



Editorial. The Labours of Surveillance.

Kirstie Ball¹

Abstract

Surveillance and work is examined as the central theme of the issue. Two interpretations of the phrase are made – first, surveillance of work, and second surveillance as work. After a focus on the second, a review of recently published work which informs this perspective is undertaken, and then two issues for future research are discussed. These issues concern how the surveilled subject might come to be understood, and how connectivity between different surveillance locales may be examined. It is concluded that examining surveillance as work renders new types of occupational category and organizational activity significant, as well as the labours involved in the social processes of identity work and representation management.

Introduction

Issue two of Surveillance and Society is themed ‘surveillance and work’. Surveillance occurs in numerous contexts where individuals, groups and organizations could be said to be ‘working’ to implement, perpetuate and resist it. There are a number of advantages to examining surveillance and work. First, it highlights the significance of everyday surveillance. The development and use of surveillance technologies is inextricably bound up with the activities of both public and private sector organizations, and the careers of the people within them. Second, it highlights the roles that private and public sector organizations have in surveillance networks: a large number of their operations depend upon the effective vending, purchasing and use of such technologies. Finally, it highlights the idea that the use of surveillance techniques in context can have transformative effects on the occupational experiences of those who are subject to them. It is some of these processes that the contributions to this issue examine.

The issue features three full-length papers, a case study, four opinion pieces and a poem. The full-length papers examine surveillance in work, how it is experienced, how it is shaped, and shaped by roles and social processes in the workplace, and how it is theorised. *Paul Thompson* examines the recent interest in surveillance by researchers in the organization studies field. Using a labour process theory lens, he asks whether there is anything really new or different about current modes of electronic surveillance-based control when compared to the type of control systems examined by, for example Friedman and Burawoy. He also questions and troubles the manner in which these processes have been theorised. Then, *Jeff Stanton* and *Kathryn Stam* examine how the

¹ Birmingham Business School, University of Birmingham, Birmingham, B15 2TT
<mailto:k.s.ball@bham.ac.uk>

value of employee information in the organization has led to the emergence of the IT professional as a key power broker in the organization, whilst at the same time documenting workers' reactions to increased electronic surveillance in not-for-profit organizations. Finally, *Ben Goold* describes a recent study of the impact of closed circuit television (CCTV) cameras on policing practices where the presence of surveillance cameras affected the working attitudes and behaviour of individual police officers, concluding that more needs to be done to prevent police from interfering with video tapes, particularly if they may contain evidence of misconduct.

A case study by *Peter Holland* makes a call for future policy-related activity. The piece reports on some of his research in progress which analyses the conflict-ridden introduction of drug testing in the Australian mining industry. In the light of his case analysis, he calls for the joint development of drugs policies by companies, unions and employees, rather than unilaterally enforced coercive policies which take employee acceptance for granted.

Four opinion pieces highlight different areas of controversy for theorists and practitioners alike. *Lucas Introna* discusses how the work of Levinas can be used to demonstrate how ethics, whilst often discussed in the context of surveillance, can never happen as long as individuals are being categorised and judged. *Andrew Charlesworth* discusses the difficulties in conceptualising and applying notions of privacy in the modern workplace and *Michele Beck* argues that mass consumer surveillance has led to a situation where consumers, as carriers of the symbolic capital of organizations via brands, can be said to be 'working' for the organization too. *Ros Searle* examines the organizational justice implications of the increasingly popular practice of E-recruiting. Identifying both procedural and distributive justice-related concerns, she introduces work from the field of occupational psychology into surveillance studies. Finally *Özgür Özmen Uysal's* poem 'Cageling' gives an opportunity for reflection upon our collective presence in surveillance networks.

Surveillance *and, of and as* work

Adopting the theme 'surveillance and work' for the second issue of surveillance and society contains a strong message: that the practice of surveillance is intertwined with labour and livelihoods; capital and careers. The theme may be interpreted in at least two distinct ways: surveillance *of* work, but, significantly, surveillance *as* work. After reviewing some of the recent research which analyses surveillance practices in this way, I make suggestions as to what future research into surveillance as work may comprise. The complex interplay between the different agencies involved in a discussion of surveillance as work highlights two areas where current knowledge is lacking: first, in respect of a coherent understanding of the surveilled subject, and second a consistent examination of the connectivity between actors, technologies, organizations, and society as a whole.

Whilst work by *inter alia* Ball and Wilson (2000), Kinnie, Hutchinson and Purcell (2000) and Fernie and Metcalfe (1998) examines surveillance of the workforce itself (see also Thompson, 2003 – this issue) one needs only to mention in passing some of the main empirical investigations, and current research into surveillance practice that highlights the role of ‘work’ in the sustainability of modern-day surveillance. Criminological and social policy – related studies of surveillance in action reveal much in this regard. For example, Norris and Armstrong (1999) and McCahill (2002) give invaluable insight into the sociology of CCTV control rooms to explore the individual and organizational contexts that come to govern at whom the camera is pointed and why. One might also posit as significant the type of ‘identity work’ (Stewart and Strathern, 2000; Knights, 1999) during self-representation by individuals who seek to avoid or resist the gaze of CCTV based surveillance on the street. Nellis (2003) explores the organizational dynamics of the probation service and UK criminal justice system in the application of the electronic tagging of offenders, and examines how the role of the probation officer has changed, and how new probation-related roles have emerged as a result. Similarly Richardson (1999) undertakes an ethnography of tagging where the labours of offenders and their families to conform to the tagging requirements were highlighted, and Goold (2003 – this issue) shows how CCTV has changed the working patterns of police officers. In the discussion of surveillance – related developments in the areas of crime, cybercrime, security and warfare, significant new roles have also been identified for data protection specialists, journalists, cybercriminals, and statisticians as individuals in its midst (Wood, Konvitz and Ball, 2003). Probably the most significant work role which is impacting upon the spread of surveillance is that of the IT professional. Whilst Stanton and Stam (2003- this issue) explore the changes in this role within general management, research currently being undertaken at the Universities of Newcastle and Sheffield is seeking to explore the worlds of those who write the coding which drives category based surveillance. This is just the tip of a huge iceberg of data categorisation, the effects of which Lyon (2002; 2001; 1994) has been highlighting for the last decade. In the appeal for a political reading of surveillance practice, the politics of data categorisation by IT and marketing professionals is an untapped mine of information, as its application is practically universal in the West’s mainstream retail-financial and consumer sectors. Our subjection to surveillance technologies is thus entirely concurrent with our positions as consumers, as employees, as citizens and as members of social, occupational and family groups.

One might also interpret the ‘work’ of surveillance to include that of organizations, the success of whose objectives and products are often dependent upon its practice. Both Bogard (1998) and Giddens (1998) tell us that Western surveillance technologies are a product of technoscientific processes connected with the perpetuation of the nation state, diffused into general usage by the capitalist enterprise. Recent commentaries (Wood, Konvitz and Ball, 2003) have proposed that this direction of influence has reversed, and relationships between the military and commerce have become closer in recent years. General management theories and transaction cost economics (TCE) acknowledge the importance of systematic information codification, monitoring and control to be central to occidental economic supremacy. Beniger (1986) and Yates (1989) emphasise the pervasive policing and control elements of large scale corporate systems which are supported by detailed communication systems (Clark, 1999). TCE, in focusing upon the

coordination of firms and market mechanisms and the policing of contracts, emphasises the role of information internal to the firm in subverting the main market mechanism: price (Coase, 1975; Williamson 1975). The private sector organization vending or using surveillance capable technology has strong motives to maintain its practice – risk management, profit and shareholder value being good examples (Ball, 2003; see also Searle, 2003 – this issue)). Notions of surveillance as reducing risk and securing profit are certainly reflected in the figures. The latest market reports value the UK's expanding security market at £2,744 million, with the government investing 75% of its crime prevention budget in CCTV schemes in the mid 1990s. There are currently 2.8 million operational CCTV cameras in the UK. The market for more sophisticated internet security products is also predicted to grow. The 2001 Information Security Breaches Survey, revealed that 60% of organizations had suffered a security breach in the last two years, and only 37% had undertaken an internet security risk assessment. The US access control market is currently valued at \$3.3 billion, with the market for biometric access controls set to grow 12.8% annually by 2005. After 9/11 shares in Identix, a leading producer of facial recognition software and famously associated with Newham Borough Council's CCTV scheme, soared. In the year 2000, there were also more FBI wire taps and bugs recorded than ever before in the name of intelligence, whereas for regular crime, surveillance activities were down 5%. Equifax, one of the largest consumer credit scoring companies, experienced an overall 7% increase on its second – quarter income compared to last year, totalling \$47 million, and Experian, its main rival, topped earning of \$1 billion in 2001. The picture becomes more complex if we consider surveillance applications within public sector organizations. Whilst the body of research concerning CCTV, policing and probation is growing, UK governmental calls for 'Joined Up Government' (Raab 2003; McGrail 1999a and b), and US governmental calls for 'Total Information Awareness' raise all manner of ethical and privacy related concerns in 'Information Age Government'. Whilst there are many stumbling blocks with this policy (Raab 2003) the wider stakeholder base of the public sector (especially including more vulnerable sectors of the population) makes the application of surveillance-based technicist and managerial approaches in this context seem inappropriate (Nellis, 2003).

The relatively simple act of surveillance generates incredible complexity when one considers its formative potential for organizations and individuals through their work in designing, implementing, using and abusing surveillance techniques. What might future research consider under the 'surveillance as work' rubric? Recent theorisations of surveillance in action by Haggerty and Ericson (2000) and Ball (2003) begin to address how surveillance practice might change, and be changed by, the world around it. Analysing recently published empirical work on surveillance in action, Ball (2003) concluded that intermediation processes were central in connecting the social, technical and power related elements of surveillance, within dominant social meanings attached to it. Moreover, Haggerty and Ericson (2000) use Deleuze and Guattari (1987) to conceptualise surveillance systems as heterogeneous arrays of objects, or assemblages, which seek to capture and categorise flows of information about the social world. Through the intricacies of economic transactions, more and more data are collected, individuals scrutinised, and data doubles created. There are many questions which need to be asked of the formative potential of surveillance in action, and of the participation

within them by different types of actor. However, I want to address what I consider to be two of the most fundamental questions concerning surveillance here. First, how can the surveilled and surveilling subject be understood, and second, what kinds of connectivity exist between surveillance domains, and how does this connectivity occur? I will briefly consider some of these questions in turn.

How can the surveilled and surveilling subject be understood?

Modernist social science has traditionally treated the subject in a rather limited way, as a representative of a class or a generation, for example. Latterly, the individual subject has dissolved into various subject positions, typically defined by face to face interactions, or textual relations of communication. Everyday life, cultural practices and consumption have been emphasised, which bear little relation to the class-bound conceptions of earlier sociologists. The environment for an individual's action has been conceptualised by a 'multiplicity of representational systems, heteronomous practices and conflicting social relations' (Törrönen, 2001: 313). How might these views be translated into surveillance studies? Work by Ditton (1999), for example, portrays urban inhabitants, who find themselves watched on CCTV by virtue of their presence in the city, as somewhat ambivalent towards it. This, argues Ditton, is as much a product of the fact that cities are uncertain places, as it is a cultural issue concerning the ubiquity and apparent docile acceptance of more CCTV by society at large. Nevertheless, monitored individuals in studies by Norris and Armstrong (1999) Ball and Wilson (2000) and McCahill and Norris (1999) all showed an involvement with surveillance that urged them to resist, test, or fool the gaze, thereby undertaking considerable identity work, primarily as an object of surveillance. Similarly, Norris and Armstrong's (1999) and McCahill's (2002) observations about the lives of CCTV operators and security personnel first suggested that the identities of operators influenced their orientation towards CCTV. At the same time, they showed that these influences, as security workers, or as members of social or family groups, fluctuated over time.

Thus, there is no unified way in which we could understand the monitored subject by virtue of their temporary position within the multiplicity of surveilled environments, and the intervening contextual factors which present themselves along the way. To approach the problem, I am going to suggest that the work of Michel De Certeau (1984) may go some way to answering the question posed above. De Certeau (1984) offered an interesting interpretation of Foucault's theory of power. He distinguishes between the *strategies* of groups with an institutional base from which to exercise power, and the *tactics* of those subject to that power, and because they, in De Certeau's view, lack an institutional base from which they can act in a continuous, legitimate way, and instead manoeuvre and improvise at the micropolitical level, developing schemata of tactics. The tactical standpoint is an extremely rich way of understanding the subject's interaction with socio-technical assemblages like surveillance. Furthermore, according to De Certeau, actions of everyday life are predominantly responses by individuals to systems of production called 'consumption'. Surveillance knowledge is thus created at the intersection of the consumption of retail goods, the internet or urban space, by individuals, and the production of the medium and products by organizations.

A significant subject position implicated in the discussion of identity work concerns the surveillance subject as embodied, and this is only briefly considered by De Certeau. Pre-empting Lyon (2001), Haggerty and Ericson (2000) also argue that the human body, and the information it yields in terms of its make-up and movements is the starting point for the creation of surveillance practice. Its significance arises not least in relation to notions of the surveillance *of* work. The body is one of the central sources of information on, verification and authentication of the integrity of the employee, in terms of their personalities, personal habits and trustworthiness with data routinely gathered through personality and ability testing, drug testing and lie detector testing. Recent developments in bodily surveillance at work are reviewed by Marx (1999), including the rather alarming ‘smart toilet’ which is popular in Japan. On use, the toilet can measure one’s body temperature and weight, and can detect pregnancy, diabetes etc via urine. Marx originally joked about the then fictitious device in a 1987 newspaper article. Similarly, the body is also regulated through cultural norms of dress in the workplace, which, particularly in the retail environment (Longhurst 2000) are the subject of intense surveillance from bosses. Van der Ploeg (2002) and Gibson (2001) examine notions of the body as a source of information in more detail.

Van der Ploeg (2002) explores the specific problem of autonomy and privacy in the gathering of biodata, and the informatization of the human body. She argues that biodata are a different category of information – rather than it being *about persons* it is *of the body*, giving rise to a new ontology of the body as information. The human genome project, and excursions into DNA analysis, gas chromatography etc., enable a reading of the body by its codification in information. As such, protection and disclosure of one’s bodily information is a matter of information privacy, and is a significant aspect of identity work under surveillance. If, as Van der Ploeg (2002) argues, body ontology is changing to one of information, the point at which the body itself stops and the body as information starts will begin to shift - after all, we involuntarily leave our DNA all over the place. Similarly Gibson (2001) characterises the polygraph machine as a translator of the body, inscribing it as holding the ultimate truth about a person, hence becoming a specific site of truth investments. Gibson (2001) argues that the repeated subjection of the body to pain-free truth tests (in comparison to torture) such as polygraphy, DNA testing, hair strand testing, retinal scanning etc renders it ‘a fragmented site of cross-referenced zones or assemblages of meaning’ (p63). In a manner similar to Van der Ploeg (2002) she notes that techniques such as the polygraph do away with notions of body integrity and interiority, by virtue of their informatised body ontology, arguing:

This borderless body technology may indeed be preferable to a torturous play between inside and outside, where the border is the site for a battle of wills over what is revealed or imagined as concealed. Yet this graphic writing of the living, breathing and speaking subject is a form of capture or incarceration within seemingly limitless decipherability (2001: 73).

Whilst it’s not unusual that surveillance studies, as a branch of the social sciences, should take a corporeal turn, it’s useful to consider the contribution which might be made to surveillance studies by existing sociological literature about the body. Beck (2003 – this

issue) identifies how brand-aware individuals can be said to be ‘working’ for organizations, even though they are not on the payroll. This viewpoint interpellates Bourdieu’s (1977: 1990) conceptions of ‘habitus’ and ‘physical capital’ which address the ways in which class relations are embodied. Bourdieu’s thesis is that the body is commodified such that it acts as the bearer of symbolic social value through education and acculturation. His notion of ‘symbolic violence’, the requisite acculturation and formation of non dominant groups into an institutionally sanctioned ‘language’, is also relevant here. Whilst this, in principle might well explain the function of the body as ‘aligning’ surveillance networks, as argued by Haggerty and Ericson (2000), recent work by Nick Crossley (2001) goes beyond Bourdieu to offer a more fluid conception of the role of the body in social networks. Distinguishing between views of the body-as-lived and the body-as-a-social-object and concentrating on the former, Crossley establishes, in a manner similar to Burkitt (1999) that bodily and mental life are interconnected. He argues that human embodiment is central to the constitution of the social world, since social interactions are sensuous, i.e. of the senses. Indeed, social interaction depends on the public availability of ‘mental states’, which necessitates their embodiment. Similarly, the meaning which is derived from this interaction is irreducible to the physical level. Consequently, our consciousness – our perception of the world – is itself embodied, as to perceive is to be in a two - way sensuous relationship with it. Thus, as embodied beings, we are perceptible to others. At this point, Crossley makes a crucial observation:

We fall within their perceptual field, and, in this sense, they ‘have’ us too. Our embodiment is thus necessarily alienated. We are never in complete possession of ourselves. More to the point, our perceptible being is captured in schemas of collective representation. From the moment of birth, and even before, our anatomical state and embodied visibility are made to signify social meanings and we, accordingly, are positioned in social space. Indeed, we only come to have ourselves by first enjoining this intersubjective order and learning to see ourselves from the outside, as “other”. (2001:141)

The meaning of our embodied beings is totally derived from the social world, and through participation in, and connectivity with it, and through the development of habits, we learn to identify ourselves from the outside, as reflected in others, and the social categories of our respective societies through time. The body, therefore, is something which is more than a social object, because it proactively perceives and constructs the social world, and yet it is not quite a subject – an identity produced by the social world in and of itself. Crossley proposes that there is a third term to describe this position, between subject and object, as ‘body-subject’. The key mediator between the body subject, the self and the world, is what Merleau Ponty calls the ‘corporeal schema’, ‘an incorporated bodily know-how and practical sense; a perspectival grasp upon the world from the ‘point of view’ of the body.’ (2001: 123). New habits and experiences are merged into the corporeal schema, which shapes its reactions and responses to the social, and ultimately, the social world itself. There are massive implications for surveillance studies in both Crossley’s work on corporeal schema, and De Certeau’s work in identifying the tactical schemata of subjects. Both could become significant units of

investigation by which a deep understanding of surveilling and surveilled subjects could be understood. Both Crossley (2001) and De Certeau (1984) may be legitimately consulted by investigators interested in the experience of surveilling and being surveilled. The 'work' undertaken by individual subjects who watch and are watched is manifestly intertwined with their lifeworlds, cultures, and selfhood, and the tactics of personal and bodily integrity.

However, this discussion has still not acknowledged a number of other problems in assessing the processes in surveillance as work. The first is that the watched is not always an individual – it is sometimes a larger agency – an organization, or a state, or something so nebulous as a socio-economic group, which may not deploy its 'tactics' in any consistent, observable fashion. The practice of surveillance certainly troubles the traditional social-science categories concerning analytical levels. The second is that strategies are continuous and legitimate. Clearly, the notion of an institutional strategy allows us to consider the intentions of organizations, or networks of organizations, and governments, economies, laws and societies which have a vested interest in the pursuit of surveillance practice. Whilst legitimacy may not, *a priori*, be a problem in terms of power relations, the notion of 'strategy' as consistent may well be. More fluid theorisation of surveillance in action is required, coupled with empirical analyses of the connectivity between different locales of surveillance practice, rather than the minutiae of the practice itself. This leads to the second question, relating to connectivity between surveillance domains.

What kinds of connectivity exist between surveillance domains, and how does this connectivity occur?

Recent (yet to be published) work in the organization studies field by Alan McKinlay of St Andrews University and the author, have separately concluded that, it is not only the relationships between vendors and users of surveillance capable software which determine its level of use, but also connections between purchasing users within an organization (e.g. an internet security team, or a human resources department), and other organizational members which are crucial in determining surveillance capability. The nature of the connectivity between these organizations, and the individuals within them is clearly significant, and has been referred to as 'intermediation'. 'Intermediation' is a key socio-technical process which 'binds (or unbinds) networks of individual actors or institutions' (Mansell 2002: 4). The intermediary, therefore, is a person, object or thing which helps to achieve this binding. As Callon (1991) states, intermediaries comprise 'anything passing between actors that defines the relationship between them' (Callon 1991: 134 - 135), and can be forms of texts: books, newspapers, magazines, or material artefacts, skills, or money, in its various formats.

At the individual level, governmental and media intermediaries seek to position individuals as needing protection as they walk down the street as a citizen, as needing to be marketed the type of product which the organizations say is suitable for their socioeconomic group, or as needing their behaviour and performance monitored in the workplace for the sake of their personal development and good of the organization. In particular, since 9/11, national security is now a more pervasive argument used in public

and policy circles to justify (for example) orders under the UK Regulation of Investigatory Powers Act, which propose to allow a wide range of public bodies access to individual communication records. Security is also a salient argument for proponents of street CCTV, the position of which was strengthened following the abduction and murder of James Bulger, and the much – used CCTV image of the abduction itself. Similarly, drivers in the UK are constantly reminded of the benefits and detriments of speed cameras to ensure their personal safety and law-abiding behaviour, by government installed road signs. Notions of citizenship influenced the spread of DNA testing for German male citizens who are now routinely tested if there is a crime in their local area, and the suspect is a male in their age range (Nogala, 1995). For business enterprises, the availability of information about workers, customers, tenants or citizens is portrayed as desirable and necessary to ensure competitiveness, profitability, and accountability. Thus, individuals, organizations and technologies begin to align, as surveillance is constructed as a necessity, as a protection from threat, a gateway to new knowledge and information, or as a means of securing profit. As well as the micro (interpersonal) level, actors are also involved at the macro (for example, technology vendors, local authorities) and meso (for example, the state) level (Michael 1996), and have interests in sustaining the stability of different surveillance domains. The nature and effects of the connectivity between them is a crucial unit of analysis, as they intermediate to help maintain local surveillance domains.

The Labours of Surveillance?

So who labours to perpetuate surveillance, and what type of work is involved? In the first instance, the occupational categories of police workers, CCTV operators, statisticians, IT professionals, data protection specialists, lawyers, marketing professionals, and, of course general managers involved in the immediate monitoring of their staff come to mind. When the analytical horizon is expanded, however, a number of more subtle labours are revealed. The identity work and representation management undertaken by the individual intermittently or permanently connected to the ‘surveillance assemblage’, whether by CCTV or electronic tagging. The financial, political and economic investments of various state and organizational level actors who have vested interests in the informative and predictive capacities of surveillance techniques are also reflected here.

For those studying surveillance, what is more significant is to address questions concerning the formative potential of surveillance in action, and of the varying nature of participation within the surveillance complex by different types of actor. In considering these issues, one should take on board the range of social science theories, tools and techniques at one’s disposal, some of which I have reviewed here. These concern theories of subjectivity, the body, and recent thinking on connectivity, all of which are supported by recent writing within surveillance studies itself. It is through the use and examination of these units of analysis that we may begin to uncover the details of the spread of surveillance practice, the politics of participation within it, and bases for its responsible and measured application.

References

- Ball, K.S. (forthcoming, 2003) Elements of surveillance: a new framework and future research directions. *Information Communication and Society* 5(4)
- Ball, K.S. and D.C. Wilson (2000) Power, control and computer based performance monitoring: repertoires, subjectivities and resistance. *Organization Studies*, 21 (3):536-565
- Beck, M. (2003) Working for them. *Surveillance and Society* 1(2): 223-226. <http://www.surveillance-and-society.org>
- Beniger, J.R. (1986) *The Control Revolution. Technological and Economic Origins of the Information Society*, Cambridge MA: Harvard University Press,
- Bogard, W. (1998) *The Simulation of Surveillance*, Cambridge: Cambridge University Press.
- Bourdieu, P. (1977) *Outline of a Theory of Practice* (trans R. Nice), Cambridge: CUP.
- Bolter, J.D. and R. Grusin, (1999) *Remediation: Understanding New Media*, Cambridge, MA: MIT Press.
- Burkitt, I. (1999) *Bodies of Thought: Embodiment, Identity and Modernity*, London: Sage.
- Callon, M. (1991) Techno-economic networks and irreversibility. In J. Law (ed.) *Sociology of Monsters*, London: Routledge, pp132 - 164.
- Clark, P. (1999) *Organizations in Action: Competition Between Contexts*, London: Routledge.
- Coase, R (1937) The nature of the firm. *Economica*4: 386 - 405.
- Crossley, N. (2001) *The Social Body: Habit, Identity and Desire*, London: Sage.
- De Certeau, M. (1984) *The Practice of Everyday Life*, London: University of California Press.
- Deleuze, G and F. Guattari (1987) *A Thousand Plateaus: Capitalism and Schizophrenia*, Minneapolis: University of Minnesota Press.
- Ditton, J. (2000) Crime and the city: public attitudes towards open-street CCTV in Glasgow. *British Journal of Criminology*, 40:692-709.

- Fernie, S. and D. Metcalf (1998) (Not) hanging on the telephone: payment systems in the new sweatshops. Discussion Paper No. 390, Centre for Economic Performance.
- Gibson, M (2001) The truth machine: polygraphs, popular culture and the confessing body. *Social Semiotics* 11(1): 61-73
- Giddens, A. (1985) *The Nation State and Violence*, Cambridge: Polity Press.
- Goold, B.J. (2003) Public area surveillance and police work: the impact of CCTV on police behaviour and autonomy. *Surveillance and Society* 1(2): 191-203. <http://www.surveillance-and-society.org>
- Haggerty, K. and R.V. Ericson (2000) The surveillant assemblage. *British Journal of Sociology* 51(4): 605-622.
- Introna, L.D. (2003) Workplace surveillance 'is' unethical and unfair. *Surveillance and Society* 1(2): 210-216. <http://www.surveillance-and-society.org>
- Kinnie, N., S. Hutchinson and J. Purcell (2000) 'Fun and surveillance': the paradox of high commitment management in call centres. *International Journal of Human Resource Management*, 11(5): 967-985
- Knights, D. (1999) *Management Lives: Power and Identity in Work Organizations*, London: Sage.
- Longhurst, R. (2001) *Bodies: Exploring Fluid Boundaries*, London: Routledge.
- Lyon, D. (ed.) (2002) *Surveillance as Social Sorting*, London: Routledge.
- Lyon, D. (2001) *Surveillance Society: Monitoring Everyday Life*, Milton Keynes: Open University Press.
- Lyon, D. (1994) *The Electronic Eye: The Rise of the Surveillance Society*, Cambridge: Polity Press.
- Mansell, R. (2002) Introduction. In R. Mansell (ed.) *Inside the Communication Revolution: Evolving Patterns of Social and Technical Interaction*, Oxford: Oxford University Press, 1-20.
- Marx, G.T. (1999) Measuring everything that moves: the new surveillance at work. In I. and R. Simpson (eds.) *The Workplace and Deviance*. JAI series on Research in the Sociology of Work.
- McCahill, M (2002) *The Surveillance Web: The Rise of Visual Surveillance in an English City*, Culthampton, Devon: Willan.

- McCahill, M. and C. Norris (1999) Watching the workers: crime, CCTV and the workplace. In P. Davis, P. Francis and V. Jupp (eds.) *Invisible Crimes: Their Victims and their Regulation*, London: Macmillan, 208 - 231.
- Mcgrail, B. (1999a) Highly thought of? new electronic technologies and the tower block. *Research Report, ESRC Virtual Societies, The Social Science of Electronic Technologies Research Programme*. Milton Keynes: The Open University.
- Mcgrail, B. (1999b) Communication technology and local knowledges: the case of 'peripheralized' high-rise housing estates. *Urban Geography*, 20(4): 303-333
- Michael, M. (1996) *Constructing Identities*, London: Sage.
- Nellis, M (2003 forthcoming) 'They don't even know we're there': the electronic monitoring of offenders in England and Wales. In K.S. Ball and F. Webster, (eds.) *The Intensification of Surveillance: Crime, Terrorism and Warfare in the Information Era*, London: Pluto.
- Nogala, D. (1995) Advanced surveillance technologies: techno-policing and its trivialization. Paper presented to *the International Privacy Conference*, Copenhagen, 2nd-3rd September.
- Norris, C. and G. Armstrong (1999) *The Maximum Surveillance Society: The Rise of CCTV*, Oxford: Berg.
- Raab, C. (2003 forthcoming) Joined-up surveillance? In K.S. Ball and F. Webster, (eds.) *The Intensification of Surveillance: Crime, Terrorism and Warfare in the Information Era*, London: Pluto.
- Richardson, F. (1999) Electronic tagging of offenders: trials in England. *The Howard Journal* 38(2): 158-172.
- Searle, R.H. (2003) Organizational justice in e-recruiting: issues and controversies. *Surveillance and Society* 1(2): 227-231. <http://www.surveillance-and-society.org>
- Stanton, J.M. and K.R. Stam (2003) Information technology, privacy, and power within organizations: a view from boundary theory and social exchange perspectives. *Surveillance and Society* 1(2): 152-190. <http://www.surveillance-and-society.org>
- Stewart, P.J. and A. Strathern, (2000) *Identity Work: Constructing Pacific Lives*. Pittsburgh: University of Pittsburgh Press.
- Törrönen, J. (2001) The concept of subject position in empirical research. *Journal for the Theory of Social Behaviour* 31(3): 313-329.

- Thompson, P. (2003) Fantasy island: a labour process critique of 'the age of surveillance'. *Surveillance and Society* 1(2): 138-151. <http://www.surveillance-and-society.org>
- Van der Ploeg, I. (2002) Biometrics and the body as information: normative issues of the socio-technical coding of the body. In D. Lyon (ed.) *Surveillance as Social Sorting*, London: Routledge, 57-73.
- Williamson, O.E. (1975) *Markets and Hierarchies: Analyst and Antitrust Implications*, New York: Free Press.
- Wood, D., E. Konvitz, and K.S. Ball (2003 forthcoming) The constant state of emergency: surveillance after 9//11. In K.S. Ball and F. Webster, (eds.) *The Intensification of Surveillance: Crime, Terrorism and Warfare in the Information Era*, London: Pluto.
- Yates, J. (1989) *Control Through Communication: The Rise of American Management*, Baltimore: John Hopkins University Press.