

Parents have always been concerned about what their children might be up to, of course, but ours is the first generation that has deliberately sought techniques used by the military or the police in order to monitor their activities. Surveillance is not merely something exercised on us as workers, citizens or travellers, it is a set of processes in which we are all involved, both as watched and as watchers. Indeed, one of the most striking areas of growth for systematically keeping an eye on ordinary people is that of consumption. Throughout the twentieth century, techniques originating in market research were honed to try to second-guess what customers would want, but by the end of that century database marketing and its offshoots had become a billion dollar business. *make predictions/enforce narrative*

Loyalty cards in the supermarket, for example, are a key means of tracking purchases in a way that connects back to the individual, but numerous other means are also used to profile and classify consumers. This can produce targeted marketing, once the budget, preferences and shopping times of the customer are known. Shoppers may appreciate knowing about special offers that are actually specific to them, but they may also find that they are simply not informed about other available merchandise. Conversely, some even fear that government health regulations may oblige supermarkets to prevent certain customers purchasing a product – say, people with tendencies to obesity buying doughnuts – when profiles are accessed that combine medical with purchasing data (cited in Lace 2005b: 208). Once we are identified as particular kinds of customers, it can sometimes be difficult for us to make purchases outside our box.

Defining surveillance

Before going any further, I should make clear what is meant by 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, 'surveill') 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 (Giddens 1985).

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' (Hentschel 2006).

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.

Caught by coordinates

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.

Coordinates are key. Anyone who can pinpoint the time and place of some event or activity already has a handle on the situation. Those data reveal a lot. As we shall discover, the quest for personal data by large organizations has grown hugely over the past two decades. It has given rise to a new word, dataveillance, to describe this kind of 'watching' using not sight, exactly, but the amassing of details to create profiles that in a sense resemble those thus 'seen'. Dataveillance, says Roger Clarke, monitors or investigates people's activities or communications using personal data systems (Clarke 1997 [2006]). Being much cheaper than direct physical or electronic surveillance it enables the watching of more people or populations, because economic constraints to surveillance are reduced. Dataveillance also automates surveillance. Classically, government bureaucracies have been most interested in gathering such data, although employers have increasingly sought to keep accurate tabs on their workers as well.

But in recent decades organizations dedicated to 'getting to know' customers have challenged the primacy of government surveillance. In the 1980s database marketers developed new means of obtaining geo-demographic data as a means of building a picture of what sorts of people live where (hence, 'geo-demographic') so that direct mail shots could be much more accurately aimed than previously. In the 1990s, as the possibilities for online marketing grew, internet surfing was monitored to produce more data. And in the first decade of the twenty-first century several systems have appeared that have the capacity to capture 'locational' data. Tracing where you are at a given moment can be achieved using cell-phones, RFID (radio frequency identification) and other wireless devices (Lyon 2006b). An employer can check just how long his or her drivers take to reach their destinations, how long their breaks are and even what speeds they reach on the highway. Alongside this, geographic and geo-demographic information systems (GIS and GDIS) are also implicated in translating captured data into the means of sorting cities in ways that favour the already privileged (Burrows and Ellison 2004; Graham 2005).

Such coordinates are of interest to others than marketers, of course. If marketers can orchestrate mobile consumers and purchasing opportunities, the same kinds of systems can help police to track suspects on the move, airports to check the progress of travellers – whether 'trusted' or not – from check-in to gates, and even schools to monitor where students are. For example, near Houston, Texas, children wear RFID tags to alert school authorities and police when they get on and off the school bus, and a school in Buffalo, New York uses RFID to automate attendance registration (Richtel 2004). Such systems are at an early stage of development and it is not clear that they will be reliable enough for routine use, but interest in (as well as opposition to) them is widespread.

After 9/11, public interest in surveillance – such as it is – shifted back to law enforcement, as public opinion was sought on whether or not measures such as national ID cards or biometric measures in airports were acceptable in the 'war on terror' (and often, because of the way the questions were worded, a large measure of approval was found in Europe and North America¹). But within surveillance studies, all kinds of coordinates are of interest, not least because another trend is towards data collected for one purpose being used for others. Those consumer data, for example, may be of considerable

3 Explaining Surveillance

Surveillance has rapidly become a central topic of public debate and political concern. Post-9/11, wiretaps became controversial in the USA. CCTV coverage is questioned in the UK. Australians worry that an unwanted ID card system may be foisted on them. Simultaneously, surveillance appears as a popular theme in the mass media, and high-technology companies are making large profits with constantly evolving new devices. These, and other, developments are clear about contemporary surveillance. But beyond these observations, explanation is needed. Why are these things happening, what are the underlying trends, and why does surveillance occur differently or why is it experienced differently in different organizational and national contexts? The field of surveillance studies will not be worth much if no such explanations, or only weak explanations, are on offer.

While each area in which surveillance occurs has to be considered in its own right, and subjected to theoretical interrogation suited to its specific characteristics, there are some ways in which surveillance theory has to be discussed in a broader terrain; that is the main purpose of what follows. Because surveillance is occurring across national boundaries, is often mediated by similar types of computer software and hardware, and because its growth is frequently related to overarching goals such as 'national security' or 'safety', it must be theorized in ways that transcend its local and specific manifestations. In other words, the global, technological and policy aspects of surveillance demand some wide-ranging theories to make sense of the big picture.

At the same time, however, the quest for an abstract grand theory of surveillance is a wild-goose chase, particularly if it is yoked with particular concepts and is supposed to have universal relevance. The



theoretical task is better seen as an ongoing conversation in which concepts or theorems that prove helpful should be explored and used, but even if they loom large they should not be permitted to dominate the debate. Concepts such as the Panopticon have been unhelpfully overused, for example. The task of theory in this context is to show the connections between the real lives of ordinary people and the modes of surveillance that serve to watch, record, detail, track and classify them. That is, to make good surveillance theory, which actually explains what is important without becoming overly abstract or paranoid or technologically deterministic, the practices and processes of everyday life must always be kept in focus. *sublimate into a central question*

The elements of any theory include being historical and open to empirical constraint and moral critique. The sorts of elements that may be helpful in providing an orientation would include the following. Although it often has protecting, entitling or caring components, surveillance expands primarily as a means of power in modern societies, due to military, geo-political and economic dynamics expressed through bureaucratic organizations. From the late twentieth century, however, applications of digital technology stimulated by the same dynamics have helped to produce cross-system similarities, system networking and integration and the further extension of surveillance into everyday life, which overlay and interact with previous surveillance formations. In earlier and later forms, sovereign power and active subjectivity together shape how well surveillance power works in any given setting. Vision and visibility have been central to surveillance since early modern times, but this ocular emphasis also affects our understanding of non-visual analogues – such as 'dataveillance' – that feed off direct visual imagery.

Throughout the chapter, I try to keep in focus what it is that theory attempts to explain. To obtain the best kind of leverage, we have to be aware of theory that explains, firstly, the origins of surveillance in modern societies and thus, in a sense, what drives surveillance; secondly, the main ways in which surveillance operates in any given period, with the accent on the present; and, thirdly, the effects of surveillance on individuals, groups and the overall structuring of social relationships. In short, we can distinguish between theory that helps to interpret the causes, the courses and the consequences of surveillance, even though it is also helpful to see these together in their interconnectedness.

In what follows, I survey various aspects of surveillance theory, starting with its roots in several disciplines, moving through a discussion of 'modern' and 'postmodern' theories to more specific debates over 'discipline' and 'control', and concluding with a look at 'governance' and at the 'ban' as potential key concepts in surveillance theory. Each of these constitutes a general theoretical issue in surveillance studies, and must always be linked back to specific situations, processes and practices for the theory to be worth anything. But they are also issues that relate necessarily and strongly to critical and normative positions that must also be articulated and open for inspection and questioning.

The roots of surveillance theories

Among the many problems encountered by students of surveillance is that the field is large and sprawling and concepts and theories are drawn from a wide range of sources. Where to begin? And does the theory that originated in one domain such as the workplace really apply in another, such as the domestic or the consumer realm? How helpful are the popular concepts that are drawn from the work of George Orwell (Big Brother) or Michel Foucault (the Panopticon)? A good place to start is with those areas in which surveillance has been theorized for a long time, such as workplace management, military power or criminal justice.

As Elia Zureik points out, 'worker monitoring, fragmentation of tasks, the separation between mental and manual tasks, and regimentation of work' were noted by scholars such as Karl Marx, who saw them as a means of subordinating labour to capital (Zureik 2003: 31). But as he goes on to say, these themes are linked with workplace surveillance, especially through the application of new technologies that affect power relations. There is a sense in which such surveillance expresses an ongoing theme, that those who establish some means of watching over others are demonstrating that they do not trust those being watched, in this case workers. Workplace studies of surveillance often follow Foucault's focus on the micro-techniques of discipline that target and treat the body as something to be observed and tested (see Staples 1997: ix), and Zureik also shows that subtle, discursive approaches indicate how different uses of technology may produce different outcomes. But he reminds us as well that the larger ques-

tions of political economy – some of which derive from Marx – still must be borne in mind.

Turning to the second area, military power, Christopher Dandeker shows how important warfare and military development were – and still are – to the growth of Western liberal democracies (Dandeker 1990, 2006). As such, he argues, they have helped to expand surveillance into a central position in the constitution of nation-states. This argument is derived especially from Max Weber's theories but also from the 'Machiavellian' approaches of Italian theorists such as Pareto and Mosca. The early modern state had to supervise its citizens as well as to distinguish its domain of power separately from them. As war was a major feature of the life of those states, military organizations were often the first to bureaucratize and surveillance was an outcome. The state's supervisory powers over society extended in order to facilitate military objectives, something that became even more clear as 'welfare states' were created after World War II. Moreover, as long as the existence of bureaucratized and technologized military power is seen as a means of maintaining peace, the military-surveillance connection will persist.

Thirdly, as far as criminal justice is concerned, surveillance has also been a key feature of numerous developments, from making Victorian streets visible for policing (Cohen 1985) to equipping officers with high-tech devices for undercover tasks (Marx 1988). Indeed, to hear that someone is 'under surveillance' is almost automatically to assume that they are being monitored and tracked by police agents of some kind. But why might increased general surveillance, including the use of new technologies, occur at some times more than at others? Durkheim's theory of crime illuminates this issue well. When the gap between the relatively well-off and the relatively disadvantaged is growing, he argues, each group will come to see the other, increasingly, as a threat to their security. There may be both real and perceived increases in crime rates, because of the widening inequalities gap, and the better-off will respond by supporting more draconian counter-measures and broadening the definition of 'crime'. This includes obtaining technologies of self-protection, thus further excluding the more marginalized and targeting offender and innocent alike. As Perri 6 suggests, Durkheim's ideas may be extrapolated to suggest that more surveillance would follow, especially to maintain vigilance over public spaces, which would affect some 'suspect' categories disproportionately, thus adding to their stigma (Perri 6 2003).

↳ adding
to
stigma
of
suspect

As may be seen from these three examples, without intending to establish 'surveillance studies', some early social scientists spoke at least indirectly of surveillance issues, mapped the field in a preliminary way, and drew attention to modern disciplines of capitalist supervision (Marx) or military-bureaucratic record-keeping (Weber), or to the likelihood that surveillance would increase at times of growing social and economic inequality (Durkheim). One could add other examples as well, such as the accenting of the eye in the urban metropolis, which was central to the work of Georg Simmel (1950). For the latter, modernity entailed the creation of a 'society of strangers', the ideal breeding ground of surveillance surrogates for the sorts of trusting relationships that one might expect in contexts where longer-term and personal relations predominate.

— More specifically, one could consider the ways in which classical social and political theories focused – so to speak – on the eye. Without even invoking Jeremy Bentham's Panopticon, such ideas may be viewed more broadly within the 'scopic regimes of modernity' (Jay 1989), dating from Descartes. The eye was privileged to the extent that much later twentieth-century theory reacted with anti-ocularcentric critique. Narrowing this down to how some may 'watch over' others, it is already clear that the 'watching' may be metaphorical (the work-timing machines in the factory, the office files and the city plan) as well as literal. It is important to consider the implications of Enlightenment 'ocularcentrism' and its twentieth-century critique because 'watching' metaphors and considerations of the 'gaze' lie behind much surveillance theory, even when actual eyes and images are not in view. **

The question of vision and its critique is highly significant in surveillance studies, not least because the very concept of surveillance presupposes it. More broadly, as we shall see, knowledge is sought on the subjects of surveillance, and new techniques may be deployed to provide this. In his piece on 'digital rule', for instance, Richard Jones shows how the Foucauldian 'gaze' has given way in many cases to fresh forms of surveillance that rely on digital technologies (Jones 2000). Nonetheless, while a variety of restrictions on time and space are evident – though no longer typically in enclosed spaces – forms of control, exclusion and punishment persist. Watching over, monitoring or overseeing may in some cases be transposed into an electronic key, with consequences that cannot safely be overlooked (as it were).

Modern and postmodern surveillance theories

Modern surveillance theory relates to those classical treatments that understand surveillance as an outgrowth of capitalist enterprises, bureaucratic organization, the nation-state, a machine-like technologic and the development of new kinds of solidarity, involving less 'trust' or at least different kinds of trust (see Lyon 2001: 109ff.). Postmodern surveillance theory, on the other hand, deals with what William Staples thinks of as new forms of 'vigilance and visibility' – technology-based, body-objectifying, everyday, universal kinds of surveillance (Staples 2000: 11).

One does not have to accept the validity of other debates around the terms 'modern' and 'postmodern' to use them as helpful markers. Moreover, they may best be thought of as changing attempts to deal with major shifts in the social, economic, political and cultural landscape rather than as internally 'theoretical' movements. It seems to me that new kinds of theory are required to deal with some profound alterations in the organization of everyday life and in global relations that were accented from the 1980s onward. Although no one concept can be expected to undertake the task of encapsulating unprecedented transformations of social experience, 'globalization' is very relevant here, and 'postmodernity' also speaks well to the issues (see Lyon 1999 for fuller justification).

One particularly useful dimension of the concept of 'postmodernity' is precisely that it still refers to and assumes 'modernity'. Without debating whether we have ever been modern (it is a good question – see Latour 1993), it is important to remember that even if the concept of postmodernity – or 'postmodern theory' – is accepted, it does not necessarily supersede what obtained previously. With regard to the elements of postmodern surveillance mentioned above, it is clear that certain kinds of techniques and technologies for surveillance were common long before recent times, that targeting the body is not a new idea, and nor is local surveillance or even large-scale capture of population details (think of censuses, in use since ancient times). Rather, these elements have come to the fore, and now dominate the surveillance landscape in ways that they did not previously. These are general characterizations intended merely to provide a contextualizing big picture.

The main contours of modern theories of surveillance derive from analyses such as those mentioned above, including Marx, Weber and

Durkheim, but with two interesting additions. One is the (largely but certainly not explicitly) Weberian work of the French sociologist and legal scholar Jacques Ellul, and the other is the theoretical influence of the work of novelist and social critic George Orwell. The one bequeathed a strong interest in the technological dynamics of surveillance, and the other a model (or 'ideal type', if one is to see Weberian influence here as well) of a total surveillance society by which the degree of surveillance power in a given setting may be gauged. Both these figures also lent a moral seriousness and political urgency to the development of surveillance theory in the mid- to late twentieth century.

Ellul painted with a broad brush, the dominant stroke of which is '*la technique*'. This is a cultural orientation towards 'means' rather than 'ends', which also yields part of the commonality with Weber's work. This orientation makes the insertion into social life of many artefacts and technical processes seem desirable, plausible. *La technique* constructs the social world that the machine needs, feeding on itself and expanding in an all-embracing and usually irreversible fashion. Thus, for instance, Ellul was among the first to note the effects of technologized policing; it requires that more and more be supervised in the hope of apprehending more effectively those who violate rules and laws. *La technique* in police work steadily puts all under subtle surveillance (Ellul 1964).

Ellul's work, concerned as it is with the critique of totalitarianism, was recognized as a significant contribution by many early surveillance studies researchers and writers. Gary T. Marx's work on undercover policing and Oscar Gandy's on the personal information economy are cases in point of theorists who take some significant cues from Ellul. And the idea of 'surveillance creep', now widely used in the field, also originates in Ellul's work, via Langdon Winner's concept of 'function creep' (Winner 1977), although it was also used by Marx (1989) in relation to DNA fingerprints. In Winner's hands, this term, or, rather, the tendency to which it points, is used, for instance, of the establishment of digitized identification card systems, which tend to be expanded to include other functions not originally envisioned by their promoters (this is discussed further in Lyon 2001: 111–13).

Orwell's work, on the other hand, has provided some of the most enduring, best-known and publicly accessible concepts in surveillance studies, above all the figure of Big Brother. Theoretically, the notion

that nation-state surveillance arises from certain political imperatives, relating to military and geo-political struggles, and may embrace a whole society in negative and repressive ways, is connected with the work of Mosca, Pareto, Sorel and Michels. But in much academic as well as popular imagination, these theoretical ideas are brought to life in Orwell's fiction. The centralization of state power, the use of technologies such as the ubiquitous telescreen to bring the face of Big Brother into every corner and through which citizens could also be monitored, the twisting of language to create 'doublespeak' – all these are familiar dimensions of Orwell's sinister state-centred surveillance society.

One other aspect of Orwell's work is worth mentioning, however, and that is his ambiguity regarding the actual location of the *Nineteen Eighty-Four* society. While many considered his work as a critique of state socialism (and the old 'communist' countries behind the 'iron curtain' or Eastern Europe), Orwell did not let Western liberal democracies off the hook so easily. It is clear that his work, along with that of theorists as diverse as Hannah Arendt or Anthony Giddens, sees totalitarian tendencies – among which state surveillance would figure prominently – as immanent within any bureaucratically organized nation-state. This has become an abiding theme of surveillance studies, that it is precisely within liberal democratic nation-states where record-keeping, monitoring and observation become routine and technologically augmented that restrictions on liberty – and, especially post-9/11, mobility – may be anticipated.

One prominent theorist who does argue for the central role of surveillance in modern life is Anthony Giddens. Lamenting the dominance in late twentieth-century sociology of Marx-influenced theories, on the one hand, and what he calls 'industrial society' theories, on the other, Giddens insists that surveillance (and militarism, the other neglected factor) must be seen in its own right and not merely as a product of capitalism or bureaucracy (Giddens 1985). For Giddens, surveillance refers to both the accumulation of coded information and the direct supervision of social life (Giddens 1985: 13), and it may become a significant means of domination. While he sees the dangers of totalitarian tendencies in bureaucratic administration, Giddens also wants to distance himself from the more cynical reason of Nietzsche or Foucault's 'ubiquitous power' and leave history open to democratizing possibilities.

While Giddens' work makes a welcome break with the relative neglect of surveillance in social theory, two observations must be made about his contribution. One, the distinction between 'supervision' and 'coded information' becomes more and more difficult to maintain in a digital world where coded information becomes a *means* of supervision. Computerized surveillance contributes to the collapse of that distinction. Two, Giddens' assumption that surveillance is primarily a feature of nation-states is hard to sustain when personal data, used for regulation purposes, are promiscuously processed in many non-government realms, but with undoubtedly governmental consequences.

Towards postmodern surveillance

All these examples in the previous section add up to what I am calling, for want of a better term, 'modern' contributions to surveillance theory. By the later twentieth century, however, it became increasingly clear that surveillance was undergoing some serious alterations, as the political-economic context moved towards 'consumer capitalism' and as new digital technologies were adopted in organizations. This meant, for example, that those thinking in primarily 'Orwellian' terms had to consider surveillance practices well beyond the nation-state – in advertising and marketing, for instance – and involving technologies that have greater speed and capacity and are much more subtly interactive than anything previous. The new technologies make automation and permanent record-keeping possible, the body may be watched, assessed and manipulated in new ways, everyday surveillance is local and immediate, and yet the data of large populations are captured for sorting and sifting.

This last point is especially significant, but must also be handled with great care. Any social and political theory that attempts to incorporate the technological is vulnerable to charges of 'determinism'. That is, the impact of new artefacts and systems may easily colonize the argument, such that already existing situations and processes are downplayed and 'indigenous' factors may be obscured by an exaggerated view of technical capacities. At the same time, to ignore or downplay the role of digital technologies in helping to create today's surveillance landscape would seem to be blindness of a perniciously perilous kind. Without the enablement of new technologies, the extension of 'vision' would be

restricted (Marx 1988: 217–19), cross-system usability and networked integration would be impossible, and ‘social sorting’ – the pervasive digital discrimination that makes possible different treatment of different categories of population (Graham and Wood 2003; Lyon 2003b) – could not occur on the scale that it does today.

The more ‘postmodern’ versions of surveillance theory, as Staples says, underscore technology-based, body-objectifying, everyday, universal kinds of surveillance. To review these: the technologies make surveillance amenable to automation and place increasing reliance upon the data-double or the virtual self. Mark Poster makes some important observations on this, suggesting how post-structural theory helps us to see databases as ‘discourses’ and data-doubles as simultaneously independent and dependent entities (Poster 1996). For Poster, this means we live in the era of the ‘superpanopticon’. So, far from producing Foucault’s ‘interiorized’ subjects, (aware of their self-determination,) database discourse produces objectified individuals with dispersed data ‘identities’ of which some may not even be aware. The body is no longer a bastion to be protected as ‘private space’. It is already part of the superpanopticon. that even aware of these clubs

The body-objectifying aspects of postmodern surveillance may be seen in the very visibility of bodies to surveillance agencies, which is now almost constant in some contexts, and in the rising attention paid to the body itself as a source of surveillance data. This aspect is not limited to external agencies, either. As new sorts of surveillance seep into all life-spheres, some engage in self-surveillance of quite precise and systematic kinds. Think of keep-fit ‘fanatics’, for instance, who constantly check times, pressures, weights and rates, or of the ways in which some women use scales, body-fat indicators and calorie charts in forms of low-level self-surveillance (Bordo 1993). As far as the external agency use of body data is concerned, the use of biometrics and DNA is further discussed in chapter 6.

The everyday character of postmodern surveillance refers to the ways in which the regulation of daily life now goes far beyond criminal or workplace deviance. Surveillance categories now include geo-demographic lifestyle groups, psychological classifications, educational differences and health distinctions. Some of these reach back to birth or even before birth in an attempt to gauge future life-chances. In the UK, for example, a child registry database established in the Children’s Act (2004) may even be used to check on children’s daily

fruit intake (Roberts 2006). As Deleuze would say, surveillance comes out of specific enclosures to permeate all of life. Surveillance is universal in the sense that no one is immune from the gaze. Surveillance is also universal in the sense that wherever new systems are adopted, they tend to have a similar technological character.

William Bogard uses Jean Baudrillard's work as a springboard for showing how surveillance is simulated (Bogard 1996). The speed with which computer systems operate makes it possible for them to overtake themselves, as it were, and to try to second-guess or predict events. This is an instance in which technological capacities contribute directly to the changing character of surveillance, enabling it to have a decidedly future orientation. The idea is to see first, to anticipate. Of course, early sociologists such as Auguste Comte believed that they could foresee and thus change the course of events, and in film-fiction the classic recent treatment is Steven Spielberg's adaptation of Philip K. Dick's short story 'Minority Report', where murders are 'seen' in advance by clairvoyant 'pre-cogs'. But surveillance as simulation brings this out of philosophy and fiction into practical police work or marketing. Pattern recognition software used in parking-lot CCTV, for instance, is intended to alert operators to 'suspicious behaviour' before the event.

What actually happens on the ground and in daily life, however, is likely to display a mixture of 'modern' and 'postmodern' features of surveillance. While risk management and new modes of governance may well be seen in pre-emptive data-mining or 'predictive' CCTV, watching for behaviour patterns rather than actual offences, in most countries the power of the state is still strong. Public space CCTV systems, for example, though they may be run on a commercial basis, or be outsourced to operating companies, are still operated in conjunction with police departments, and images from them may still be demanded by state intelligence authorities (Norris and McCahill 2006). However 'postmodern' the situation, the 'modern' is still present in the word and in the social reality.

Inside and outside the Panopticon

Some surveillance theories that may be considered to straddle the 'modern' and the 'postmodern' rubric originate in the work of Michel Foucault or Gilles Deleuze, neither of whom, paradoxically, had much

time for ideas of 'modernity' or 'postmodernity'. It took Michel Foucault, writing in the mid- to late twentieth century, to pinpoint a precise shift to modern scopic regimes, above all in the Panopticon, with its powerful explanatory proposals (Foucault 1979). The semi-circular architecture of Jeremy Bentham's envisaged prison heightened inmate visibility through individual back-lit cells and reduced or eliminated 'inspector' visibility through the use of blinds in the central inspection tower. Power lay primarily with the inspector, who could see without being seen, the uncertainty thus generated being the very means whereby his power was guaranteed.

For Foucault, the disciplinary gaze of the Panopticon is the archetypal power of modernity, the model of discipline that would suffuse all social institutions. Interestingly, however, archaeological work has recently uncovered some ancient observation sites that appear to be 'panoptic' *avant la lettre*, thus potentially relativizing Foucault's claims about the uniquely modern character of such surveillance (Yekutieli 2006). Nevertheless, his work certainly gave a new lease of life to some quaint ideas of Bentham's, ideas that were influential during the nineteenth century but which in their details might otherwise have remained in some dusty history of failed plans for prisons. Instead they have become paradigmatic for thinking about some aspects of surveillance (see Lyon 2006a).

Despite what seem to have been Foucault's intentions, the idea of unilateral power vested in the inspector is what animates a number of studies carried out following the logic of the Panopticon. This has yielded a rather one-sided account of surveillance that focuses heavily on the subtly coercive experience of living with the uncertainty of being seen, which for better or worse also lends itself to updating for an era of almost invisible electronic surveillance. In this account, as Foucault himself said, 'visibility is a trap' (Foucault 1979: 200). But not only does this kind of account distract attention from the subtle interplay between surveillance power and the attitudes and activities of those subject to surveillance, it also places all the emphasis on forms of rational control. The impression is given that surveillance is unambiguously imbued with the controlling interests of sovereign power.

Bentham was a driven secular social reformer, a major contributor to the British utilitarian school of thought. Late eighteenth-century Britain was buzzing with ideas for urgently needed penal reform, and other contributors to this came from the evangelical wing of Christianity. But

Bentham's vision differed from these in that, while he shared the idea that moral reform and not retributive punishment alone should be central to the prison experience, he insisted that the 'fabrication of virtue' (Evans 1982) should occur without any religious underpinnings. So although he prefaced his Panopticon plan with words chosen from the biblical Psalm 139 – 'Thou . . . spiest out all my ways. If I say, peradventure the darkness shall cover me, then shall my night be turned to day' – he turned his back on any notion that the surveillance should be about *caring* for the individual (the parallel theme of Psalm 139) and focused exclusively on the mechanisms of *control*.

Nikolas Rose summarizes nicely what the Panopticon was all about, for Foucault: 'the diagram of a political technology, one that was individualizing, normalizing, based on perpetual surveillance, classification, a kind of uninterrupted and continuous judgment enabling the government of multiplicities, reducing the resistant powers of human bodies at the same time as it maximized their economic and social utility' (Rose 1999: 187). But several processes are in play in Foucault's model. One is concerned with discipline, as seen sharply in the Panopticon plan, but the other focuses on bio-power. Where the first helps to normalize individuals, the second, through devices such as the census, socializes people by group or by category. In this second case, individuals are affected by virtue of their group membership or association. Even in the Panopticon, however, classification of prisoner types occurs, so that bio-power is also present there.

Although Foucault claimed that his was a history of the *present*, he studiously omitted any mention of the role of mass media or computers in contributing to the kinds of discipline and bio-power into which he had otherwise demonstrated such insight. Others, however, have taken his ideas into the realm of digital surveillance, showing how the Panopticon might go electronic (e.g. Poster 1996; Zuboff 1988). One could be forgiven for scepticism as we trace the path from a prison that was never built but whose principles supposedly permeated modern societies to electronic forms of surveillance that Bentham could never have dreamed of and Foucault curiously ignored.

It is important to recall that Foucault saw his work on surveillance in several other contexts that are explored, for example, in the *History of Sexuality* (Foucault 1976) and other writings, and centred on other concepts, such as the 'confession' (see, e.g., Cole 2006). And, importantly, it is not always possible to generalize about the Panopticon. For

one thing, the primary referent of the diagram is a prison, and thus although some of its operations may work in other contexts such as the workplace, the degree to which surveillance subjects can walk out of the surveillance site does make a difference. For another, a key element of the panoptic is its contribution to what Foucault called 'soul-training', so although visibility may be centrally significant to, say, CCTV systems, without the soul-training element there are limits on how far CCTV may be said to be panoptic (Haggerty 2006).

In *Discipline and Punish* (Foucault 1979) Foucault saw surveillance taking place in enclosed spaces – prisons, workplaces, schools – where people are confined. Each context has its panoptic principles at work; containing, shaping and including subjects within a system of automatic power. Foucault's arguments suggest how self-discipline is promoted through panoptic and related methods. The uncertainty about whether or not one is being watched creates the desire to comply with whatever is the norm for the institution in question. Through the process is developed an inner compulsion to 'do the right thing' as prescribed by the organization, which produces the desired 'docile bodies'. This brief account accents the power/knowledge dimension as it is tied to the visual and highlights what many have thought Foucault intended to achieve, an exposure of and a critique of 'vision' for its role in modern forms of domination.

Without doubting that the panoptic paradigm throws light on some very interesting aspects of the development of surveillance, it must also be said that it is also subject to a number of important criticisms. For one thing, it pays little attention to the growth of the mass media and thus the persistence of the 'spectacle', a theme that was initially suggested by Thomas Mathiesen in his work on the 'synopticon' (Mathiesen 1997) and is discussed in chapter 6. For another, despite some imaginative efforts, it is hard to bring together all the diverse aspects of digitally enhanced surveillance with the power/knowledge dynamics of the vision-directed Panopticon. Moreover, Foucault had additional observations on subjectivity that remain relevant after these critiques have been considered (see discussion in chapter 4).

The present discussion turns, then, to questions of how surveillance theory might go 'outside' the Panopticon, first in relation to digital technologies and the 'control society' thesis, and secondly in relation to another Foucauldian theme, that of governmentality (or, less clumsily, governance). Implicit in Deleuze's idea of the control

society is a critique of panopticism, that such surveillance has been superseded by other forms of power than discipline, mediated by electronic technologies. And in the 'governmentality' argument, surveillance is seen as one strand, or one strategy, in broader conceptions of power.

This debate about surveillance after the Panopticon is conceived in a variety of ways, among which is Roy Boyne's proposal that 'post-panopticism' be considered a successor to the panoptic paradigm (by definition, however, this position does not have the coherence of the panoptic perspective) (Boyne 2000). First, from Zygmunt Bauman, Boyne brings the idea that forms of consumer seduction are replacing the panoptic regime. Second, he suggests that self-surveillance may be carried out so effectively in Western capitalist societies that it makes the original panoptic impulse redundant. Third, he refers to William Bogard's claim that simulation, prediction and action before the fact may reduce the need for older forms of surveillance. Fourth, Boyne brings in Mathiesen's contention that the mass media synopticon, where the many watch the few, acts alongside the Panopticon, where the few watch the many, thus relativizing its effects. Finally, the arguable failure of the Panopticon to produce docile subjects is seen as a final challenge to panoptic theory.

In a terse but trenchant piece called 'Postscript on the Societies of Control' Deleuze sketches the shift from 'discipline' to 'control' (Deleuze 1992). Whereas Foucault had theorized surveillance in the context of confined fixed spaces like the Panopticon, Deleuze proposed that such old sites of confinement were no longer the only or the primary sites of surveillance. The erstwhile 'analogical' sites are now paralleled by new digital means, an idea similar to that of Paul Virilio, who writes of the rapid free-floating control of the 'vision machine' (Virilio 1994). The new surveillance is individualized and competitive, appropriate to the new businesses that emerged from later twentieth-century restructuring, where constant monitoring checks worker activities and individual inducements provide incentives for compliance.

According to Deleuze, individuals in the disciplinary society could be individuated and amassed using signatures and numbers. Now all that is required is just the code for 'dividuals' so that they can pass through the system of universal modulation: swipe the card; place the thumbprint on the screen. Work can be contracted out; consumers