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Spiders, Flies, and the Internet

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Spiders, Flies, and the Internet

by David Lyons

Much is made of the enabling character of the Internet. We are told that this amazing tool liberates us to do things hitherto undreamed of. The idea of a "World Wide Web" suggests a global network of interconnected electronic nodes that make possible a new level of communication that goes beyond the older broadcasting mode into a sphere of interchange that even promises to better the democratic structure of the telephone system. The decentralized character of telephones, and the interchangeable positions of sender and receiver, are augmented and enriched in the Internet, with the potential for new communicative relations within a burgeoning cyberspace (see, e.g. Poster 1995).

Webs can have other purposes, of course. The spider spins the web in order to entangle and entrap the unsuspecting fly. The more the fly struggles, the more it is stuck. Without disputing the inherently democratizing possibilities latent in the Internet, it is worth exploring the capacity of the "web" to capture and control, to target and to trap, to manage and to manipulate. Although much has changed since the birth of the Internet's precursor as a Cold War military communications system, power has not simply been discarded as an infantile trait. Rather, power is now bound up with an extensive, increasingly integrated surveillance technology. Paul Virilio calls this "the militarization of knowledge" (1996).

"Personal" data caught in the web are of many kinds. The Internet makes possible new levels of surveillance-integration, relating to work-situations, government administration, policing, and, perhaps supremely, marketing. You may see a surveillance camera in the shopping mall, or even suspect that someone else is listening in to your cellular phone call. But Internet-based surveillance is far more subtle. You are part of a Usegroup? "People-finding" tools such as Alta Vista or Dejanews gather personal data from them. You visit websites? Many such sites automatically create visitors' registers, collecting data such as the kind of computer you own, your e-mail

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address, and the previous page you visited. The fine threads are almost imperceptible, and although each "fly" movement creates more entanglement, the "fly" remains blissfully unaware of what is happening.

In order to understand the world-wide-web of surveillance, first we need some background. The precursors to contemporary surveillance are many, but the Internet helps to shift such activity into a different register, a different plane. Where once the monitoring of place was significant, now surveillance data flows in a kind of "off-world" sphere. ("Off-world" real estate is advertised in the movie "Bladerunner." As used here the term echoes Manuel Castells' (1989) reference to economic "flows," uncoupled from physical places.) Secondly, we explore the various forms of surveillance activity generated on the Internet and note common traits. Thirdly, we ask the questions: how should these surveillance practices be understood? Are they an extension of capitalist control, or further evidence of our incarceration in an electronically-enhanced "iron cage" of bureaucratic organization? Or are they better understood as a form of panoptic power, where an unseen observer oversees a regime of truth and knowledge? Lastly, we raise the issue of response. What would count as an appropriately critical or normative approach that might positively affect policy and practice?

Surveillance: a modern growth industry

Watching others' activities, as a means of monitoring and supervising them, is hardly a new practice. The most ancient records—say of Egypt or Babylon—indicate that surveillance has been carried out to keep tabs on populations for taxation or military purposes, or to ensure that work was carried out satisfactorily. In modern times, however, surveillance became much more routine and general, involving whole national populations, across a range of activities and life situations. Births, marriages, and deaths were recorded systematically, individual persons were listed as being of an age and having status to vote in democratic elections, and workers were assembled under one roof to facilitate supervision.

In the twentieth century, these processes intensified. Government administration undertook surveys of populations; and departments such as health, welfare, immigration, taxation, customs, housing, vehicle and driver licensing kept more and more detailed records. Scientific management, geared to increasing productivity, also increased surveillance, focusing detailed time-and-movement analyses. By the mid-twentieth century it had become clear that surveillance was part of modern organization. Except that the term "surveillance" was still reserved mainly for intelligence and security services, not the routine business of everyday life.

The term "surveillance" was really only popularized in the mid-1980s, for several interesting reasons. One was that organizations of all kinds started to computerize, from the 1960s onwards. The increased collection of personal data, begun during the Cold War era, when state socialist societies still exerted tight political control over their citizens, generated fears of Orwellian police states and Kafkaesque faceless bureaucratic machines. Investigations of the social implications of electronic technologies suggested to some the advent of "surveillance societies" (Marx 1985, Flaherty 1989).

At the same time as widespread and accelerating computerization occurred, enthusiasm was mounting for Michel Foucault's ground-breaking studies of modern forms of discipline. These appeared in a series of related books, but most famously for present purposes in his *Discipline and Punish* (1979). In that book, the architectural plan for the "Panopticon" prison was elevated to exemplary status for modern disciplinary techniques. What Foucault did not attempt, however, was analyzing electronic forms of surveillance.

Jeremy Bentham's Panopticon is taken by Foucault to epitomize modern forms of discipline, as opposed to the physical punishments of earlier eras. The idea was that prisoners would learn to discipline themselves—become normalized— as they conformed to what they thought the institution required. Why would they? Well, for two reasons. They were carefully classified according to type, which already determined the kind of regime they could expect. And they were

observed from a central control tower. However, by using a system of venetian blends, inmates were prevented form seeing their watchers, so it did not in fact matter whether an official really was in the tower. This system of automatic control has obvious analogies for electronic surveillance, where the subtlety of classification and the imperceptibility of control is constantly enhanced.

Two major debates began concerning surveillance. The first focuses on whether electronic technologies contribute to a qualitatively different kind of surveillance from that characterized by paper files and classic bureaucratic organization. The second is how far Foucault's work can be applied to electronic surveillance (see Lyon 1993).

These two debates now converge in the area of most rapid expansion, consumer surveillance. The use of the newer technologies raises the question of how far database marketing goes beyond older styles of mass advertising, coupon delivery, and club memberships. So-called "mass customization" creates incentives for collecting personal data to use in the production-marketing process. Manufacturers or retailers wish to collect, store, and manipulate information about customers in order to control their behaviors (Samarajiva 1994, 91).

Database marketing works by clustering consumers by social type and location, and by more and more tightly trying to personalize advertising and consumer advice. The Claritas Corporation, for instance, noting that birds of a feather flock together, categorizes all North Americans into one of 40 groups, from "shotguns and pickups" to "young influentials," from "pools and patios" to "post-war rentals." Webster and Robins see the attempt more closely to influence consumers as "social management"—an extension of Taylorist practices of scientific management. This is elaborated and refined in Oscar Gandy's work on what he calls the "panoptic sort," where he sees database marketing as a "discriminatory technology" for grading and guiding consumers.

Consumer surveillance uses many of the same techniques as other forms of dataveillance, such as profiling, record linkage, and so on, but in North America operates largely beyond the reach of regulatory limits placed on government use of these practices. This, coupled with the apparent effectiveness of the crude behaviorist sociology involved in channeling choice and directing desire, means that database marketing has mushroomed in a few short years. Until recently, the only other brake on its progress was the relative lack of communicative means for transmitting data, not only within, but also between countries and continents. Enter the Internet.

Cyberspace Surveillance

The "spiders" who use the Internet are involved in what night be called "cyberspace surveillance," meaning any and all forms of personal data gathering that use computer-mediated communications. From the viewpoint of the "flies" or data-subjects, all these are part of the web whose weaving is triggered at the keyboard and which can be seen—if one knows where to look—on the screen.

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Three main categories of cyberspace surveillance may be discerned, relating to employment, to security and policing, and to marketing. These categories blur in practice for at least two reasons. One is that the very existence of electronic networks makes it easier in principle for data to be shared between different agencies, even though in most countries, regulatory regimes limit this. The other is that the same network used by large and powerful bodies such as governments or corporations can also be used by individuals or groups with far less power. At the very least this means that cyberspace surveillance is not necessarily centralized.

In employment situations, monitoring and supervisory forms of surveillance are common, so it is hardly surprising that increasing use of the Internet, and above all e-mail, by employees, has created new challenges. In December 1996, a Canadian federal scientist at the Department of Defense was arrested for allegedly downloading more than 20,000 pictures and video clips of child

pornography, using his office computer (MacLeod 1997). Also in 1996, Compaq Computer in Houston, Texas, fired twelve employees for using work-time to visit sex sites. With respect to e-mail, concerns have arisen among employers about the use of company time and resources for private correspondence, within and beyond the organization.

Responses to such practices generally take the form of technical measures to minimize the risk of recurrence. Software is installed to record and report all activities entailing use of the Internet and e-mail. All company information technology services have the capacity to track the use of electronic network use and to monitor the content of e-mail messages. In most of North America, whether they do so or not is a matter of company or organizational policy. A few years ago, a U.S. survey of managers revealed that 22 percent had searched employees' computer files, voice-mail, e-mail, and other electronic communications (Pillar 1993:7). The results are sometimes dramatic. A Los Angeles police officer, Laurence Powell, got into deep water after sending an e-mail to a friend, describing his involvement with Rodney King: "I haven't beaten anybody this bad in a long time" (Weisband and Reinig 1995:41).

These examples from work-situations also spill over into policing and security. Part of the policing is private, as when Canadian service-provider i-STAR removes certain risqué groups in the alt.sex hierarchy from public access. But another part is public, when Internet-based surveillance is undertaken by legally-constituted police services. In 1995, for instance, the American FBI undertook "Operation Innocent," an undercover sting involving the interception of American On-Line (AOL) e-mails of people who had responded to messages purporting to be from pedophiles. Raids were conducted on 125 homes and offices in 57 cities and many arrests were made (*New York Times*, September 16, 1995, cited in Zuijdwijk and Steeves 1995).

The best-known effort to enable widespread "security" surveillance on the Internet is the so-called Clipper chip. In 1994 the U.S. government proposed to introduce a uniform encryption standard that would effectively prohibit the proliferation of codes designed to protect the privacy of electronic communications. While individual users could rest assured that their messages would remain private, the one exception was that, in the interests of "national security," government agents would be able to listen in, when appropriate and necessary. Needless to say, the controversy aroused by this proposal has been fierce and is, as yet, unresolved.

While the preceding examples of cyberspace surveillance in employment and policing are interesting and, for many, alarming, they are on a small scale compared with the massive armory of commercial surveillance used by marketers. Apart from the suspicion of many that Netscape admits that they know each time a browser of theirs is in use, many other companies are certainly engaged in extensive profiling of Internet users. Some of these use the well-worn ploy of registration—as when one fills a warranty form for an appliance, thus giving extensive personal data to the company—to profile visitors to websites. In this case, some informed consent is required of netsurfers.

In many other cases, however, no such consent is sought or required. Websites frequently send automatic messages back to their owners, providing data about users' needs, habits, and purchases, based on their visits to the site in question. Some transactional information is passively recorded, such that the webmaster can determine what files, pictures, or images are of interest to the user, how long was spent with each, and where the user was before and after visiting that site. Internet Profiles, known better as I/PRO, indicates just how well and by whom a site is used. I/PRO's clients include Yahoo!, Compuserve, Netscape, and others such as CMP Publications and Playboy (Stagliano 1996).

So-called "Cookies" (Client-Side Persistent Information) give extensive tracking capacities to companies eager to exploit commercially the valuable segmented personal data on discrete individuals. Cookies allow websites to store information about visited sites on the user's hard drive; then they read the drive each time a site is visited to discover if the user has been there before. The latest marketing techniques applaud these practices as offering benefits to the consumer, of customized advertising, tailored to their needs. But the title of one such manual—*Strategic*

Marketing for a Digital Age (Bishop 1996)—also leaves little doubt about who else will benefit from this "military" maneuver.

However, lest these examples be discounted as paranoid, it should be noted that much data gathered via the Internet is available to any user with a credit card. A "privacy panic" arose in late 1996 over the activities of Lexis-Nexis and their P-TRAK system, designed to help police and lawyers locate litigants, witnesses, share-holders, debtors, heirs, and beneficiaries. In response to an outcry regarding the availability of Social Security numbers, along with names, addresses, and telephone numbers, the U.S. Federal Trade Commission (FTC) called for broader privacy protection, and Lexis-Nexis eliminated access to Social Security numbers. As it happens, other companies offer much fuller services then P-TRAK, also for fixed fees per datum. Information Resources in Fullerton, CA, for example, offers items such as criminal and court records, Social Security numbers, driving records, and employment background checks. Although one cannot obtain such information directly from the Web, all such companies—Information Resources, CDB Infotech, Information America, and so on—have Websites for marketing purposes (<isworld@listserv.hea.ie>).

Theorizing the surveillance web

What John Beniger (1986) calls the "control revolution" extends through all modern organizations. Especially in the police, the military, and in business corporations, a bureaucratic drive is evident, pushing towards tighter predictability as a means to greater control. For Beniger, such control is understood as increasing the probability of a desired outcome. This is the logic behind surveillance of many kinds. All contemporary institutions in the so-called advanced societies are characterized by an internal imperative to obtain, store, produce, and distribute data for use in the risk of management of their respective populations.

The examples given earlier show how this works in practice. Employers try to reduce the risk of employees using office time or equipment for their own purposes, for instance. The police work towards preventing the risks of crimes. And marketers do all in their power to avoid risks of lost opportunities, market niches, and, ultimately, profit. All engage in data-gathering procedures to try to pinpoint risks (or opportunities) and to predict outcomes. So surveillance spreads, becoming constantly more routine, more intensive (profiles) and extensive (populations), driven by economic, bureaucratic, and now, technological forces.

The surveillance literature becomes fuzzy at this point. Two main concerns are expressed regarding the outcomes of surveillance situations. One has to do with social participation, the other with personhood. The first sees surveillance outcomes in terms of social division and inequality, and thus social access and exclusion. The second focuses on questions of "invasions of privacy," on identity and, sometimes, on human dignity. Unfortunately, some theorists seem so concerned with the one that they ignore or minimize the significance of the other. Yet the two dimensions overlap, indeed, are two sides of the same coin. Identification and identity, for example, may be the means of inclusion and exclusion. Personhood is realized in participation.

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Surveillance is clearly implicated in the maintenance of social inequality and division. The panoptic sort (Gandy) distinguishes between different classes of consumer, reinforcing the lifestyle patterns and expectations of each group and maintaining a barrier between consumers and non-consumers. The latter form marginal populations—due to their age, ethnicity, income, neighborhood, and so on—that are in part constituted by the workings of surveillance systems that concentrate on the more rich and respectable echelons of society. Such marginal groups have their own surveillance that tend to be much more punitive, found in health, welfare and penal systems (Lyon 1994, cf. Ericson 1993).

Surveillance also deepens questions of identity when the capacity to control communication about

oneself is wrested from the individual. This is one strand in the debate over privacy, the right to which is often held to entail taking—or being given back—such control by various means. Analyses of surveillance that start from a premise of privacy are really focusing on fairly philosophical questions of personhood and what expectations one might have for communicative self-determination. Such analyses tend to assume that autonomous, individuated "selves" are threatened by intensified surveillance.

These issues are clearly of considerable political and ethical import, and that is why they should be discussed in relation to the burgeoning practices of cyberspace surveillance. However removed from daily life and remote from public control these practices seem to be, the drives behind them are very powerful, and their material consequences are all too real. As Stephen Graham says, many of these systems are directly geared to protect affluent consumer neighborhoods and corporate districts "...and to the exclusion, enforcement and control of the groups and areas that are marginalized by labor market and welfare restructuring" (1996, 28). The distribution of life-chances and of communal and personal well-being are increasingly dependent on the increasingly efficient systems of advanced surveillance.

Beyond these questions of participation and personhood, however, lie some further concerns about the nature of contemporary cyberspace surveillance. The kinds of issues just discussed assume that modern discourses of human rights or social justice still hold good in the world of the Internet. Yet the Internet is implicated in certain cultural shifts that call into question just those kinds of categories. Mark Poster, for instance, argues that the way that today's "personal" databases function makes them more like a "super-panopticon" (1995). Surveillance practices are not so much a threat to the privacy of an individual subject, but are actually involved in the very constitution of subjects. This puts a new slant on surveillance.

The new slant may be observed in more conventional settings. In the case of medical practice, notes Robert Castel, there has been a shift of emphasis away from face-to-face examination of the patient and towards an examination of records "compiled in varying situations by diverse professionals and specialists inter-connected solely through the circulation of individuals' dossiers" (Castel 1991: 282). This process has, he believes, crossed a threshold and taken the character of a mutation, a new form of surveillance that has prevention of risk at its core.

Individual subjects are now less significant than statistical correlations; autonomized management becomes the order of the day. If one can guide and assign individuals rather than take responsibility for them, then the management strategy has worked. This could even be seen, argues Castel, as a "post-disciplinary" situation, where the quest of efficiency has become paramount. To "forward plan social trajectories from a 'scientific' evaluation of individual abilities" is the new—maybe mythical—goal (Castel, 296).

The idea that there might be a mythical goal of surveillance has been taken up more recently by William Bogard (1996). He argues that a simulation of surveillance is contributing to "hypercontrol" in societies infused with communication and information technology networks. The mutation described by Castel seems to have wider relevance. Bogard brings together the work of Foucault with that Jean Baudrillard to try to obtain theoretical leverage on the simulated or virtual aspects of surveillance.

Where the panopticon dealt with real time and physical space—it is, essentially, an architecture—today's "hyperpanoptics" exist in a realm of electronic environments, where time is asynchronous and speed of flows is crucial, and where distance and proximity are blurred in cyberspace. Existing surveillance literature often speaks of data-images or data-shadows, and of blurring boundaries between images and realities, but Bogard's work suggests that this is central rather than epiphenomenal to today's situation.

Bogard stresses that the simulation of surveillance does not mean it is illusory, unreal. Indeed, "the better a simulation, the less awareness there is of the artifice that identifies it as a simulation" (31). This connects with the idea of "mythical goal" of surveillance, namely, that the problem of perceptual control ever a distance is solved through new electronic means. Knowing in advance who is likely to engage in welfare fraud,

buy Bennetton, or vote Liberal is seen as the means of maintaining order, normalizing populations, maximizing efficiency. Unlimited surveillance is the unspoken goal (and it is attractive to politicians, police, marketers and high-tech companies alike) but it is, as Bogard says, "actual only in simulation" (49). Alongside older forms of monitoring and supervision (such as the use of software for checking on employees' or children's use of the Internet) are these newer methods, that more and more involve the subjects of surveillance, now part of the total surveillance scene. And the Internet serves only to make the mythical goal more (seemingly) realizable.

These reflections aid analysis insofar as they help theory to move beyond the confines of physical space and real time—a task already accomplished in the virtual realm of cyberspace. But it would be a mistake to pull Wittgenstein's ladder up behind us as we rise through the clouds into this next level of surveillant simulation. The danger of discourses that inhabit a world of simulations is to forget the realness of the "real world" (see, e.g. Robins 1995). This demands that whatever constructive insights are gleaned from Foucault and Baudrillard, they be articulated with those of access, inclusion/exclusion and participation on the one hand, and identity, dignity, and personhood on the other. As Graham reminds in respect to the city, "webs of simulated surveillance system become woven into supporting and constructing the fabric of "real" urban life, just as the "real" landscapes of cities themselves become transformed into a realm of surveillant simulation" (1996, 28). Much work remains to be done to understand how these systems work.

Bringing cyberspace surveillance down to earth

The World-Wide-Web of surveillance exists as a means of control, enhancing through electronic networks already existing forms of surveillance. Exactly how that control is sought and is achieved remains debatable, although it is clear that on present showing, existing inequalities of power and access are reinforced, and fears being held in an unseen gaze are unrelieved. The foregoing discussion suggests that modern surveillance, based in the so-called control revolution, has evolved rapidly in new directions since the inception of computer-power.

While such computerization started as a way to enhance and augment already existing systems of surveillance, its technical possibilities have provided opportunities for novel practices, geared to coping with risk by preempting and preventing or by managing and manipulating. The convergence of computing with telecommunications, seen for example in the Internet, has enabled the growth of virtual surveillance, off-world dataflows, detached from their erstwhile moorings in time-and-space.

Surveillance theories have struggled with these changes, and the classic work of Marx and Weber has been augmented by that of Foucault, and now, Baudrillard. However, theory is still in a somewhat rudimentary condition. Yet if the preceding argument is correct, surveillance, including surveillant simulation, has all-too-real social, material, spiritual effects. Understanding these, and thus developing some critical discourses to deal with them, is of paramount importance.

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As use of the Internet expends rapidly among the well-heeled communities of the so-called advanced societies, so the scope of newer surveillance methods will also grow. At present, most critical debate discusses privacy concerns—rights to be left alone or free speech (guaranteed by encryption security). Resistance is all-too-often understood in terms of charging royalties on the use of personal data, or, better, of encouraging at least voluntary compliance with data protection conventions.

But privacy seems a weak weapon against the negative aspects of cyberspace surveillance. For one thing, it is rooted in the same soil that produced modern surveillance, the individuating thrust of democratic administrations. For another, one could argue that privacy is the cause not the cure for surveillance. As Steven Nock points out (1993), it is the mobile world of private,

anonymous strangers that requires proofs of trustworthiness—the credit card, driver's license, and so on. What Nock does not appear to notice is that these forms of evidence are used predominantly by those who already have a reputation to defend. Others, in whom consumer surveillance is less interested, find not only proof, but ordeals—such as video surveillance or genetic testing—awaiting them on the street, or in the welfare agency and penal systems. The sorting mechanisms have done their work, including and excluding, seducing, and marginalizing.

Some theories of privacy, recognizing classic liberal conceptions as a cul-de-sac, have attempted to introduce a social dimension to the argument. Priscilla Regan's (1995)work is exemplary in this respect, showing how privacy might be seen as a public and a common good. But until the inequality-reinforcing and personhood-threatening aspects of contemporary surveillance are seen together, and until these dimensions are understood in relation to the virtualizing of surveillance, the real issues of contemporary surveillance will continue to elude us.

Those real issues are not just "real" in a modern sense, that is to say, empirically available through sense experience. That understanding of "real" is already compromised, in part through the development of the very technologies we have been discussing. We should not be afraid to confront the hyper-real and the superpanoptic in our attempt to understanding these contemporary forms of social ordering. But they raise issues of the most profound kind about humanness and its relation to data-shadows and about the mythical goal of militarized knowledge—20/20 vision, perfect prediction, so that risk can be eradicated.

The multiple selves circulating in surveillance systems are indeed interesting socially, philosophically. But their existence has consequences in real time, real space, for the management of populations. The perfect knowledge machine, dreamed of by Bentham, seems to find exquisite realization in the simulations of cyberspace surveillance. But it seems to echo an older vision of knowledge acquired from plucking a fruit. In plotting the Panopticon, Bentham used divine omniscience as his template. Or he thought he did. But when he quoted from Psalm 139 he failed to note the eye that watches does so for control and care. God is not there to trap flies in a web but to watch his creatures both morally and lovingly. Considering this may be a good starting point for pursuing policy and practical goals for the Internet.

Whatever the social benefits of the Internet—and, stripped of hype, there are many—their realization will be jeopardized by the existence of the World-Wide-Web of surveillance. This is not something added to or different from the rest of the Internet, but an aspect intrinsic to its constitution. How we grapple with this fact will depend not on mere technical expertise, political acumen, or business skill, but on our understanding of humanness, justice, and the technological task in a less-than-perfect world.

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