely practiced with little question. And they are about power because they are intended to discipline people into acting in

ways that others have deemed to be lawful or have defined as appropriate or simply "normal." In this way, meticulous rituals are the specific, concrete mechanisms that operate to maintain unbalanced and unequal authority relationships. These relationships exist between specific clusters of individuals (e.g., between managers and workers, police officers and suspects, probation officials and offenders, teachers and students, parents and children, and the like) and, in a larger sense, between individuals and the public and private organizations where these rituals take place.

Surveillance and social control of this type are not orchestrated by a few individuals; they are not part of a master plan that is simply imposed on us. Rather, in my view, we are all involved and enmeshed within a matrix of power relations that are highly intentional and purposeful: arrangements that can be more or less unequal but are never simply one-directional. . . .

I see at least four defining characteristics that set these practices apart from more traditional methods. In the first place, consider the following. In the past, the watchful eyes of a small shopkeeper may have deterred a would-be shoplifter; her surveillance was personal, not terribly systematic, and her memory, of course, was fallible. She was more likely to know her customers (and they her), to keep a "closer eye" on strangers, and to "look the other way" when she saw fit (and to make a call to the offending juvenile's parents later). This kind of "personal" social control was once typical of small communities or close-knit societies where people certainly watched one another very closely and where fear of ridicule or exclusion was a powerful inducement to conformity. By contrast, the large corporate bookstore where I sat with my friend have less interest in watching for thieves; their huge number of customers is an anonymous crowd. So here, the store management relies on the hidden, faceless,

notice input or influence.

Second, these new meticulous rituals of power often involve our bodies in new and important ways, and I want to distinguish two primary tactics of bodily social control. I agree with Donald Lowe

and ever-ready video security camera. The videocam—one of the defining features of postmodern society—projects a hyper-vigilant "gaze," randomly scanning the entire store day or night, recording every event, and watching all the customers, not just the "suspicious ones." The cameras are also positioned to watch the vast number of employees, who must now be monitored both as "productive" workers and as potential thieves. In this way, surveillance and discipline have become oddly democratic; everyone is watched, and no one is trusted.

So the first characteristic of postmodern social control is that it tends to be systematic, methodical, and automatic in operation. It is likely to be impersonal in that the observer is rarely seen and is anonymous; further, the "observer" is likely to be a computer system, a videocam, a drug-testing kit, or an electronic scanner of some kind.

Once more, the data that these devices collect may become part of a permanent record in the form of a videotape, a computer file, or some other digital format. In fact, the role played by efficient and inexpensive digital databases is crucial. Corporate personnel files, hospital, mental health, and substance abuse agency records, as well as insurance company data banks, join all those demographic, financial, credit, and consumer habits data to create "virtual" database identities of all of us. Once created, these representations are, as Mark Poster suggests, "capable of being acted upon by computers at many social locations without the least awareness by the individual concerned yet just as surely as if the individual were present somehow inside the computer." For example, credit ratings can be destroyed, loan applications rejected, or medical benefits denied, without personal notice input or influence.

Second, these new meticulous rituals of power often involve our bodies in new and important ways, and I want to distinguish two primary tactics of bodily social control. I agree with Donald Lowe

when he states: "As living beings, we are more than body and mind, more than the representations and images of our body. We lead a bodily life in the world." These bodily lives are shaped, manipulated, and controlled by a set of ongoing practices that compose our daily lives as workers, consumers, and community members.

The first tactic I want to distinguish has to do with types of monitoring and surveillance that enhance our visibility to others. We seem to be entering a state of permanent visibility where attempts to control and shape our behavior, in essence our bodies, are accomplished not so much by the threat of punishment and physical force but by the act of being watched—continuously, anonymously, and automatically. This kind of watching happens when people engage in such diverse activities as clipping on a company beeper, using a credit card to purchase something at a store, or parking their car in a garage with a security camera. These instances signify different forms of "visibility"; the beeper enables an employer to remotely "check up" on and monitor an employee; the credit card purchase leaves an electronic paper trail of a person's activities and whereabouts; and the security camera identifies to the police, or anyone else who gains access to the tape, that a particular individual was indeed parked in that garage on a particular day at a certain time. The methodical, technology-driven, impersonal gaze, I argue, is quickly becoming a primary mechanism of surveillance and, by extension, social control in our society, and it is fixed on our bodies and their movements.

A second tactic of bodily surveillance and social control relates to new developments in science, technology, and medicine. These intersecting fields are making the human body infinitely more accessible to official scrutiny and assessment. This means that the ability of organizations to monitor, judge, or even regulate our actions and behaviors through our bodies is significantly enhanced. It also means that it

becomes less important to trust suspects to "speak the truth" or convicted offenders to "mend their ways." Rather, it is the individual's body that will "tell us what we need to know," as in indicating that someone is using drugs or was at the scene of a crime or even has "deviant desires." In this way, the body is treated as an "object" that contains the evidence of any possible deviance. For example, on the soft side of our spectrum of social control, we see that corporations are using medical data collected on employees in their "wellness" and exercise clinics to confront the "unhealthy lifestyles" of those not conforming to prevailing standards (about, for example, to bacco use or obesity). Meanwhile, on the hard side, DNA samples are being systematically collected and stored and are increasingly presented as evidence in courtroom proceedings. The body, I contend, is a central target of many postmodern surveillance techniques and rituals.

The third defining characteristic of postmodern social control relates to a shift in the location of social control and surveillance and which behaviors are the subject of it. Since the early nineteenth century, our primary method of dealing with lawbreakers, those thought to be insane, other deviants, and even the poor has been to isolate them from everyday life—as in the case of the modern prison, mental asylum, poorhouse, and reformatory. Yet the kinds of practices I am most concerned with here attempt to impose a framework of accountability on an individual in everyday life. While, obviously, removing "troublesome" people from social control (after all, in the United States, we institutionalize more people than any other Western country does), this approach is increasingly considered, by various experts, to be an inefficient, ineffective, and undesirable practice. This is particularly true if we consider the idea that as a society we seem to be engaged in a far-reaching attempt to regulate not only the traditional crimes of

person and property but also the behaviors, conditions, and "lifestyles" of substance (abuse, alcohol and tobacco consumption, "eating disorders," forms of sexual expression and sexual "promiscuity" and "deviance," teenage pregnancy, out-of-marriage births, domestic violence, child abuse, "dysfunctional" families, various psychological or psychiatric disorders and other "medical" conditions such as "attention deficit disorder," and such diseases as AIDS. How can we possibly institutionalize and control everyone that falls into these rapidly expanding categories of "troublesome" individuals?

Given these conditions, it would appear that the segregative or quarantine models of social control of the nineteenth century are an invention whose time has simply passed. The incentive now is to develop new ways to control and "keep an eye on" what appears to be an increasing number of "deviants" through an expanding network of formal "community corrections" programs; regulatory welfare, health, and social service agencies; and even schools, workplaces, and other community institutions. New developments in the forensic, medical, and computer and information sciences—generated by corporate research and development departments and the post-Cold War military-industrial complex (which I believe is being converted rapidly into a "security industrial complex")—are creating more remote, more flexible, and more efficient ways of making this happen.

Finally, as new forms of social control are localized in everyday life, they are capable of bringing wide-ranging populations, not just the official "deviant," under their watchful gaze. As I indicated earlier, trust is becoming a rare commodity in our culture. The notion of "innocent until proven guilty" seems like a cliché these days, when people are apt to be subjected to disciplinary rituals and surveillance ceremonies simply because statistics indicate that they have the potential for being offenders (for example the police tactic known as "racial profiling" as a justification

for stopping motorists). Data generated through surveillance techniques produce "types" or whole classes of individuals who are deemed "at risk" for behavior, whether any particular individual has engaged in such behavior or not. These data, of course, are then used to justify even closer surveillance and scrutiny of this group, thereby increasing the likelihood of uncovering more offenses; and so it goes. In the context of these changes, social control becomes more about predicting and preventing deviance—always assuming that it will, indeed, happen—rather than responding to a violation after it has occurred. Therefore, when put in place, ritualistic monitoring and surveillance ceremonies often blur the distinction between the official "deviant" and the "likely" or even "possible" offender. Indeed, what separates the convicted felon from the college athlete, or the discount store cashier if each is subjected to random drug screening? One consequence of this blurring is that we may be witnessing a historical shift from the specific punishment of the individual deviant to the generalized surveillance of us all.

But by implying that social control is becoming more universal and thus oddly more democratic, I am not suggesting that we are all necessarily subject to the same quantity or quality of social control. Historically and cross-culturally, the amount and character of monitoring, discipline, and punishment that individuals are afforded have varied considerably by such defining characteristics as race, ethnicity, class, and gender. Without question, this continues today. My point is that there are more impersonal, more methodical, and more technology-driven forms of surveillance and social control in our society than ever before, and today's forms—and their sheer volume—are enveloping even those who might have been previously exempt. For those who have traditionally been the target of monitoring and control, these developments serve only to intensify and increase the amount of formal regulation already in their daily lives.

DAVID LYON

SURVEILLANCE STUDIES

An Overview

David Lyon is probably the scholar most directly responsible for the growth of surveillance studies as a field. His seminal work, *The Electronic Eye* (1994), placed surveillance in a larger historical trajectory and presented the concept of the "surveillance society" as important for sociological investigation. Lyon's definitions, here expressed in his introductory book, *Surveillance Studies*, remain a necessary starting point for any scholarly inquiry into surveillance.

Although the word 'surveillance' often has connotations of surreptitious cloak-and-dagger or undercover investigations into individual activities, it also has some fairly straightforward meanings that refer to routine and everyday activity. Rooted in the French verb *surveiller*, literally to 'watch over', surveillance refers to processes in which special note is taken of certain human behaviours that go well beyond idle curiosity. You can 'watch over' (or, more clumsily, 'surveil') others because you are concerned for their safety; lifeguards at the edge of the swimming pool might be an example. Or you can watch over those whose activities are in some way dubious or suspect; police officers watching someone loitering in a parking lot would be an example of this kind of surveillance.

Surveillance always has some ambiguity, and that is one of the things that make it both intriguing and highly sensitive. For example, parental concern and care for children may lead to the adoption of some surveillance technologies in order to express this. But at what point does this become an unacceptable form of control? Does the answer depend on whether or not the offspring in question are aware that they are being tracked, or is the practice itself unethical by some standards? At the same time, putting the question this way assumes that people in general are wary, if not positively spooked, when they learn that others may be noting their movements, listening to their conversations or profiling their purchase patterns. But this assumption is not always sound. Many seem content to be surveilled,

for example by street cameras, and some appear so to relish being watched that they will put on a display for the overhead lenses, or disclose the most intimate details about themselves in blogs or on webcams.

So what is surveillance? For the sake of argument, we may start by saying that it is the focused, systematic and routine attention to personal details for purposes of influence, management, protection or direction. Surveillance directs its attention in the end to individuals (even though aggregate data, such as those available in the public domain, may be used to build up a background picture). It is focused. By systematic, I mean that this attention to personal details is not random, occasional or spontaneous; it is deliberate and depends on certain protocols and techniques. Beyond this, surveillance is routine: it occurs as a 'normal' part of everyday life in all societies that depend on bureaucratic administration and some kinds of information technology. Everyday surveillance is endemic to modern societies. It is one of those major social processes that actually constitute modernity as such.

Having said that, there are exceptions. Anyone who tries to present an 'overview' has to admit that particular circumstances make a difference. The big picture may seem over-simplified but, equally, the tiny details can easily lose a sense of significance. For example, not all surveillance is necessarily focused. Some police surveillance, for instance, may be quite general—a 'dragnet'—in an attempt somehow to narrow down a search for some likely suspects. And by the same token, such surveillance may be fairly random. Again, surveillance may occur in relation to non-human phenomena that have only a secondary relevance to 'personal details'. Satellite images may be used to seek signs of mass graves where genocide is suspected or birds may be tagged to discover how avian flu is spread. Such exceptions are important, and add nuance to our understanding of the big picture. By looking at various sites of surveillance, and exploring

surveillance in both 'top-down' and 'bottom-up' ways, I hope to illustrate how such variations make a difference to how surveillance is understood in different contexts.

The above definition makes reference to 'information technology', but digital devices only increase the capacities of surveillance or, sometimes, help to foster particular kinds of surveillance or help to alter its character. Surveillance also occurs in down-to-earth, face-to-face ways. Such human surveillance draws on time-honoured practices of direct supervision, or of looking out for unusual people or behaviours, which might be seen in the factory overseer or in neighbourhood watch schemes. Indeed, to accompany the most high-tech systems invented, the US Department of Homeland Security still conscripts ordinary people to be the 'eyes and ears' of government, and some non-professional citizen-observers in Durban, South Africa have been described by a security manager (without irony) as 'living cameras'.

But to return to the definition: it is crucial to remember that surveillance is always hinged to some specific purposes. The marketer wishes to influence the consumer, the high school seeks efficient ways of managing diverse students and the security company wishes to insert certain control mechanisms—such as PIN (personal identification number) entry into buildings or sectors. So each will garner and manipulate data for those purposes. At the same time, it should not be imagined that the influence, management or control is necessarily malign or unsocial, despite the frequently negative connotations of the word 'surveillance'. It may involve incentives or reminders about legal requirements; the management may exist to ensure that certain entitlements—to benefits or services—are correctly honoured and the control may limit harmful occurrences.

On the one hand, then, surveillance is a set of practices, while, on the other, it connects with purposes. It usually involves

relations of power in which watchers are privileged. But surveillance often involves participation in which the watched play a role. It is about vision, but not one-sidedly so: surveillance is also about visibility. Contexts and cultures are important, too. For instance, infra-red technologies that reveal what is otherwise shrouded in darkness help to alter power relations. But the willing self-exposure of blog-writers also helps to change the contours of visibility. To use infra-red devices to see into blog-writers' rooms at night would infringe personal rights and invade private spaces. But for blog-writers to describe their nocturnal activities online may be seen as an unexceptional right to free expression...

At first glance, as it were, surveillance seems to be about watching. One person watches others in order to check for inappropriate or abnormal behaviour. The pole-mounted camera in the street keeps watch for potential deviance, from criminal acts to 'undesirable' activities. But surveillance may also be about listening, from eavesdropping to phone-tapping. What is heard may in certain circumstances be used as evidence, and in the context of global fears about terrorism fairly flimsy references to violent action may count for something. Already these examples include some technological mediation, whether closed-circuit television (CCTV), wiretaps or whatever. But once we consider the range of possible mediations, the surveillance picture enlarges significantly...

Concepts such as 'surveillance society' draw our attention to the ways in which our whole way of life in the contemporary world is suffused with surveillance. In this perspective, the gaze is ubiquitous, constant, inescapable. What once was experienced only in specific contexts such as voter registration, tax files or medical records, in each of which personal records are held by an impersonal organization, has spilled over into every dimension of daily life. Whether travelling, eating, shopping, telephoning,

working, walking in the street or working out at the gym, some check occurs, some record is made or some image is captured. As Robert O'Harrow's book title says, there's 'no place to hide'. But such terms as 'surveillance society', while useful, are also potentially misleading because they suggest merely a total, homogeneous situation of 'being under surveillance' when the reality is much more nuanced, varying in intensity and often quite subtle.

Rather than thinking only of 'surveillance societies', it is helpful to think of specific surveillance sites, as they have developed historically in the modern world. Theoretically, this is a more institutional approach that separates surveillance strands out into different domains of social life such as work and leisure. This gives us a sense of the variety of surveillance situations that we might encounter, a sense of how one system gave rise to or facilitated another, and at the same time a sense of how one system may overlap with another or several others. Eventually, however, we are obliged to see that contemporary surveillance is very much influenced by the apparent imperative to be joined-up. The desire to create assemblages is strong, even if these are not always matched by the reality, which may be technically deficient or may encounter user resistance, or both.

Separate strands do still exist but increasingly, using electronic information and communication networks, they are or can be connected. ... There are also some common threads, which help us to analyse similarities and differences between different sites of surveillance. Such threads include processes basic to modernity, such as the following:

Rationalization. This describes the process whereby standardized techniques are sought and reason (rather than tradition, emotion or common-sense knowledge) is prized as the guide to social, political and economic life. Whether or not surveillance

systems (or any other ones) that owe their peculiar traits to the modern quest for rationalization actually work well, or better than what preceded them, is an open question. Because in the case of surveillance personal information gathering is rationalized, there are bound to be tensions.

Technology. The application of science and technology to organizational practices, in order to support and reinforce rationalization and to speed up processes, is clearly visible in surveillance sites. Surveillance, which for most of human history has been a matter of face-to-face oversight augmented with some methods of recording basic information, is now also characterized by high-technology applications. As these become embedded in surveillance systems they sometimes help to alter the very character of those systems.

Sorting. The classification of groups—workers, prisoners, customers and so on—into categories to facilitate management and control through differential treatment of those groups is also central to surveillance. Those who have the capacity to influence how people are classified and categorized tend to be in positions of greater power than those who do not. This process is now somewhat occluded, especially in the present context, by the use of computer software to accomplish the sorting processes.

This simply pushes the question back, however, to ask how the highly consequential coding is done that distinguishes between one group and another.

Knowledgeability. The different levels of knowledgeability and willing participation on the part of those whose life-details are under scrutiny make a difference to how well surveillance works. Surveillance works best with the cooperation of those who are subject to it. Of course, the Iraqi soldier caught in a remote satellite image or the supermarket shopper whose preferences are sold to a third-party marketing company can hardly be thought to be involved in their surveillance. But what they do know and what they do with that they know makes a difference... at a micro-level all sorts of strategies and subterfuges on the part of knowing subjects make a difference to how surveillance works.

Urgency. A fifth thread that has become increasingly prominent within the safety- and security-oriented world of the present, especially since 9/11, is what might be called obsessive risk aversion and media-amplified public panic. This tends to prompt the adoption of surveillance measures of many kinds, even if already-existing measures do the same job. Some national ID card proposals fall within this category.

GARY T. MARX

WHAT'S NEW ABOUT THE "NEW SURVEILLANCE?" CLASSIFYING FOR CHANGE AND CONTINUITY

Continuing an exploration he began in his book *Undercover: Police Surveillance in America* (1988), in this excerpt Gary Marx outlines key dimensions of what he calls "the new surveillance." Some notable changes are that the new surveillance is technologically mediated, largely undetectable, involuntary, and often automated. By systematizing differences (between "old" and "new"), Marx seeks to provide a framework for careful and rigorous analysis on the part of other researchers.

One indicator of rapid change is the failure of dictionary definitions to capture current understandings of surveillance. For example in the *Concise Oxford Dictionary* surveillance is defined as "close observation, especially of a suspected person." Yet today many of the new surveillance technologies are not "especially" applied to "a suspected person." They are commonly applied categorically. In broadening the range of suspects the term "a suspected person" takes on a different meaning. In a striking innovation, surveillance is also applied to contexts (geographical places and spaces,

particular time periods, networks, systems and categories of person), not just to a particular person whose identity is known beforehand.

The dictionary definition also implies a clear distinction between the object of surveillance and the person carrying it out. In an age of servants listening behind closed doors, binoculars and telegraphic interceptions, that separation made sense. It was easy to separate the watcher from the person watched. Yet self-monitoring has emerged as an important theme, independent of the surveilling of another. In

the hope of creating self-restraint, threats of social control (i.e.: the possibility of getting caught) are well-publicized with mass media techniques.

A general ethos of self-surveillance is also encouraged by the availability of home products such as those that test for alcohol level, pregnancy, menopause and AIDS. Self-surveillance merges the line between the surveilled and the surveillant. In some cases we see parallel or co-monitoring, involving the subject and an external agent. The differentiation of surveillance into ever more specialized roles is sometimes matched by a rarely studied de-differentiation or generalization of surveillance to non-specialized roles. For example regardless of their job, retail store employees are trained to identify shoplifters and outdoor utility workers are trained to look for signs of drug manufacturing.

The term "close observation" also fails to capture contemporary practices. Surveillance may be carried out from afar, as with satellite images or the remote monitoring of communications and work. Nor need it be close as in detailed—much initial surveillance involves superficial scans looking for patterns of interest to be pursued later in greater detail.

The dated nature of the definition is further illustrated in its seeming restriction to visual means as implied in "observation." The eyes do contain the vast majority of the body's sense receptors and the visual is a master metaphor for the other senses (e.g., saying "I see" for understanding or being able to "see through people"). Indeed "seeing through" is a convenient short hand for the new surveillance.

To be sure the visual is usually an element of surveillance, even when it is not the primary means of data collection (e.g., written accounts of observations, events and conversations, or the conversion to text or images of measurements from heat, sound or movement). Yet to "observe" a text or a printout is in many ways different from a detective or supervisor directly observing

behavior. The eye as the major means of direct surveillance is increasingly joined or replaced by hearing, touching and smelling. The use of multiple senses and sources of data is an important characteristic of much of the new surveillance.

A better definition of the new surveillance is the use of technical means to extract or create personal data. This may be taken from individuals or contexts. In this definition the use of "technical means" to extract and create the information implies the ability to go beyond what is offered to the unaided senses or voluntarily reported. Many of the examples extend the senses by using material artifacts or software of some kind, but the technical means for rooting out can also be deception, as with informers and undercover police. The use of "contexts" along with "individuals" recognizes that much modern surveillance also looks at settings and patterns of relationships. Meaning may reside in cross classifying discrete sources of data (as with computer matching and profiling) that in and of themselves are not that revealing. Systems as well as persons are of interest.

This definition of the new surveillance excludes the routine, non-technological surveillance that is a part of everyday life such as looking before crossing the street or seeking the source of a sudden noise or of smoke. An observer on a nude beach or police interrogating a cooperative suspect would also be excluded, because in these cases the information is volunteered and the unaided senses are sufficient. . . .

For simplicity I have arranged this largely in a series of discrete either/or possibilities (e.g., visible or invisible, gathered by a human or a machine). But there may be continuous gradations between the extreme values (e.g., between visible and invisible). Some dimensions involve mutually exclusive values (e.g., single vs. multiple measures) but many do not (e.g., the hybrid case of a guard dog wearing a tiny video camera).

In some cases classification reflects an inherent property of the technology (e.g., infra-red and sound transmission devices go beyond the unaided senses). In other cases where a means is classified depends on how it is used. A technology may seem to lend itself well to a value (e.g., video lens can be used invisibly relative to the traditional bulky zoom camera), but a policy announcing that a video camera is in use would lead to its being classified as visible.

The differences between traditional and new surveillance can be approached in terms of the categories in Table 1. Traditional surveillance tends to be characterized by the left side of the table. The traditional means have certainly not disappeared. They have however been supplemented by the new forms which tend to fall on the right side of the table.

The new surveillance relative to traditional surveillance extends the senses and has low visibility or is invisible. It is more likely to be involuntary. Data collection is often integrated into routine activity. It is more likely to involve manipulation than direct coercion. Data collection is more likely to be automated involving machines rather than (or in addition to) involving humans. It is relatively inexpensive per unit of data collected. Data collection is often mediated through remote means rather than on scene and the data often resides with third parties. Data is available in real time and data collection can be continuous and offer information on the past, present and future (à la statistical predictions). The subject of data collection goes beyond the individual suspect to categories of interest. The individual as a subject of data collection may also become the object of an intervention. There may be only a short interval between the discovery of the information and the taking of action.

The new surveillance is more comprehensive often involving multiple measures.

But since it is often mediated by physical and social distance (being more likely to be contextual) it is not necessarily more valid. It is more intensive and extensive. The ratio of what the individual knows about him or herself relative to what the surveilling person knows is lower than in the past, even if objectively much more is known. Relative to the past the objects of surveillance are more likely to be an anonymous individual, a mass or an aggregate. The emphasis is expanded beyond the individual to systems and networks. The data often goes beyond direct representation to simulation and from narrative or numerical form to also include video and audio records. The monitoring of specialists is often accompanied (or even replaced) by self-monitoring. It is easy to combine visual, auditory, text and numerical data and to send and receive it. It is relatively easier to organize, store, retrieve and analyze data. Traditional surveillance is the reverse of the above.

Given the nature of perception, lists imply an egalitarianism among terms that is often unwarranted. The dimensions in Table 1 are hardly of equal significance. They can be clustered or ranked in various ways. Among those on the new surveillance side with the clearest social implications are extending the senses, low visibility, involuntary nature, remoteness, and lesser cost. These create a potential for a very different kind of society and call for stringent vigilance. In extending the senses (the ability to see in the dark, into bodies, through walls and over vast distances etc.) they challenge fundamental assumptions about personal and social borders (these after all have been maintained not only by values and norms and social organization, but by the limits of technology to cross them). Low visibility and the involuntary and remote nature of much contemporary surveillance may mean more secrecy and lessened

TABLE 1 Surveillance Dimensions

DIMENSION	A. Traditional Surveillance	B. The New Surveillance
<i>Senses</i>	unaided senses	extends senses
<i>Visibility (of the actual collection, who does it, where, on whose behalf)</i>	visible	less visible or invisible
<i>Consent</i>	lower proportion involuntary	higher proportion involuntary
<i>Cost (per unit of data)</i>	expensive	inexpensive
<i>Location of data collectors/analyzers</i>	on scene	remote
<i>Elites</i>	harder (more coercive)	softer (less coercive)
<i>Integration</i>	data collection as separate activity	data collection folded into routine activity
<i>Data collector</i>	human, animal	machine (wholly or partly automated)
<i>Data resides</i>	with the collector, stays local	with 3rd parties, often migrates continuously (omnipresent)
<i>Timing</i>	single point or intermittent	past, present, future
<i>Time period</i>	present	real time availability
<i>Data availability</i>	frequent time lags	more democratized, some forms widely available
<i>Availability of technology</i>	disproportionately available to elites	more democratized, some forms widely available
<i>Object of data collection</i>	individual	individual, categories of interest
<i>Comprehensiveness</i>	single measure	multiple measures
<i>Context</i>	contextual	ascontextual
<i>Depth</i>	less intensive	more intensive
<i>Breadth</i>	less extensive	more extensive
<i>Ratio of self to surveillant knowledge</i>	higher (what the surveillant knows, the subject probably knows as well)	lower (surveillant knows things the subject doesn't)
<i>Identifiability of object of surveillance</i>	emphasis on known individuals	emphasis also on anonymous individuals, masses
<i>Emphasis on Realism</i>	individuals	individual, networks systems
<i>Form</i>	direct representation	direct and simulation
<i>Who collects data</i>	single media (likely or narrative or numerical)	multiple media (including video and/or audio)
<i>Data analysis</i>	specialists	specialists, role dispersal, self-monitoring
<i>Data merging</i>	more difficult to organize, store, retrieve, analyze	easier to organize, store, retrieve, analyze
<i>Data communication</i>	discrete non-combinable data (whether because of different format or location)	easy to combine visual, auditory, text, numerical data
	more difficult to send, receive	easier to send, receive

accountability, less need for consent and less possibility of reciprocity. Lesser costs create a temptation to both widen the net and thin the mesh of surveillance. For example, what if brain scan technology lives up to the claims of its advocates to identify

what people feel, know or are thinking? In the interest of preventing terrible things from happening (which after all it would be irresponsible not to do, not to mention legal liability), the sacred value traditionally placed on interior life would be eroded.

SECTION 2

SOCIETY AND SUBJECTIVITY

How are subjectivities produced by and governed through surveillance? If modern society and its institutions are organized around surveillance, as the previous section claimed, then surveillance encounters infuse all interactions individuals have with institutions, whether direct or indirect. One's individual identity, social relations, and life chances are shaped by such interactions, whether with government agencies, schools, healthcare systems, places of employment, or any of the other institutions that pervade society. More than that, to the extent that such surveillance operates in the background, as part of the largely invisible, rational functioning of society, its politics are insulated and obscured, making them difficult to detect or challenge. Some of the most influential work in the field of surveillance studies has explored and theorized these very dynamics.

The figure of the Panopticon—or "all-seeing" prison—is one of the most potent representations of such institutional power. As conceived of by philosopher Jeremy Bentham in the eighteenth century, and then popularized by Michel Foucault's expansive analysis in his book *Discipline and Punish: The Birth of the Prison* (1977), this prison design afforded the efficient control of people by delegating governance

functions to the architecture, to the very material and bureaucratic system of managing individuals in space. The excerpts in this section sketch the Panopticon in great detail, but, in brief, the prison design was that of a circular building with cells along the outer walls and a guard tower in the center. Inmates were housed individually in backlit cells, which facilitated their easy monitoring by guards or others. The vitally important design element of window blinds in the guard tower prevented inmates from knowing exactly when they were under observation, leading—it is argued—to prisoners' internalization of discipline such that they could be rehabilitated and introduced back into society as law-abiding citizens.

For both Bentham and Foucault, the Panopticon model was something that could be, or was in Foucault's reading, replicated in other institutions throughout society. The principles of comprehensive and individualizing surveillance could be found also in schools, hospitals, factories, military barracks, and so on. Across these settings, Foucault argued, control was achieved through complete visibility and legibility of subjects. In large part, the impetus for these transformations was the perceived instability caused by revolution, industrialization, and class mobility in Europe in the