Some conceptual issues in the study of borders and surveillance *

Gary T. Marx

> *We are at any moment*
> *those who separate the connected*
> *or connect the separate.*
> Georg Simmel

> *A question well put is half answered.*
> William James

> *Because you're mine*
> *I walk the line.*
> Johnny Cash

The Canadian sociologist Everett Hughes advised that the study of society should begin at home * In fact it should begin (and continue) wherever the observer is. In that regard the conference at which the papers in this volume were delivered can illustrate some border issues.

One that stands out is the common form of a temporal process of linked border crossings. Here the initial crossings of various personal borders are a prerequisite for some kind of permissive or restrictive action on the part of border guards (as broadly defined). This permits the subsequent crossing of organizational borders (which can, but need not, be linked with geographical borders) in the form of exiting and then entering.

*These reflections expand on earlier work available at www.garymarx.net, in particular Marx 1997a, 1997b, 2001, 2002, 2003.

Consider those of us who passed through one or more international borders in coming to Canada. We were permitted to cross into the physical and organizational Canadian border, but only under the prior condition of permitting a variety of our personal borders to be crossed – first by the country that we were permitted to exit, perhaps were in transit through, and then the country we entered.[1]

These personal border crossings included 'non-public' information (both that personally known by the subject but not immediately manifest to strangers, and information not even necessarily known by the subject). Take, for example, the biographical and biometric identity information encoded into a passport or visa and offered to (or 'taken' by)[2] an agent, and the disparate and disaggregated details of prior transactions and behaviour which are accessed, combined, cross-checked and compared against watch and risk profile lists.

This checking in turn can rend asunder knowledge inhibitors stemming from the logistical borders of fragmentation, incompatible formats and time. Consider the resurrection for decisional consumption of events long past (which in an earlier age could be easily concealed and were often beyond human memory) or in widely dispersed records and those in varied non-combinable formats. Note also how inspectors go beyond direct searches and through x-rays, electronic, chemical, canine and other scans pierce the protective border coverings of the unaided senses offered by our bodies, clothes, backpacks and suitcases. For some travellers the transversing of the body is a transgression.[3]

In these border crossings we see several central characteristics of contemporary surveillance – the breaking through previously protected information barriers/borders of the person often in a low-visibility or invisible fashion; the use and integration of multiple kinds of data (no border is an island); and the use of acontextual, non-local and abstract categories to construct profiles of, and decisions about, the individual.

As with video cameras applied equally to guards and prisoners or workers and managers, we see the reproduction or generalizability of these means as they are also applied to those licensed to cross the personal borders of travellers. Consider the use of drug tests, background investigations, biometric identification and video – including a recent proposal for cameras in airline cockpits, as applied to those in the transportation industry.

The articles in this volume emphasize the juridical and geographical national border. This form which can be so vital with respect to issues of citizenship, identity, economics, security and culture can be located within a broader conceptual space which permits comparisons across kinds of borders, and an emphasis on the links between borders.

At the broadest level border issues are central to the idea of any system, whether physical, cultural, social or psychological. Thinking about society as a system is, of course, fundamental to modern social theory (Park and Burgess 1921; Parsons 1956). Any notion of society involving a system of interdependent parts implies the ideas of internal and external borders and means of defining and regulating them. The parts are differentiated from each other, even as there are points of connection and exchange between them.

Many forms of surveillance can be usefully viewed as techniques of boundary maintenance. Surveillance serves to sustain borders through defining the grounds for exclusion and inclusion – whether to physical places, opportunities or moral categories. Differential treatment based on surveillance results is central to many forms.

Surveillants (whether at an airport, a welfare office, a credit card company, a highway, a mall or in a family) serve as gatekeepers, compliance inspectors, social-essence definers and guardians, assessing aspects of individuals to determine who they are, what categories they fit into and how they are to be treated.[4] Conversely, while it usually generates less attention as a policy issue (because it can more easily be framed as legally and often ethically wrong), surveillance is also a tool for undermining borders.

At a very general level there are likely some universal border structures or forms, regardless of specific content, that serve to define and protect organisms as well as groups. Borders that serve one group's interest (and are functional for it) may of course be challenged by those whose interests are not served and for whom the border is dysfunctional. The topic involves a fundamental natural and social process of border differentiation and creation/re-creation that has accelerated under modernization. We see a kind of boundary musical chairs, as actors and organizations strategically pursue their ends in ever-changing environments.

Changes in life conditions, social organization, cultural values and technology rearrange borders, generating various combinations of the new and the old. Borders may become ever more inclusive and generalized and simultaneously (in other forms) ever less inclusive and more specialized,[5] as well as becoming more permeable for some elements and less for others.[6] Depending on the point of view and the analytic component, surveillance may serve to maintain or undermine borders.

Beyond its broad usefulness in thinking about social behaviour and organization in any context, the concept of borders offers an organizing perspective for considering contemporary surveillance issues. When

these are sociologically and socially significant and newsworthy, it is often because defining, crossing or failing to cross a border of some form is at issue.

I hypothesize that when individuals feel their personal borders are wrongly invaded (their privacy is violated) one or more of four conditions are present (Marx 1999): 1) A natural sense border protecting information is crossed (e.g. the presence of secret video or audio transmission devices); 2) A social border assumed to be protective of information is breached (e.g. violations of confidentiality); 3) The temporal and spatial borders separating various periods or aspects of one's life are violated (the matching and mining of diverse computer data sets); 4) The assumption that unless notice is given, interaction and communication are ephemeral and transitory like a river, and not to be recorded and shared with others for future use.

From the early stirrings of surveillance studies in the 1970s through to the end of the twentieth century, empirical research and moral concerns focused on the use of new computer technologies to break through personal borders, as well as their potential for bringing greater organizational accountability. Those concerned with privacy and civil liberties argued for tightening the newly vulnerable borders around personal information, and they met with some success. At the same time, fallout from the 1960s and Watergate led to increased pressure for greater organizational openness and transparency (e.g. the Freedom of Information Act). The technological and social changes related to economic globalization also meant the weakening of several forms of organizational borders, resulting in the freer flow of goods, information and persons.

Yet after 9/11 in some ways the above was reversed. We see less public concern over the invasion of privacy and less support for governmental and organizational openness. Pressures to cross personal borders in order to protect organizational and national borders have greatly increased. Many in government argue that the privacy and openness of recent decades, and the unrestricted use of new technologies such as encryption and the web, undermine national security. Contrary to the trend of recent decades, many social borders are now more difficult to cross – whether entering another country, a neighbourhood or a building, seeking immigrant or asylum status, or accessing information – while some individual borders are easier to cross as a result of new laws such as the Patriot Act.

This can confuse the righteously indignant researcher on the side of the angels. Is the social problem the difficulty of crossing the borders of the individual and the ease of crossing organizational borders, or the

reverse? Of course there is not one social problem, and much depends on the context.

But however viewed, we need to attend to enduring as well as changing aspects. To this end I first suggest a framework and questions for analysing and seeing the connections (whether theoretical or literal) between various border structures and processes. I next offer examples of how recent developments in communications, surveillance and related technologies undermine and alter some of the physical, geographical, spatial, juridical and temporal borders that have traditionally defined the self, the body, the human, home, work and other institutions, communities, cities, regions and nation states as entities. Understanding these changes in borders ought to be a central project for social science.

Classifying borders

In dictionary terms a border is a boundary or an edge that separates elements within from those beyond it. I use the term border to encompass a family of overlapping concepts and meanings. I emphasize personal and social borders as they affect, and are affected by, new communication and surveillance technologies.

The border demarcation may be metaphorical, symbolic and largely definitional, as with the borders between good and evil, loyalty and disloyalty or art and kitsch. Or it may be more literal, material and tangible, as with the borders of a printed page, the walls of a prison or an expressionless face.

I am interested in the norms and physical/technical conditions involved in the discovery or protection/concealment of information, particularly as this involves the borders of the individual in relation to other individuals, as well as to organizations.[7] The area can also be analyzed by considering organizational borders and inter-organizational relations.

The topic may be usefully approached by studying the interplay of the cultural and the physical/material as both border barriers and border breakers. Border barriers are intended to serve as blockages in defining edges, and border breakers are intended to overcome these.

Borders as barriers can be understood as literal containers or excluders of persons, objects and information (e.g. as in a prison, a purse or an encrypted communication). Some of this is done using 'hard' physical factors[8] (e.g. closed doors, clothes, locked display cases, armour) and some using 'soft' normative factors ('don't ask, don't tell' rules, 'you can look, but don't touch', 'stop on red') and very often both (e.g. doors on

restrooms and the expectation that 'ladies' and 'gentlemen' signage will be appropriately directive).[9]

Border breakers may also involve physical (e.g. explosives, night vision or decryption technology) or cultural factors (e.g. search warrants, self-disclosure and notice rules), as well as combinations (e.g. the voluntary[10] offering of information on customs declarations forms and electronic and chemical searches of persons and luggage at international borders).

A fundamental question is how agents and subjects of surveillance create borders around themselves and/or their opposition and, in game-like fashion, seek to transcend or undermine their opponent's borders. To pursue this we need a comparative and dynamic framework for thinking about types of barrier borders and barrier breakers and the questions they raise.

Knowledge advances through identifying variation in outcomes. Below I suggest some of the main forms of border variation. A next step is to analyse their causes, correlates and consequences. For ease of presentation these variables are discussed in either/or terms, although many are best seen as continua.

Table 2.1 combines the dimensions of the presence or absence of physical and cultural factors in the determination of borders. This yields four types helpful in considering the sociology of information. Cells 3 and 4, involving barriers to border crossings, are most applicable to technological surveillance issues. The cases in Cell 1 (absence of cultural or physical barriers) are likely characterized by greater trust, equality,

Table 2.1   Borders

cultural (normative) barrier to crossing	physical barrier to crossing	
	no (soft)	yes (hard)
no (open)	1. looking at a person speaking to you, city borders	2. sense limitations (darkness, distance)
yes (closed)	3. staring, backstage regions, privacy and confidentiality expectations,[12] religious and sacred areas[13]	4. convent, military base[11]

resource abundance and cooperative group and individual relations, and lessened hierarchy than borders with barriers. That pattern holds for the single barriers of Cells 2 and 3 relative to the cases in Cell 4, where we see both cultural and physical barriers.

Key issues here are the extent to which a border is naturally 'readable' and 'crossable' without special disclosure rules or technological means of access, or in contrast serves as a barrier. The barrier may be natural as with limits of the unaided senses or because a border (whether to movement or perception/comprehension) has been created.

The compulsion of disclosure norms and the frequently involuntary (for the subject) character of surveillance technology represent major social markers for understanding and evaluating the ethical and public policy aspects of personal information collection.

In the same fashion the use of borders to restrict access and information (sometimes as a result of initial personal border crossings to determine eligibility) are relevant to understanding current questions around the privatization of public space and access and new restrictive copyright rules. The latter block access to what, in their absence, would be otherwise available (e.g. the right to physically be in a given place, to access information without restrictions or to reverse engineer and modify software).

Contrast a bank visitor with a Halloween mask bearing a threatening note and a customer without a mask also making a withdrawal; calling from an unlisted (or listed) telephone number to phone numbers with and without Caller ID; a supervisor seeing or smelling employees smoking dope as against inferring dope smoking from a drug urine test; observing police behaviour on a public sidewalk versus in the back areas of a police station; or driving within, as against beyond, borderless EC countries. My discussion will focus on the border barrier cells (i.e. Cells 2, 3 and 4).

In 'The Mending Wall' Robert Frost (1975) writes:

> Before I built a wall, I'd ask to know
> What I was walling in or walling out,
> And to whom I was likely to give offence.
> Something there is that doesn't love a wall,
> That wants it down.

Implicit in the poem are some major questions about borders. In classifying border barrier phenomena and processes, I suggest asking a series of questions.

What is the purpose or immediate goal of the barrier from the standpoint of its owner/controller/responsible agent? By definition a

border demarcates. But beyond its denotative function, a barrier can be intended to keep in, keep out or do both simultaneously and differentially, depending on the category. A fence around an electrical power facility is intended to exclude persons. Physical borders – whether high mountains, islands or limitations of the senses – also serve to exclude, as do sealed or confidential records. Countries that deny residents the right to travel freely (whether within or beyond their national territory) use borders to keep the population within. The walls of a prison are intended to keep prisoners within, and a sometimes wrathful public out.

Whether the purpose is to wall in or to wall out, we can ask what is included/held within or excluded/blocked? What is a border intended[14] to be open or closed to? A mobility metaphor is often appropriate with any consideration of the idea of a border. The question being, what elements (under what conditions) are kept in or out, or permitted/able to pass through, and how often and in what direction? Major forms here are persons, valuables, information, communication, animals, insects, germs, heat and cold, and chemicals.

Given the richness of physical and social reality, all barrier borders are partial and limited with respect to what they can include and exclude. A mapping of even the most basic elements that can be contained within the catchment areas of a border and those that may cross in one or both directions is far from simple. Thus cyclone fences inhibit the movement of persons across them, but not sights and sounds (or movement over or under them). A broadcasting booth protected by a window permits light[15] and the visual to go back and forth, while internal sound is kept within and external sound without. As a Los Angeles teenager, I recall watching films I was unable to hear while parked beyond the fenced Griffith Park Drive-in Theater.[16] Conversely, I recall hearing, but not seeing, concerts outside the Berkeley Greek Theater (rather than doing both from inside with an admission ticket). A cattle grate keeps bovines from going from one territory to another, while permitting persons and vehicles to go both ways at will. However, it has no impact on seeing, hearing or smelling what is happening on opposing sides.

What is the barrier's operative principle? What is it based on? How does it keep out and in? What is it that must be crossed/broken through in order to enter or leave or be within or beyond? The distinction between the cultural and the physical applies. Cultural restrictions involve barrier norms – manners, diplomacy and secrecy, privacy and confidentiality rules.

Physical barriers that restrict or block may be inanimate as with cliffs, walls, safes or clothes.[17] Solid doors – with and without locks – windows with 'blinds' or curtains, drawers and secret compartments are related examples.

18

More permeable borders may be 'voluntarily' maintained out of habit or to avoid sanctioning for wrongful crossing (e.g. fear of electric shock, land mines or setting off an alarm and other deterrents). More gentle forms such as a mall store that keeps teenagers away by playing classical music can also be noted.

An armed guard, guard dogs, geese trained to quack at intruders, and alligators in a moat (who threaten to eat unauthorized entrants) offer examples of sustaining borders through animate means. Skin can be the functional equivalent of a wall in preventing access to body conditions. The face can be a potential mask of inner feelings and attitudes. Animals mark territory with their scent, and skunks and squid use their resources to deter predators in creating a defensive perimeter.

We can also note borders of an ecological or logistical nature in which there is a separation/compartmentalization/segmentation of activities, or the dispersal and disaggregation of information. Thus the absence of a national ID card or universal identifier means that personal information in distinct databases cannot be immediately joined. There may be cognitive borders to communication, as with incomprehensible languages and incompatible codes.

Time is a distinctive form of information barrier. Here the physical and cultural may be combined, as when rules provide that records kept in a locked vault may not be released for a fixed period of time. Time may also protect information as a result of memory loss or record disappearance or degradation. Time shares with the senses the idea of a border between the known and the unknown. To the extent that the past has been experienced or known, it stands in the same relation to an unknown future as does the unseen lying beyond the power of the naked eye.

The senses

A final operative principle for borders beyond the physical, cultural, logistic, ecological and temporal lies in the zones within and beyond which the unaided senses work, and fail to work. Erving Goffman (1959: 106) implies this limitation in his definition of front and back stage regions as applied to group interaction. In suggesting that 'a [border] region may be defined as any place that is bounded to some degree by barriers to perception', he identifies a central way that borders can vary and is discussing the senses. I would broaden this definition to 'any place bounded to some degree by barriers to the senses'. This avoids narrowing the topic to just the sense of vision as implied by 'perception'.

For borders and surveillance a key element is access or inaccess as these involve the various senses.

The senses stand in special relation to other border factors since persons may be the object of a border (whether having things taken from or imposed upon them, or being kept in or out). Persons may be the carriers of a border as with those wearing location monitoring transmitters (e.g. children, paroles),[18] the boy encapsulated in a plastic bubble for medical purposes, or high and low caste Hindus.[19] Persons are also of course the vehicles for comprehending borders through their senses. Many forms of surveillance as border crossing tools and border enhancement tools rely on extending or constricting the senses (whether of the agents or subjects of surveillance and in varying combinations).[20]

Border barriers and breakers often aim at limiting or strengthening sense data. The former thus can involve the construction of barriers that block or limit the normal range of the unaided senses (soundproof rooms, encryption, masks, blindfolds, concussion grenades),[21] as well as impeded human physical mobility and access. Border breakers may seek to extend that range by magnifying the sense in question, or by offering new forms of data and means of transcending physical limitations.

The senses, while invariably connected to perception and cognition, can also be seen as a distinct border form. The senses of course are not a border that one can physically cross as when going between countries or places. Sense borders are different from those that block the mobility of persons or objects. Nor are they a conceptual border involving opposites as between the sacred and the profane or hot and cold. The senses involve cognitive or experiential borders between the known and the unknown, or the experienced and what can only be imagined. The ignorance associated with the 'beyond' of a sense border also differs from limits to cognition that stem from being unable to give meaning to data because they are not understood, or are unknown as a result of disaggregation or being hidden.

Borders of the senses occur naturally when their thresholds are reached. Thus the horizon's border offers a barrier to sight, as does darkness. The borders beyond which we cannot hear (or smell, or touch and taste) are logically equivalent, if involving much shorter distances than sight. The latter two even require immediate proximity to the stimulus. The territory included in our unaided senses is miniscule relative to what there is to be sensed.

Asking what is on the other side of a border or a frame is a related question.[22] How does what is within the border differ from what is beyond it? With the conceptual border, there is a logical opposition (if not always opposite) based on what is included or excluded from the

20

category. Physical borders may separate places with different social definitions (e.g. a river as the marker between countries) or simply different physical attributes (e.g. a valley and mountains).

The elements distinguished by a border may be basically equivalent (other than for their differentiating factor) as with the river banks separated by flowing water,[23] a national or state border defined by latitude, or the two halves of a basketball court. Such symmetrical borders contrast with asymmetrical borders that separate fundamentally different elements (whether beyond, below or above). Consider what lies beyond the edge of a cliff, below the wire of a tight-rope walker, surrounds a submerged submarine, or the in- and out-of-bounds lines of an athletic field. Or consider buildings with a concierge, or gated communities and what lies beyond them, or the jagged and shifting lines of police using fire hoses aimed at crowds.

The finite crossing of a physical border, such as opening a sealed envelope or in hiding a video camera in a wall, creates transparency – the act of border crossing reveals what is on the other side. But sense borders stand in a different relation to their other side. Sense borders may be extended through technology (e.g. binoculars, telescopes, microscopes and sound transmitters).[24] However, those extensions simply push the opaque threshold beyond which one can no longer receive sense stimuli. The ratio of what is known to unknown is altered as the border is extended, but it is not obliterated.

We may also ask about directionality and frequency of border crossings. Where border crossings are permitted we may ask if they are uni- or bi-directional. Mann, Nolan and Wellman's (2000) work in trying to take pictures of surveillance agents (in the tradition of Garfinkle's [1967] breaching experiments) illustrates the one-way nature of much surveillance and the question of how, and by whom, a social border is created.

A related factor is whether the transition across borders is sudden or gradual. The border change may be immediate and discontinuous, as with the edge of a cliff or a town wall. Or the border may be slow and continuous (even as a qualitative difference eventually appears), as with day and night and ecological regions that fade into each other.

Gradual transitions may be marked by in-between areas and intermediate buffer zones traditionally known in geopolitical contexts as 'no-man's-land' (which did not make them woman's lands). Contrast the direct division between entities as when leaving the US and entering Canada or Mexico with the demilitarized zone separating North and South Korea and equivalent contested areas.

Such interstitial border areas (while partly designed as conflict-

minimization means) are particularly likely to be contentious, as those on opposing sides claim the interstitial area as their own, or one they are entitled to control and use to pursue their own ends. As we will note, this contention goes far beyond traditional issues of geography to the location and meaning of borders between the person and others under the stimulus of new surveillance technologies.

We may ask if the border is relatively fixed involving geo-coordinates and stationary barriers, or shifting and fluid. Consider, for example, the relatively fixed borders of an inland home as against a property line determined by tide levels or a bluff constantly eroded by wind, rain and waves. Diplomatic immunity and international planes and ships involve borders that move with the diplomat and vehicle, as do mobile homes. While Foucault noted how scientific measurement led to lines around presumed normalcy, many devices are fluid and their cut-off points specific to the situation and issue (e.g. the advisory note attached to credit score reports that there is no passing or failing grade).

When Frost writes 'something there is that doesn't love a wall' he implies both natural processes of erosion and the more purposive activity of insects, animals and hunters in undermining borders. Barrier borders are always partial and, to varying degrees, leaky. Many surveillance technologies rely on border seepage.[25] The logistical and economic limits on total monitoring (or perfect borders), the interpretive and contextual nature of many human situations, system complexity and inter-connectedness, and the vulnerability of those engaged in border work to be compromised frequently provide room for the inappropriate border crossings (whether involving legal or merely social violations).

In addition, new surveillance technologies give a momentous boost to crossing several forms of traditional borders. They call attention to contentious interstitial areas whose meaning is defined through political struggle. They also help create new types of border.

Border changes

> *Old borders never die.*
> *They just get re-arranged.*
> General Douglas McDialectic

In one form of intact border we see rearrangement in the individuals who pass through them. With role transitions, persons continually cross social and cultural borders. The normative borders remain around categories, but role occupants move on. The game is roughly the same, but the

players are different. Consider the move in childhood from being a non-swimmer restricted to the shallow end, to being able to cross the line into the deep water reserved for swimmers, not to mention the transitions from childhood to adulthood and beyond (and the gradations there at ages 18, 21, 25, 65, etc.), and the border crossings of immigrants, migrants and tourists.[26] There is also variation in the individuals passing through ticket-controlled perimeters on different days (e.g. sporting and musical events). Consider too, the less common transitions in role and identity entrances and exits – whether entering or leaving a school, marriage or religious order, or undergoing a sex-change operation.

Another kind of change involves the borders themselves. Closer to contemporary questions we see the link between surveillance and borders and how technology may change borders. Central topics here are how the agents and subjects of surveillance create, apply, sustain, challenge and change borders under conditions of the new surveillance.

Georg Simmel (1994: 5) has written that 'the bridge symbolizes the extension of our volitional sphere into space'. In the same way new border-creating and -breaking technologies extend our volitional sphere into areas far beyond space, including the senses, bodies, selves and time.[27]

Recent developments in communications, surveillance and related technologies in some ways undermine and alter traditional physical, geographical, spatial, juridical and temporal borders, making them more vulnerable to crossing, and, partly in response, new borders appear.

New forms and borders whose meaning is unclear or contested are appearing at an accelerated rate. New technologies that overflow and change the meaning of traditional borders may create disputed interstitial areas.[28]

Consider changes involving the borders of the person and personal information.[29] In the past, walls, darkness, distance, time and skin were boundaries that protected personal information and helped define the self. Information about the self resided with the individual and those who knew him or her. The number of records on an individual was limited. But now, with so many new ways of collecting personal data and the growth of data banks, we see the rise of a shadow self based on images in distant, often networked, computers.

New ways of defining the self have greatly expanded. We become not only the sum of our own biographies, but part of broader social types believed to have the potential to behave in certain ways. Individuals are defined relative to quantitative scales generated from enormous amounts of data.

Traditional borders blocked information about the self from flowing

too freely to others without the individual's knowledge or will. This limitation enhanced the value of personal information to the individual, who could use it as a resource, doling it out as was appropriate. The boundaries of the body/self also served to keep out unwanted influences and information.

But with recent technical developments, the self may be less protected from covert intrusions and manipulations. Technologies being developed that seek to infer meaning from personal involuntary emanations such as brain waves and scents suggest the question of who such data belong to. Consider the case of a California man with a rare blood disease whose virus was cloned in an effort to help treat others. His claim that he had a property interest in the cell line that was subsequently developed was rejected by the Court. Determining identity from DNA 'prints' left on a drinking glass or by how a person walks can also be noted. Where does the person stop once elements associated with the person are expressed? With visual image, especially if it is used for commercial purposes, the individual has a property right. Should that apply to other forms?

Related examples can be seen when previously unavailable information protected by limitations of the senses are accessed and given meaning through technological supports. Night-vision technology takes what had been existentially private (regardless of whether it is in a legally protected private or public place) and makes it visible. Urine, hair and sweat analyses are used to infer drug-use patterns. The effort to read subtle facial expressions, voice tremors, handwriting and heat patterns around the eyes as clues to the person also seek to profit from porous borders.

Various forms of electronic and chemical scan are used to infer the presence of contraband by 'seeing' through closed objects such as a suitcase or clothes. Consider also unseen cameras with zoom lenses that look beyond their location in a private mall to a 'public' street, or a 'public' street camera that reveals the interior of a 'private' shop or home. A nice example of how heretofore meaningless personal data associated with a legally private place comes to a public place and is suddenly given meaning through a new technology can be seen in thermal imaging. Here heat from inside a house can be picked up by a device 'outside', revealing the outline of interior areas.

In crossing borders the above efforts take from the person and/or their possessions. But technological border crossings may also impose upon the person and, in so doing, often create contentious marginal zones in search of legal and social definition.

Consider a bakery pumping its smells onto the street, a factory pumping scents through its heating system, a department store spraying

24

its 'perfume of the day', or the intrusive cellphone talking in a public place. These examples create and call attention to buffer areas traditionally free of such stimuli. Telemarketing and spam fit here. Auditory and visual subliminal messages may involuntarily and subtly cross personal borders of perception, just as tear gas, light or acoustic microwave crowd control means may not so subtly cross personal borders.[30]

A related border blurring involves the line between the human and the non-human, and the living and the machine. We are increasingly seeing humans with artificial parts, and research is well underway on artificial skin and blood. Computer chips have reportedly been implanted in chimpanzees, and a variety of implants have been proposed for humans. Cyborgs are not just science fiction. We see robots designed to behave as humans and efforts to have humans become more efficient by modelling their actions after machines. The ease with which we divided the human from the non-human and the organic from the inorganic is challenged.

Changes in institutional, organizational and place borders

The personal border changes noted above are a strand of a broader tapestry of blurred borders that also involve organizations. The lesser clarity regarding the separation of individuals and groups from each other, and from their environments, has counterparts within institutions and organizations. New communications and surveillance technologies (along with new crises, threats and opportunities) are also blurring and rearranging organizational structures and goals.[31] In some ways it becomes more difficult to draw clean clear lines separating the centre from the periphery, the rural from the urban, the national from the international, and the private from the public (whether involving material or intellectual property).

In the case of formal social control organizations, for example, we see if not outright merging, at least fogging up of the traditional lines between national and international authority, foreign and domestic police, military and police, and intelligence gathering and criminal prosecution. With increased internationalization and globalization of crime, terror and social control (McDonald 1997; Deflem 2002; Sheptycki 2003), the meaning of national borders and foreign and domestic actions is less clear. The links now made between dealing in contraband (drugs, weapons) and terror weakens the traditional distinction between crime and political activities. The previous separation of the military from domestic police, and intelligence from operational units, is also weakened by new legislation and new forms of cooperation.[32] The emphasis on prevention

blurs the line between intelligence and crime-fighting activities, freedom of speech and association and crime, and weakens the tradition of a predicate before invasive surveillance is undertaken.

Consider also the boundaries of home and work. For an increasing number of people the traditional boundaries between work and home are blurred (in one way they are even restored to aspects of the pre-industrial age). With telecommuting, we see an increase in the number of people working at home. As well, fast-track employees with beepers, cellular phones, computers with modems, and fax machines are expected to be constantly available for work no matter where they are. In addition, company rules such as those against smoking or using drugs are applied to off-duty, as well as on-duty, behaviour. The workplace becomes everywhere the worker is. At the same time, with childcare facilities, health centres, lounges and recreational and commissary facilities, workplaces become more like homes.

The use of electronic monitoring to incarcerate people in their homes breaks and creates borders in another form. Since the development of modern rights, the home has represented a sanctuary and a refuge, relatively inviolate in defining one of the lines between the public and the private. But with electronic monitoring, the home can become de-privatized for both offenders and members of their families. The latter may also be seen and overheard on the video and audio means that frequently accompany home-confinement programs.[33]

We also see the weakening of selective borders of domesticity with respect to an increase in the hard and remote wiring and sensoring (and potentially censoring as well) of the home. Here the membranes that bring inputs into the home for entertainment, telephone and computer communication, electric power and heat, as well as various security sensors, send back records of internal activity to distant centres.

Developments in communication and surveillance tools over the last several centuries (and markedly accelerated in recent decades) fundamentally alter temporal lines. The ephemeral past is not what it used to be. With modern technologies, elements of the past can be preserved and offered up for visual and auditory consumption. Temporally bounded events move from a flowing river to a stagnant pool. This goes beyond filming of a birth, a wedding or a battle, to surfacing and preserving elements of the past that were previously unavailable, such as images of a growing embryo or a brain wave pattern in response to a given stimulus.

The growth of computer records offers a different type of preservation

and access. In extending our ability to know the future (particularly on a probable basis), we see the weakening or even breaking of yet another border. Traditionally, many elements of the future were open-ended. This supported American optimism and a belief that with hard work or good luck things might get better. DNA analysis or expert systems that yield predictive profiles based on the analysis of large numbers of cases claim to offer windows into a determined future.

Another weakened temporal border involves the lag between the occurrence of an event and communication about it. Such time frames have been greatly shortened as the immediate past and the present almost merge and the temporal buffer offered by slower, more restricted means of communication is reduced. There is less time for judgement and greater pressure for instant action in our 24-hour globally connected informational world. For people who are 'on call' regardless of the time or where they are, the borders between action and inaction, on- and off-duty, and public and private that were available with the 'natural' rhythms of day and night, weekends and holidays and distance are shattered.[34]

Resistance and efforts to create new borders

Of course these efforts to change traditional borders occur in a dynamic environment. In Western liberal democracies the advantages of technological border-breaking developments are often short-lived and contain ironic vulnerabilities. Border creation and border crossing involve a dynamic adversarial social dance of strategic moves and counter-moves and should be studied as a conflict interaction process.

Elsewhere (Marx 2003) I identify eleven behavioural techniques intended to subvert the collection of information based on crossing personal borders. While my emphasis is on crossing personal borders, many of these tactics are relevant to other forms of border as well. Here I note several forms particularly relevant to the topic at hand.

For discovery moves (known as surveillance detection in the intelligence trade), the goal is to find out if surveillance is in operation and where it is. Examples of discovery moves include locating a hidden border-breaking device through the use of bug, tape and video camera detection devices.

Avoidance moves may follow the discovery that surveillance is present and involve self-regulation. The subject's behaviour varies depending

27

on whether or not surveillance has been found to be in operation. For example, drivers slow down when their anti-radar 'fuzz buster' warns them that police radar is in use.

With piggyback moves the surveillance is directly faced rather than avoided. A border control is evaded, or information protected, by accompanying or being attached to a legitimate subject or object. For example, systems requiring an access card can sometimes be thwarted by walking or, in the case of a parking structure, driving quickly, behind a person with legitimate access.[35]

Blocking and masking call explicit attention to the communicative aspects of surveillance. Surveillors desire to read the signals given off by their subjects. With blocking, subjects seek to physically block access to the communication or, if they are unable or unwilling to do that, to render it (or aspects of it such as the identity, appearance or location of the communicator) unusable. The Faraday cage, which encapsulates space in metal or a metallic net, blocks electronic transmissions. A simpler version is the shoplifter who uses a large shopping bag with a familiar logo within which is concealed a second bag lined with aluminium or duct tape. Wearing a Halloween mask and writing in invisible ink are familiar children's games with adult counterparts. A 'photo flash deflector' fluid which blocks the photographing of a licence plate became available soon after systems for monitoring red-light runners appeared. Some 'fuzz busters' send white noise back to a police radar gun, producing a blank reading. The encryption of communications is another example. Electronic surveillance may easily intercept a message, but it is meaningless absent decryption.

Masking involves blocking in that the original information is shielded, but it goes beyond it to involve deception[36] with respect to the identity, status and/or location/locatability of the person or material of surveillance interest. Such actions include efforts to disguise identity, whether involving wigs, dyed hair, elevator shoes, padded clothing, plastic surgery or fake documents. Remote computer entries, whether taking or sending information, by using another's identification and password are a nice example of masking.

The goal of breaking moves is to render the surveillance device inoperable, often by stopping a border-breaking or -defining device. For example, Radio Frequency Identification (RFID) chips can be fried in a microwave, and a video monitor immobilized by spray painting the lens or aiming a laser pointer at it. A male guard dog may be neutralized with a tranquillizer dart, mace, poisoned food or a female dog in heat.

Terminus

In conclusion, I have suggested questions and concepts that may, consistent with the opening epigraph from Simmel, help connect the separate and separate the connected with respect to border phenomena. The prism of the border offers a way to order and reflect upon questions of surveillance, communication, privacy, accountability and social change.

It is tempting to see a linear pattern with the knowledge of science and technology leading to the breaking of ever more borders that seemed impassable and immutable to previous generations.[37] Yet we are hardly at the age of the end of borders. The pushing back of borders and frontiers does not mean they disappear given their functionality, social and cultural supports and the richness and complexity of an onion-skinned universe. It is just as reasonable to note the discovery and invention of new borders and the pushing further back (or ahead) of older ones in a continuing process. We see continuity in the progressive erosion of borders, but also in the creation of new borders. What changes is content, not form.

Developments in communications and surveillance create new forms and destroy, rearrange and alter some of the physical, geographical, spatial, juridical and temporal borders that have traditionally defined and protected the integrity of individuals and groups.

When surveillance topics are controversial it is often because defining, creating, crossing or failing to cross a border of some form is at issue. Policy issues in a wide array of contexts often revolve around the appropriateness of crossing, or failing to cross, personal and organizational borders and the wise and unwise use of border barriers. Concepts such as those offered above can identify questions and variations. A next step is to study correlates, consequences and causes of this. Studies of the structures and dynamics through which agents and subjects of surveillance strategically create border barriers and border breakers around themselves and/or their opposition ought to be a central topic for social inquiry.

Notes

1   Note also borders between and within countries. Being inside a country once a plane or train arrives need not ensure leaving the controlled confines of a disembarkation centre. Consider the film *Terminal* in which an arriving visitor is told, 'Welcome (almost) to the US international travel lounge which you are free to be in.' He is not, however, 'free' to be out of it.

Non-citizens face additional monitoring and limitations, if within a floating, materially invisible normative border (e.g. prohibitions on working or on free movement).

2   What is 'given' and 'taken' corresponds broadly to voluntary (consensual) as against coercive means, however difficult drawing this line often is (e.g. 'an offer that can't be refused').

3   Note the controversy over the 'pat downs' of female air travellers. On my last trip to a Canadian conference in Vancouver, after I left the train for the controlled place of the station, the man in front of me attracted the attention of a customs dog and was quietly taken inside for further questioning and a more intensive possession, and likely body cavity search.

4   This excludes much of the surveillance work of intelligence agents, voyeurs, paparazzi, blackmailers, documentarians, strategic planners and researchers in which the surveillance is its own end or is used for publicity. In Marx (forthcoming A) I discuss a number of surveillance roles and goals. The goals of the above actors stand in contrast to the social sorting and categorization examples found in Lyon (2003) and Gandy (1993).

5   Thus we see new global and regional political, economic and cultural units such as the European Union and the North American Free Trade Agreement. Yet we also see a dialectical move towards smaller, less inclusive units as in Eastern Europe, the former Soviet Union and parts of Africa. Note also Great Britain where Scottish, Irish, Welsh and Kentish identities are in some ways more prominent, or moves to split Italy and California into southern and northern units. Consider also new hybrid units such as those based on Kurdish identity crossing several countries, as well as the gradual emergence in the geographical and cultural borderlands between the United States and Mexico as a third way. The further weakening of the historical connection between physical proximity, temporality and social relations made possible by cyberspace breaks and creates new borders as well.

6   Andreas (2000), for example, notes how the United States–Mexico border has become formally much more permeable for the flow of goods but less permeable for the flow of undocumented immigrants and drugs.

7   I suggest that information about persons be seen as involving a series of concentric circles moving from the outermost, which includes individual information, to private information to sensitive/intimate information to unique identification to core identification. I identify ten broad types of descriptive information and 18 analytic dimensions that can be used to characterize them (Marx forthcoming B).

8   These of course vary in their degree of strength from hardened steel barriers to minor restraints (e.g. most railroad crossings or ropes guiding customers in a line).

9   Such arrangements of course seek to simplify the social and physical world and ignore the issue of persons with a mixed male-female identity/physiology. One sensitive drug-testing agency asked such a person whether they wanted to be observed in sample production by a male or female and was told 'it doesn't matter'. Small children of course often cross such borders at will, as may those experiencing great urgency.

30

10 Voluntary refers to whether or not the individual chooses to fully reveal. Legally there is no choice, even if there is practically (absent being singled out for an intensive search).

11 Here the border to be crossed involves both the physical passage and who can become a member.

12 The border here involves the confines of the confidential relationship within which the shared information is kept.

13 A British General said the shrine in Fallujah, Iraq is protected by 'an invisible shield'.

14 In the case of natural physical borders we need to ask about consequences rather than intentions. However, intention may be considered when humans fail to take altering action such as building a bridge or moving a mountain.

15 There are of course kinds of light. Sun screens and expensive dark glasses promise to let in one kind of light and not another. One-way mirrors permit seeing out but not in.

16 After the ticket booth closed for the last midnight showing it was possible to back in the exit and steal the sound as well. A few years later that could be done only at the cost of destroying one's tyres, given the development of slanted spikes in the ground that permitted exiting but not entering. The latter mechanism, along with turnstiles that go one or both ways, is a nice illustration of directional flow built into a border-control mechanism.

17 Clothes may hide scars, tattoos and appearance-altering devices.

18 There is great variation in the goals and context for using these and related forms. Contrast the moving border associated with those under court injunction to stay away from a particular person such as a former spouse, to those sentenced to house arrest, to cellphones that indicate location when 911 is dialled.

19 The borders determining issues of ritual pollution such as being in another's shadow, touching higher status persons and their objects, or looking directly at the ruler might usefully be contrasted with those involving literal pollution or contamination (the isolation of those with contagious diseases or the sanitary zones of a hospital or manufacturing facility).

20 These tools in turn fit within broader efforts to engineer social control by affecting the actions of controllers, targets, potential victims and their environments (Marx 1995).

21 Note also more permanent actions such as the reported blinding of some of the builders of the Pyramids and the medieval cutting out of tongues of non-literate persons as a means of ensuring their silence. We see the opposite with sense-enhancement means which, when voluntarily used, cross (via extending) the sense borders of the user. However, when sense data are imposed upon the person (e.g. smells, sound or images) a border of a different sort is crossed. Technologies that strengthen the senses may in turn be used to cross the personal borders of another person against his or her will.

The concept of borders, particularly when we consider persons in

interaction, is expansive and illusive and dependent on the component in question and whose, or which, perspective is adopted (the sender or receiver of stimuli, the controller or the controlled, potential victim or perpetrator). Borders are hopelessly interwoven and reciprocal, like the parts of an Escher drawing. This speaks to the topic's ironic and paradoxical qualities. However, conceptual unpacking permits some disentanglement, at least for purposes of analysis.

22 Consider also the mysterious and magical phenomena that mythology suggests lie beyond the borders – barbarians and the uncivilized, dangerous creatures, temptation, damnation and pollution, and less often, salvation, angels, heavenly delights and utopia. Apart from the inchoate 'beyond', note the sense of foreboding and uncertainty associated with interstitial borderlands. Being beyond the formal control of the established order within the border, these are in many ways often messier and more dangerous, if more dynamic and energized.

More generally this is also the case for regions of cultural conflict where diverse peoples meet – whether at crossroads, frontiers, ports or borderlands. Tolerance may be greater and rule-violating behaviour more common because of the weakness of a central authority and lesser consensus on the rules. Such places may also be incubators of social change given lesser traditionalism and the sparks of cultural confrontation.

As Rosaldo (1993) observes, understanding border regions can offer insight into broader cultures. Here, as sources of insight, border areas share something with the cracks and ruptures in the social order appearing with natural and social disasters.

23 Of course, in conjunction with other borders these can matter enormously – consider the two sides of the Ohio River which for slaves meant the difference between slavery and freedom, depending if they were on the Kentucky or Ohio side.

24 The thresholds of the senses are somewhat individual, varying from those who in varying degrees are blind or deaf to those with acute senses (e.g. the astounding vision of baseball great Ted Williams or the greater hearing ability of many of those who are blind, as with Ray Charles).

25 A dog need not enter a vehicle to search it for explosives since the scent escapes from the metal walls of the vehicle. Speech from inside a room creates vibrations on windows which can be remotely 'read' by outsiders. Consider the related difficulties in border definition and control seen with pollution, whether airborne pollutants from smokestacks, industrial waste emptied into a river going downstream, or when sewage pumped into the ocean from Victoria, Canada or Tijuana, Mexico makes its way to the western waters of the USA. Surfing in Coronado, California, a few miles from the Mexican border, sometimes has its drawbacks.

26 While it is of a different order, a life cycle model of various forms of birth, maturity and death can also be applied to organizations – from empires to

scholarly and artistic fields to family units. Both entropy and innovation are factors here.

27 However, these may be one-way or bi-directional bridges. Who the 'our volitional sphere' refers to and what interests are served should always be analysed.

28 This is also the case with new land use patterns such as shopping malls, entertainment worlds and large apartment, university, hospital and corporate complexes that blur lines that had been clearer as between the public and the private. While privately owned, they are dependent on steady flows of people in and out. The ratio of public to private spaces has been altered so that the amount of public physical space, as traditionally defined, appears to be declining. In addition, what had formerly been public, or at least ignored, space (such as empty lots) is increasingly built upon and the rapid growth of gated communities and access-controlled buildings further alters conventional borders.

29 This draws from and expands on Marx (1997b).

30 Since the 1970s Russian experimenters have claimed to have techniques to control rioters and dissidents, demoralize or disable opponents and enhance performance through what is termed 'acoustic psycho-correction'. This is done with computerized acoustic devices said to be capable of implanting thoughts in people's minds which are intended to alter behaviour, without their awareness of the source. Here come the Manchurian candidates.

31 We also see border blurring among distinct objects such as telephones, computers and televisions which are merging, as well as the merging of what had been distinct formats and types such as sound, image, print and data. Issues of simulation and the blurring of lines between copies and originals also fit here.

Beyond empirical changes that need to be culturally framed, some of the blurring involves lack of definitional singularity. For example, note the various dimensions (e.g. property, access, information) that may be present when the terms 'public' and 'private' are used (Marx 2001). Understanding the range of empirical and causal connections between physical borders and social and cultural conceptualization of borders is vital for understanding. Nippert-Eng (1995) creatively explores aspects of this in studying boundary negotiations between home and work.

The physical and the cultural borders are also joined in language with expressions such as 'over the top', 'out of bounds', 'off base' and 'beyond the pale'. In the latter case, a pale is part of a fence. The expression, however, refers to social distance from a normative standard, not physical distance from the fence.

32 Of course, more is going on here than the impact of technology. In some cases blurred borders are clearly a functional means to get around organizational restrictions. Note the US federal government turning to the use of data gathered and analysed by private agencies as a means of avoiding privacy and related legislation (O'Harrow 2005).

33   In another poem, 'The Hired Hand', Robert Frost writes, 'Home is the place that when you have to go there, they have to take you in'. The proliferation of electronic borders may require us to update this, at least for some persons, to 'Home is the place that when you want to leave, they have to keep you in'.

34   It took many days for news of Napoleon's defeat to reach France, and some battles were fought after the Civil War was ended because combatants had not heard the news.

35   An important context for this form is entrance and exit controls. The fact that the door or gate must remain open long enough to permit legitimate entry may offer a window for illegitimate entry. While not quite the leakage noted elsewhere, this nicely illustrates the ironic vulnerability of control systems in which there is exchange across borders. The need to open creates the possibility for illegitimate as well as legitimate entrance and egress.

36   Deception offers challenges to border conceptualization. The border here involves manipulating perceptions to make it appear that an illusory border is literal (e.g. the Potemkin village, the seeming firm ground above an animal trap, signs warning that video surveillance is present when it isn't). Deception may also be used to misinform with respect to what it is that is on the other side of a border – note cans of 'shaving cream' and other consumer goods sold as containers for valuables or a picture hung over a wall safe. The 'honey traps' (sexual lures) of covert police work and flypaper seek to draw their subjects in via temptation, in the former case to break through informational borders of the suspect and in the latter to create a border with no exit.

37   Consider Copernicus and Galileo for breaking the conventional border between earth and heaven, and Darwin for that between the human and animal, as well as technologies that blur the line between the human and the machine and those overcoming traditional physical limitations permitting space travel, microscopic and telescopic data, and new sense-extending means of communication.

References

Andreas, P. (2000) *Border Games* (Ithaca: Cornell University Press).

Deflem, M. (2002) *Policing World Society* (New York: Oxford University Press).

Frost, R. (1975) *The Poetry of Robert Frost* (New York: H. Holt and Co.).

Gandy, O. (1993) *The Panoptic Sort* (Boulder, CO: Westview).

Garfinkle, H. (1967) *Studies in Ethnomethodology* (Cambridge: Polity).

Goffman, E. (1959) *The Presentation of Self in Everyday Life* (Garden City, NY: Doubleday).

Lyon, D. (2003) *Surveillance as Social Sorting* (London: Routledge).

Mann, S., Nolan, J. and Wellman, B. (2000) 'Sousveillance: inventing and using wearable computing devices for data collection in surveillance environments', *Surveillance and Society*, 3, pp. 321–55.

Marx, G. (1995) 'The Engineering of Social Control: The Search for the Silver Bullet', in J. Hagan and R. Peterson (eds) *Crime and Inequality* (Stanford: Stanford University Press), pp. 245–56.

Marx, G. (1997a) 'The Declining Significance of Traditional Borders and the Appearance of New Borders in an Age of High Technology', in P. Droege (ed.) *Intelligent Environments* (North-Holland: Elsevier Science), pp. 484–94.

Marx, G. (1997b) 'Social Control Across Borders', in W. McDonald (ed.) *Crime and Law Enforcement in the Global Village* (Cincinnati: Anderson Publishing), pp. 23–39.

Marx, G. (1999) 'Ethics for the New Surveillance', in C. Bennett and R. Grant (eds) *Visions of Privacy: Policy Choices for the Digital Age* (Toronto: University of Toronto Press), pp. 39–67.

Marx, G. (2001) 'Murky Conceptual Waters: the public and the private', *Ethics and Information Technology*, 3:3, pp. 157–69.

Marx, G. (2003) 'A Tack in the Shoe: neutralizing and resisting the new surveillance', *Journal of Social Issues*, 59, pp. 369–90.

Marx, G. (Forthcoming A) *Windows into the Soul: Surveillance and Society in an Age of High Technology* (Chicago: University of Chicago Press).

Marx, G. (Forthcoming B) 'Varieties of Personal Information as Influences on Attitudes Toward Surveillance', in R. Ericson and K. Haggerty (eds) *The New Politics of Surveillance and Visibility* (Toronto: University of Toronto Press).

McDonald, W. (ed.) (1997) *Crime and Law Enforcement in the Global Village* (Cincinnati: Anderson Publishing).

Nippert-Eng, C. (1995) *Home and Work* (Chicago: University of Chicago Press).

O'Harrow, R. (2005) *No Place to Hide* (New York: Free Press).

Park, R. and Burgess, E. (1921) *Introduction to the Science of Sociology* (Chicago: University of Chicago Press).

Parsons, T. (1956) *The Social System* (Glencoe: Free Press).

Rosaldo, R. (1993) *Culture and Truth: The Remaking of Social Analysis* (Boston: Beacon Press).

Sheptycki, J. (2003) *In Search of Transnational Policing* (Aldershot: Dartmouth Publishing).

Simmel, G. (1994) *Bridge and Door: Theory, Culture, and Society* (Thousand Oaks: Sage).