A Report on Camera Surveillance in Canada

Part Two

Surveillance Camera Awareness Network (SCAN)

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Executive Summary

In January 2009 the Surveillance Camera Awareness Network (SCAN) released part one of its *Report on Camera Surveillance in Canada.* Since the release of that report the use of camera surveillance continues to proliferate. For example, the Ontario Provincial Police are in the process of procuring surveillance cameras equipped with automated licence plate recognition technology with the hope of providing security on the provinces highways. And while the U.S. Department of Homeland Security unveils plans to install 11 high-tech camera surveillance systems along its border with Canada at the St. Claire River, the City of Vancouver remains tight-lipped about its intentions to employ camera surveillance during and following the 2010 Olympics.

In this report the members of SCAN continue to undertake a survey of camera surveillance in the Canadian context. Drawing on innovative primary research this report begins to fill in the picture of camera surveillance practices in Canada. This report contextualizes the proliferation of camera surveillance with site-specific cases studies, provides insight into public and camera operator perceptions of camera surveillance, and explores privacy and civil liberties questions as they relate to the transfer and reproduction of camera surveillance images.

Our work is supported by the Contributions Program of the Office of the Privacy Commissioner, Ottawa, and by the Social Sciences and Humanities Research Council of Canada.

As always our aim is to produce an accessible report that is attuned to the range of views held about camera surveillance. This part of the report complements that released earlier this year with the addition of several sections based on rigorous empirical research. The following summarizes the main sections of the report.

The Legality of Camera Surveillance in Canada

- No Canadian Jurisdiction has yet passed legislation that explicitly addresses public camera surveillance. Various federal and provincial freedom of information and privacy statutes provide broad authority for information collection in the name of law enforcement, but it is unclear whether these statutes are capable of specifically authorizing public camera surveillance. Until the Courts have an opportunity to rule on whether this authorization is valid, existing surveillance use is "legal."
- Past Supreme Court decisions have suggested that the use of public surveillance may engage section 8 of the Canadian Charter of Rights and Freedoms, which protects against unreasonable search and seizure. If the Supreme Court were to accept that public surveillance is a "search," then the

use of surveillance technology would be circumscribed by a range of legal protections contained within section 8.

- Applying section 8 of the Canadian Charter of Rights and Freedoms will be difficult as it was originally designed to protect against the type of physical searches with which the criminal law has traditionally been concerned. Surveillance, as a result, sits uncomfortably within the legal analysis developed within section 8, which increases the challenge of successfully convincing the Courts that the Charter should apply.
- If the Courts accept that public surveillance is circumscribed by section 8 of the Canadian Charter of Rights and Freedoms, they may require that any future surveillance use require a warrant, or, alternatively, that Parliament must define a legal regime for public surveillance that can then be evaluated by the Courts for compliance with the Charter.
- In the absence of statutory or judicial authority for, or limitations on, public surveillance, the various federal and provincial information and privacy commissioners have drafted a range of non-binding guidelines on reasonable surveillance use. Though such guidelines are non-enforceable, and provide no sanctions for non-compliance, their existence nevertheless should influence patterns of surveillance use, and may still be capable of regulating surveillance in the absence of specific legal requirements.

The Technical Context of Camera Surveillance in Canada

- Camera surveillance has become big business. Like many other industries, those selling camera surveillance may see the demand for their products and services decline or slow in these difficult economic times. However, three arguments are put forth to suggest that the camera surveillance industry may be resilient to an economic downturn.
- The camera surveillance industry exploits our fears in order to market their products, suggesting that state-of-the-art technology is capable of creating a "crime free" or "worry free" society. These utopian promises form a "master narrative of technology", that can help explain some part of the technology's proliferation.
- The capabilities of current camera surveillance technologies are discussed, focusing on: camera technologies, various types of signal transmission, different modes of monitoring and recording the visual (and/or digital) data produced by camera surveillance.
- Any discussion of the technological aspects of camera surveillance must move beyond a focus on technological capabilities toward an understanding of the "technical context of camera surveillance". This includes, technological capabilities of the camera surveillance assemblage (integration and interoperability issues), the socio-technical space of the camera surveillance control room, as well as the training received by the camera operator(s).

Views From Behind the Lens: Exploring Operator Perceptions

- Surveillance camera operators list theft, broadly defined, as a top priority. Operators also prioritize their own personal safety, as well as the safety of their colleagues and others in the social space they monitor. The 'flawed consumer' - youth, the homeless, the drunk or drug addicted – are identified as a source of risk for both theft and personal safety.
- Camera operators at three of the eight research sites indicate that they have become more attuned to the risk of terrorism following the 9/11 attacks. Some of the operators suggest that following the terrorist attacks they have become more aware of 'Middle Eastern' people. In short, the terrorist threat is perceived as a 'Muslim' threat.
- The camera operators are mixed in acknowledging the employment prejudice, bias and stereotypes. While some are adamant that they do not employ stereotypes, others describe remaining indiscriminate as a significant challenge to doing camera surveillance work. Others suggest that you cannot effectively monitor surveillance cameras without relying on stereotyping. The very terms 'prejudice', 'stereotypes', and 'discrimination' are value laden in the context of camera surveillance research, likely resulting in camera operators denying the use of such strategies. However, as this section reveals not all discrimination results in heightened scrutiny or negative consequence.
- As workers, the security personnel who monitor surveillance cameras also have their activities monitored. The digitization of camera surveillance technology opens up the potential for the surveillance camera footage from all cameras to be continuously recorded. By extension, the viewing habits of camera operators are more easily scrutinized by supervisors. While the majority of camera operators do believe that their on-camera activities are open to scrutiny, their responses were mixed when discussing whether this belief had a self-disciplining effect.
- Camera operators have differing opinions about the effectiveness of camera surveillance, with some questioning whether surveillance cameras are intended to be a deterrent at all. From the perspective of those operating such systems, camera surveillance is most effective at expanding their ability to see, improving the management of resources, and reducing fear. While some of the operators provide a critique of the technological equipment they often offer system upgrades as the obvious solution.

Understanding Public Perceptions of Camera Surveillance in Canada

- Public opinion research on camera surveillance in North America has primarily been undertaken by market based investigation of political organizations and media outlets which continually demonstrate considerable support for the use of camera surveillance, due to the system's perceived ability to reduce crime and prevent possible terrorist activity.

- The Globalization of Personal Data (GPD) international survey data is used to help provide a more holistic conception of public perceptions of knowledge and effectiveness of community and in-store camera surveillance in Canada.
- Responses indicate that approximately half the Canadian public considers themselves to be at least somewhat knowledgeable about the use of video cameras as a method of surveillance and that the vast majority of the Canadian public feels that camera surveillance is at least somewhat effective in its ability to reduce crime.
- Comparison of the way different demographic variables influence public perceptions of camera surveillance resulted in little variation, however, when the results to the effectiveness questions were cross-tabulated with other questions in the survey, it was found that those with a high level of trust in the government were also more likely to think community camera surveillance to be highly effective. Similarly, those with a high degree of trust in private companies were more likely to believe in-store camera surveillance was a highly effective means of crime reduction.

The Surveillance Legacy

- Plans to implement camera surveillance in Vancouver's Downtown East Side were successfully resisted by community activists in 1999 and 2001. By 2008 another plan to implement camera surveillance on the City's Granville Mall Entertainment District was quietly shelved. Despite these victories activists fear they may be losing the battle, convinced that the 2010 Vancouver Olympic Games would play an integral role in the introduction and acceptance of camera surveillance in the city.
- The experiences from recent past demonstrate that camera surveillance is one of the legacies of hosting the Olympic Games. Following the Sydney (2000), Athens (2004) and Torino (2006) Olympic Games camera surveillance systems were repurposed toward general law enforcement and/or traffic management needs.
- Security requirements at Olympic venues and other local sites during the games operate as a trump card in the politics of surveillance. While little official information is being disclosed about the camera surveillance plans during and post- Olympics, there is some evidence that there are plans by city and police official to obtain "legacy" cameras, ensuring that camera surveillance systems remain operational in Vancouver beyond the 2010 games.
- Once the public camera surveillance systems are in place, it becomes relatively easy to justify their continued use on the grounds that the public has already come to accept the loss of privacy within the monitored spaces and that their removal would represent a significant waste of tax payer dollars, among other foreseeable arguments.

Camera Surveillance in Ottawa Taxicabs: A Case Study

- There are few independent studies on cab cameras and violence against taxi drivers. Figures from Winnipeg suggest a drop in criminal victimization after the introduction of cameras.
- While some taxi drivers interviewed believe that cab cameras decrease the prevalence of robbery, fare jumping, verbal abuse, and customer misbehaviour, others feel that cameras will only capture the image of a suspect when a crime occurs.
- Ottawa taxi drivers mobilized effectively to ensure that cab cameras were introduced on terms favourable to them; resistant to camera technology that they believe can be used to spy on them. While drivers to not appear concerned that cameras are an invasion of passenger privacy, taxi licensing boards and cab camera technology companies feel similarly in relation to the privacy of taxi drivers.
- Cab camera companies are entrepreneurial and in addition to cameras must sell the very idea of surveillance. This may require making claims regarding the deterrent effect of cab cameras, as well as the value of the footage in prosecuting crimes.
- The case of cab cameras in Ottawa supports claims that new surveillance measures are often implemented without appropriate consultation or adequate independent evaluation. This example demonstrates the importance of involving stakeholders prior to decision-making.

Camera Surveillance in the Shopping City

- Camera surveillance in mass private space cannot be conceived as a security practice alone. The conflicting goals and demands on camera surveillance are best illustrated by exploring surveillance in contextual practice. This section explores surveillance practices in a Downtown Montreal Shopping Mall, referred to as “Downtown Plaza”.
- Downtown Plaza employs external private security personnel, supervised by in-house employees, which leads to minor friction due to differing perceptions of what “security” entails and how it should be maintained.
- Security personnel have low status within the Downtown Plaza, resulting in high staff turnover at all levels. They are organized on a military-like hierarchical structure; however, there is little difference between the tasks undertaken by those at either end. Camera operators at Downtown Plaza are responsible for a range of activities beyond monitoring the cameras, making it unlikely that the average visitor will actually be watched during their visit.
- While several areas of Downtown Plaza are monitored by camera surveillance, including rest room entrances, there currently remains a significant amount of space that is not under surveillance. The implementation of newer Internet Protocol (IP) cameras may make surveillance of these blind spots more feasible.
- The overall of objective of mall security, including camera surveillance is to maintain the aesthetics of the shopping mall. This is achieved by ensuring

that: shops comply with the hours of operation set by mall administrators, spills are immediately cleaned and overflowing garbage bins are emptied, and visitors who do not fit the desired image of the space are kept out. Ironically, while promising potential visitors security, more attention is given to the mall environment and symbols of order than to the patrons within.

The Use and Transfer of Camera Surveillance Images: The Case of Crime Stoppers

- Crime Stoppers is a prominent crime prevention program in North America, with an increasingly global reach. The program aims to provide members of a community with an anonymous means of assisting the police solve crimes, which Crime Stoppers advertises through various media outlets and formats. As of late camera surveillance footage appears to be a regular feature of Crime Stoppers advertisements, and Crimes Stoppers is also transferring this footage to video sharing websites, such as YouTube.
- The transfer of camera surveillance footage to police, Crime Stoppers, and beyond poses privacy and ethical concerns. First, this practice raises notification issues, as those who have their images collected – including victims and bystanders - may not be advised that their images could be transferred to, and posted by, a third party. Second, images transferred in error, and that are accompanied by a criminalizing narrative may have a detrimental impact on an individual's reputation and livelihood. Finally, the disproportionate use of images depicting visible minorities engaged in criminal activity is potentially harming to particular racial and ethnic groups.
- There is an apparent increase in the use of camera surveillance footage over traditional Crime Stoppers reenactments. This has social implication because narratives describing a criminal incident may be more believable when backed by camera surveillance images. Further, these narratives often imply guilt rather than simply suggesting that a criminal act is alleged to have occurred. The reliance of camera surveillance footage, often provided by private business, also serves to narrow the types of crimes advertised on Crime Stoppers, making businesses the immediate beneficiaries of the images portrayed by Crime Stoppers.
- The volume of camera surveillance images transferred to third-party entities, such a Crime Stoppers and YouTube, increases as these crime-fighting initiatives expand. Ironically, the proliferation of camera surveillance images in Crime Stoppers advertisements is a testament to the failure of the cameras deterrent effect.

Introduction

David Lyon

Probably the most controversial surveillance cameras in Canada were installed in Vancouver towards the end of 2009, in preparation for the Olympic and Paralympic Winter Games 2010. They are a site of struggle between the Integrated Security Unit set up to oversee safety and to control crowds and traffic, and groups such as the B.C. Civil Liberties Association who are concerned that the cameras may remain in place after the games are completed. The City of Vancouver has stated that the cameras will be deactivated after the games but the BCCLA asks why, then, has a permanent control centre been established to coordinate a temporary measure?[1]

The controversy has other faces as well. It is not only that, from previous experience of all kinds of mega-events, one can see how a time-limited show may have long-term effects, not necessarily welcomed in the city in question. But also, the most dense placing of the cameras is in an urban area, the Downtown East Side (DTES), with a long history of social deprivation as well as debate over camera installation. Located cheek-by-jowl with some of Vancouver's most celebrated tourist areas, such as Gastown, the DTES has frequently been viewed as a threat to commerce and a zone in from which the poor, homeless and street people should be removed or at least closely controlled.

In the earlier debate, rumbling from the 1990s, concerns were expressed that inadequate attention had been paid to already existing studies of policing-by-camera in the UK and the USA[2] that tended to show how cameras were a means of social exclusion. Moreover, positive proposals were made as to what sorts of initiatives could be taken to alleviate conditions within the DTES, initiatives that might actually contribute to social cohesion and to grassroots urban renewal. After all, no one benefits from reports that the DTES is the most deprived urban area in Canada, least of all those who live there.

It would be heartening if as much attention was paid elsewhere to the mushrooming arrival of surveillance cameras on city streets in Canada but such in fact is not the case. As with so many other new devices, techniques and strategies for keeping tabs on the population – in both public and private spheres – they generally seem to be accepted without demur. Indeed, as we shall see once again in this report, in the case of surveillance cameras, public opinion is generally very favourable to their

[1] See e.g. the CBC report of December 7 2009: http://www.cbc.ca/canada/british-columbia/story/2009/12/07/bc-cctv-concerns-olympics.html

[2] See e.g. http://mypage.direct.ca/c/carnnews/cctv.html

installation. Even in the case of the DTES, plenty of Vancouverites seem sanguine about the use of cameras.

What is missing from so many media reports and indeed from the rationales offered by chambers of commerce and police departments is evidence. The onus should be on those that set up video surveillance in public streets to offer reasons why these are preferable to other methods of pursuing the same goals. Plenty of rhetoric and promotional hype is available, but very little by way of serious and solid study. It is very encouraging that some such studies, that invoke serious research, have been made and aired publicly by groups such as privacy commissions, especially in relation to the Olympic Winter Games in Vancouver.[3] But it is less than obvious that these are being taken seriously among those who make decisions about deployment, even though some minor concessions may be made in specific instances.

Nevertheless, the effort is worthwhile. Wide-ranging debate over surveillance cameras in Canadian cities is long overdue, even though Canada currently uses proportionately far fewer cameras than the UK or the USA. Cameras are being introduced in public spaces in Canada and we need not only grounded comparative studies from elsewhere, but also some specific data about what is actually happening in Canada. Policy-makers and indeed all stakeholders in areas deemed potential sites for camera surveillance owe it to members of the public to demonstrate need and an awareness of the possible consequences of their installation.

The present report is a contribution to just such evidence-based debate over video camera surveillance in Canada. While reference is made, appropriately, to experiences in some other countries, the main focus is on what is happening in Canada. This report examines a number of important issues, starting with the Canadian legal, technical and public opinion contexts of camera surveillance, and the ways that some Canadian camera operators see their world. Some further concrete cases are then analyzed, starting with the Downtown East Side in Vancouver. Ottawa taxi cab cameras and surveillance in shopping areas are explored, as is the relationship between the Crime Stoppers program and the proliferation of cameras.

Together with the findings of the SCAN report part I, released in January 2009, this present report aims to inform both the public and policy-makers, in a reliable but accessible way. The report acknowledges that under certain circumstances camera surveillance may be warranted, but it warns clearly about the risks of seeing cameras as a silver bullet. The report can only claim to be partial in its findings, though we look forward to further opportunities to share the work of the SCAN research group as new findings become available. When disagreement arises about surveillance cameras, as it presently has in Vancouver, it is our hope that participants will increasingly be able to reach for reports like this one, to help them come to decisions that are fair and appropriate.

[3] See www.priv.gc.ca/information/pub/ol_20090202_e.cfm

The "Legality" of Camera Surveillance in Canada

Mat Johnson

Introduction

Existing Canadian public camera surveillance systems operate largely within a legal vacuum. No laws have been written in Canada to specifically address camera surveillance, and no Court has yet considered the substantive questions raised by their use. Early ambiguity within the law is common for emerging technologies. Emerging technologies also sit uncomfortably with our traditional approach to questions of rights and liberties, and surveillance is no exception. Many of the protections from the State and its police powers guaranteed by the criminal law were developed decades, if not centuries, ago. The right against unreasonable searches by the State would be absurd if the law restricted its application to traditional physical searches in our modern, digital age. However, it remains difficult to determine the extent to which various types of modern technology should attract the same protections as traditional searches.

Is public camera surveillance equivalent, or analogous, to physical searches against which Canadian citizens should be protected, absent of sufficient cause? The question of whether surveillance should be understood to be a search is fundamental to the broader question of whether public surveillance is "legal." This question is also fundamentally tied to privacy issues, and specifically whether surveillance violates the privacy of those persons under its gaze. These interconnected questions are also heavily dependent on the different characterizations of surveillance. Whether surveillance is conceived as a benign public safety tool or invasive police technology leads to wildly different legal results. Until the Courts weigh in and choose between these competing characterizations, the "law" will continue to be an open question.

This discussion will examine the current state of the law as it applies to public camera surveillance, as well as the key legal issues it raises. Identifying the current state of the law surrounding emerging technologies is never easy. Normally, the "law" is a combination of existing legislation and any judicial decisions that interpret the legislation, the relevant common law, or the applicability the Canadian Charter of Rights and Freedoms.[4] In the case of public surveillance, there are a number of statutes, both Federal and provincial, which authorize and limit broad information gathering powers, but which are not specific to surveillance. There are also a number of judicial decisions relating to issues analogous to surveillance, but not directly on point.

This discussion will first examine the strengths and limitations of related statutes before turning to how the Courts have ruled on analogous questions in the past.

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[4] *Canadian Charter of Rights and Freedoms*, Part I of the *Constitution Act, 1982*, being Schedule B to the *Canada Act 1982* (U.K.), 1982, c. 11 [*Charter*].

These prior decisions suggest how the Courts will approach similar questions in the future. Finally, the voluntary guidelines published by the various Canadian privacy commissioners to fill the legal vacuum will be reviewed. These various legal considerations demonstrate the questionable legal foundations on which public camera surveillance systems rest and that, absent future Parliamentary action on this issue, a future Court may limit the authority that such systems presently enjoy.

The Public-Private Distinction

Before turning to the specific legislation and judicial decisions which are relevant to public surveillance, it is important to consider the question of who is operating the surveillance system, as this will have bearing on the legal regime that is applied. While this discussion will focus on the legal implications of public surveillance by public actors, different rules will apply depending on whether the operators of the surveillance system are public or private actors, and whether the surveillance is conducted in public or private spaces. In terms of private surveillance by public actors is regulated by the Criminal Code, while private surveillance by private actors is either governed by the guidelines of PIPEDA[5] (assuming the surveillance is for a commercial purpose), or treated as a private matter (such as in a case where an individual installs surveillance systems in their own home).

Identifying the legal requirements for public surveillance is much more challenging. While private surveillance clearly implicates privacy rights, public camera surveillance is not so straightforward. In considering the application of the rule to private and public actors engaged in public surveillance, the key distinction is that the Charter only applies to public actors (by virtue of s.32 of the Charter). This means that any Charter limitations apply only to the police or other state agents, and any private actors acting on their behalf. Private actors who operate public surveillance independently of the State are subject to different rules. Those who conduct surveillance for "commercial purposes," are subject to the requirements of PIPEDA, while existing law does not govern private actors who engage in non-commercial public surveillance, such as private citizens.

Unless specifically noted, the remainder of this analysis will focus on public surveillance by public actors, given that this is category of surveillance that tends to generate the most concern. Nonetheless, many of the issues raised herein are relevant to public surveillance by both public and private actors, even if only indirectly.

Legislation

No Canadian legislature has passed legislation that explicitly addresses or authorizes the use of public camera surveillance in their jurisdiction. The closest

[5] *Personal Information Protection and Electronic Documents Act*, S.C., 2000, c. 5 [*PIPEDA*].

such piece of legislation is the Criminal Code, which authorizes surveillance in the context of criminal investigations,[6] but this form of surveillance is focused on single individuals or organizations. The possibility for expanding the application of the Criminal Code will be examined at the end of this section. In addition to the Criminal Code, there are other federal and provincial statutes that are tangentially related to issues raised by camera surveillance. However, none of these statutes are capable of providing clear guidance for all actors or for all circumstances where public camera surveillance is employed.

Federal Statutes

The Federal Government has passed two statutes that are relevant to surveillance issues. Both laws regulate some aspects of the use of surveillance, but neither does so comprehensively.

The Privacy Act[7]

The *Privacy Act* is a federal statute governing the collection and use of personal information by the Federal Government, as well as providing access to that information. The *Privacy Act* is relevant to surveillance to the extent that surveillance footage is considered "personal information", but the Act's application is limited to the collection of information by "government institutions".[8] In practical terms, this means that the *Privacy Act* will only be applicable to surveillance conducted by the RCMP (or other federal agents), and not to municipal or provincial police forces.

Despite its limited applicability, the *Privacy Act* has served as the backdrop for one of the few administrative rulings on the legality of surveillance. In 2001, George Radwanski, the former Federal Privacy Commissioner, was asked to rule on whether an RCMP surveillance program in Kelowna, British Columbia, complied with the *Privacy Act* (Radwanski 2001). Though this ruling was concerned with the *Privacy Act*, its conclusions are broadly relevant to the legality of public surveillance and will be referred to throughout this discussion. Commissioner Radwanski found that the system's recording capabilities violated section 4 of the *Privacy Act*, which states:

> No personal information shall be collected by a government institution unless it relates directly to an operating program or activity of the institution.[9]

Radwanski interpreted this to mean that government institutions must "collect only the minimum amount of personal information necessary for the intended purpose" and that any collection requires "demonstrable need." The now former

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[6] *Criminal Code*, R.S., 1985, c. C-46 at Part IV.1.
[7] *Privacy Act*, R.S.C., 1985, c. P-21.
[8] *Ibid., s. 4.*
[9] *Privacy Act, supra* note 4 at s. 4.

Commissioner found that the Kelowna surveillance system engaged in "wholesale monitoring" and that, by recording continuously, the system unnecessarily recorded thousands of innocent citizens engaged in activities unrelated to the mandate of the RCMP. While preventing and deterring crime is an important police objective, Radwanski concluded that the program did not meet the requirements of the *Privacy Act* (Radwanski 2001).

In response to the Commissioner's investigation, the RCMP ceased the practice of continuous recording; beginning to record only when a violation law was detected. Commissioner Radwanski, while acknowledging that this change brought the system into technical compliance with the *Privacy Act*, argued that even a non-recording camera surveillance system did not respect the spirit of the Act and ordered that the cameras be removed.

The RCMP and the Solicitor-General refused to remove the cameras (Radwanski 2002). In response, Commissioner Radwanski attempted to enforce his finding through the Courts, but his application was dismissed on technical grounds.[10] As such, the scope of the applicability of the *Privacy Act* remains unclear: the RCMP acknowledged that continuous recording was inconsistent with the Act, but disagreed about the compliance of non-continuous recordings. Until the courts interpret the scope of section 4, it will continue to be unclear which view is correct. Nevertheless, it is clear that the *Privacy Act* imposes some, albeit limited, restrictions on the surveillance activities of the RCMP.

Personal Information Protection and Electronic Documents Act (PIPEDA)

The Federal Government has also enacted *PIPEDA*,[11] which is directed at the use and collection of personal information from commercial activities. While this Act represents a significant step forward for information privacy in Canada, it is only capable of defining acceptable information gathering practices by private actors involved in commercial activities.

PIPEDA only applies to organizations that collect information "in the course of commercial activities" while expressly excluding from its ambit any government institutions covered by the *Privacy Act*.[12] As a result, *PIPEDA* is not applicable to the RCMP or any other provincial or municipal police force. Furthermore, it will likely not be applicable to any other public interest group engaged in surveillance on behalf of the police, unless the group is seeking profit or another commercial benefit, such as private security firms. Private actors that collect information for profit would be subject to *PIPEDA*.

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[10] *Canada (Privacy Commissioner) v. Canada (Attorney General)*, 2003 BCSC 862, [2003] 9 W.W.R. 242, 14 B.C.L.R. (4th) 359.
[11] *Supra* note 2.
[12] *Ibid.* at s. 4.

PIPEDA places stringent restrictions on the collection of personal information without knowledge or consent, which includes video surveillance.[13] It is unlikely that any surreptitious surveillance will meet *PIPEDA's* requirements, though surveillance systems that are clearly identified may be permissible. Former Privacy Commissioner Radwanski was particularly critical of commercial surveillance, arguing that where there is a demonstrable need for surveillance, it should only be conducted by lawful public authorities. He argued that "[t]here is no place in our society for unauthorized surveillance of public places by private sector organizations for commercial reasons."[14]

Taken together, the *Privacy Act* and *PIPEDA* regulate surveillance conducted by the RCMP and private entities for commercial purposes. Provincial statutes and the common law are capable of addressing some of the gaps left unregulated by the Federal privacy regime, although not all are addressed, and protections can vary between provinces.

Provincial Freedom of Information and Privacy Statutes

Freedom of Information and Protection of Privacy Act (FIPPA)

Every province has its own *Freedom of Information and Protection of Privacy Act* (*FIPPA*), which impose restrictions on the ability of provincial institution to collect and use personal information. Ontario has both a *FIPPA* and the *Municipal Freedom of Information and Protection of Privacy Act* (*MFIPPA*), which contain nearly identical sections on information collection. For the purpose of these Acts, "provincial institutions" include provincial and municipal police forces. However, the Acts allow significant exceptions for the purposes of "law enforcement", and it is under this authority that some existing municipal surveillance systems purport to operate. For example, subsections 38(2) and 39(1)(g) of the Ontario *FIPPA* allow personal information to be collected from individuals without their knowledge or consent, so long as this is done for law enforcement purposes.[15]

It is significant that the various *FIPPA*s do not contain restrictive language comparable to section 4 of the Federal *Privacy Act*, which stipulates that "no personal information shall be collected…unless" certain conditions have been met.[16] There is no similar clause in the *FIPPA*s, imposing comparable pre-conditions that must be satisfied to justify information collection. While Commissioner Radwanski interpreted section 4 of the *Privacy Act* as an enabling clause, the various provincial acts cannot be interpreted in a similar fashion.

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[13] This prohibition includes video cameras (See e.g. Radwanski 2001a; *PIPEDA*, *supra* note 2 at s. 7.)
[14] *Unpublished Letter from Commissioner Radwanski to Information and Privacy Commissioner for the NWT Elaine Keenan Bengts*, *ibid*.
[15] *Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c. F.31;
Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c. M.56 [*MFIPPA*].
[16] *Supra* note 4 at s. 4.

As a result, such Acts would seem to provide blanket authorization for collecting information through surveillance by provincial institutions, at least until a Court rules otherwise. It should be noted, however, that it is not clear whether these Acts authorize unfettered and unlimited surveillance powers, especially in light of the Charter's prohibition on unreasonable search and seizure. There are two arguments that could be used to challenge public camera surveillance by provincial institutions. First, it can be argued that the Supreme Court has held that the Charter demands that the law authorize warrantless searches, that any such law must be reasonable, and that the search itself must be reasonable.[17] This standard has generally been interpreted to mean that "reasonable and probable grounds" is required before a search can be initiated. Arguably public camera surveillance does not meet this standard, as it does not focus on individuals or prior activities that give rise to individualized suspicion. On the other hand, it is unclear whether camera surveillance constitutes a "search" within the meaning of the Charter.[18] If public camera surveillance is not a "search", then *FIPPA*, or any of its other provincial counterparts, will be immune to this constitutional argument, at least with respect to its ability to regulate information collection through surveillance. The question of whether public surveillance is a "search" is fundamental to the various Charter issues and will be discussed more extensively in the Charter section.

The second argument against interpreting the provincial freedom of information statutes as a blanket authorization for camera surveillance can be derived from basic principles of administrative law. It is possible to argue that the legislature could not possibly have intended to grant unlimited authority for the collection of information related for the purposes of law enforcement, and that any such authority should be exercised only when it is reasonable to do so, and effective in meeting its stated objectives. Where broad powers are created by the state, the legislation should be interpreted to exclude any unreasonable or ineffective exercise of that power. It remains an open question whether surveillance is effective in combating crime, while the reasonableness of public camera surveillance is doubtful given how wide a net it casts. Commissioner Radwanski characterized camera surveillance as a program of "wholesale monitoring," the costs of which outweigh its benefits (Radwanski 2001). If this accurately characterizes camera surveillance its use would not be reasonable. However, given conflicting evidence related to the utility of camera surveillance it is unclear whether such an argument would find traction in the Courts (see Taylor 2002).

Provincial Privacy Acts

British Columbia, Manitoba, Newfoundland and Labrador, and Saskatchewan all have provincial Privacy Acts.[19] These statutes should be consulted if surveillance is operating in those provinces. These Acts may be useful, but contain similar law

[17] See e.g. *R. v. Collins*, [1987] 1 S.C.R. 265 at 278.
[18] See e.g. *R. v. Kang-Brown*, 2008 SCC 18, [2008] 1 S.C.R. 456 [*Kang-Brown*]; *R. v. Tessling*, [2004] 3 S.C.R. 432 [*Tessling*].
[19] Privacy Act, R.S.B.C. 1996, c. 373 [*B.C. Privacy Act*]; The Privacy Act, R.S.S. 1978 c. P-24; Privacy Act, C.C.S.M. c. P125; Privacy Act, R.S.N. 1990, c. P-22.

enforcement exceptions as their Freedom of Information counterparts.[20] However, all four Privacy Acts limit the law enforcement exception, demanding that any use of surveillance by a peace officer not be "disproportionate to the gravity of the crime or the matter subject to investigation".[21] Given the general nature of camera surveillance systems it may be possible to argue that such systems are disproportionate. Further, provincial privacy legislation makes explicit the ability of surveillance systems to violate personal privacy. [22]

The BC Privacy Act empowers an individual to sue for compensation (referred to as an actionable tort) where their privacy has been invaded. It does not require proof of any specific damage,[23] which means that it is not necessary to show that harm was caused by surveillance. This is important because it identifies the act of surveillance itself as a wrong that requires compensation. The common law, in the alternative, requires an act of communication (essentially the publication of the information that was collected in violation of that individual's privacy), which causes harm, in order to challenge any surveillance or other violation of privacy. This distinction therefore broadens the scope of the remedy available under provincial Privacy Acts and may provide an avenue of relief for those aggrieved by surveillance.

Criminal Code

Subsection 184(1) of the Criminal Code may also affect the legality of the public camera surveillance. The subsection states:

> Every one who, by means of any electro-magnetic, acoustic, mechanical or other device, wilfully intercepts a private communication is guilty of an indictable offence and liable to imprisonment for a term not exceeding five years.[24]

While this seems to place restriction on only the interception of private communications, two court cases have interpreted this section more broadly.[25] This section regulates investigative surveillance (such as phone taps, video surveillance, etc.), and could be interpreted to include public camera surveillance, much as was done with participant surveillance in R. v. Duarte.[26] Such an approach relies heavily on the view of surveillance as an investigative tool of the police, similar to other types of searches.

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[20] See e.g. *B.C. Privacy Act*, *ibid.* at s. 2.
[21] *Ibid*. at s. 2(2).
[22] *Ibid*. at s. 1(4).
[23] *Ibid*. at s. 1(1).
[24] *Supra* note 3 at s. 184(1).
[25] See *Druken v. R.G. Fewer and Associates Inc.* (1998), 171 Nfld. & P.E.I.R. 312 at para. 43 (Nfld. S.C. (T.D.)); *Morgan v. Alta Flights (Charters) Inc.*, 2005 FC 421, 271 F.T.R. 298 at para. 22.
[26] [1990] 1 S.C.R. 30 [*Duarte*].

Interpreting section 184 of the Criminal Code to include public camera surveillance would demand that the police, or agents acting on behalf of the police, obtain a warrant to install surveillance systems, and be subject to the requirements of Part IV.1 of the Criminal Code. While such an interpretation requires considerable judicial flexibility, it would provide a consistent national standard for the use of camera surveillance. For those who characterize surveillance as a police tool, incorporating public camera surveillance within the Criminal Code is the preferred option, whether through legislative enactment or through judicial interpretation. Incorporating public surveillance into the Criminal Code, whether through legislative amendment or by judicial interpretation, would ensure that rules for public video surveillance are applied consistently across Canada.

Jurisprudence

Given the Charter issues that can potentially be raised by the use of public camera surveillance, it will likely be the Courts that determine the legality or the appropriate use of such technology. Before turning to Charter considerations, the relevant common law provisions that may impact the use of camera surveillance will be explored. As will be seen, the common law is largely silent on surveillance, and has little to say regarding broader issues of privacy.

Common Law

Common law is the body of judge-made law that underpins Canada's legal system and which establishes precedent and guides future judicial decisions. Given the recent emergence of public surveillance as a legal issue, there have been few opportunities for common law to develop on the subject. In one of the few decisions where an appellate court has commented on the issue, the Ontario Court of Appeal suggested, "nothing at Common Law prohibits a search through use of a video camera and tape."[27] This view appears to be correct, with any legal impediments to public camera surveillance arising from the Charter and not because of common law.

Despite the limitations of the traditional common law, there have been some recent developments which may still provide for some measure of individual redress. In particular, the emergence of the tort of invasion of privacy in a number of provinces, has the potential to be of use in this area. Suing for invasion of privacy would allow for monetary damages where privacy has been violated. Unfortunately, there are significant limitations on the ability for this tort to address public surveillance. The first limitation is that it is unclear whether such a tort in fact exists (it is the nature of the common law to remain uncertain until a number of courts have had the opportunity to consider the same issue).[28] The second limitation is that an action for

[27] *R. v. LeBeau* (1988), 62 C.R. (3d) 157 at 181.
[28] For a review of this tort in Ontario, see *Somwar v. McDonald's Restaurants of Canada Ltd.* (2006), 263 D.L.R. (4th) 752 at para. 22 (Ont. Sup. Ct. J.).

invasion of privacy is quite narrow, and is focused on damages resulting from communicating the information obtained through the privacy violation, not for the act of recording itself. As a result, if an individual has their picture taken in public, but nothing more, then the tort would be unavailable. On the other hand, if an individual were to sell that picture, then it would be possible to sue. This distinction limits the utility of this tort in the case of surveillance, in that many would argue the very act of surveillance should be of concern, with any resulting use of surveillance footage a secondary consideration.

Given how new this area of law is, no definitive conclusions may be drawn other than that any use of suing for invasion of privacy will likely only be able to address the most egregious violations of privacy. Nevertheless, the use of this tort may represent a last resort for those who oppose the use of surveillance cameras (see Bezanson 1992; and, Moreham 2002).

Application of the Charter

It is the interpretation of surveillance in light of *the Charter* that will likely determine the legality of any public surveillance system. Not only will the Courts determine whether any particular surveillance system is Charter-compliant, but the Courts will also determine whether any purported authorization for surveillance under any of the statutes discussed earlier is legitimate. Section 8 of the *Charter* is concerned with searches, and the question of whether a particular activity constitutes a search within the meaning of the section is fundamental and determinative of the ultimate result. Section 8 specifically states:

> Everyone has the right to be secure against unreasonable search and seizure.

This section has been consistently interpreted to protect a "reasonable expectation of privacy" for Canadians. Traditionally, the protection against unreasonable searches has been primarily concerned with physical searches, and, in particular, with determining when a home, place of business, or an individual's person, can be searched by the State. With the advent of new forms of technology, the scope of what we consider to be a "search" has expanded. Section 8 has been held to protect against audio and video surveillance,[29] against the use of drug sniffer dogs,[30] against phone taps,[31] and against GPS tracking devices.[32]

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[29] *Duarte*, *supra* note 23; *R. v. Wong*, [1990] 3 S.C.R. 36 at 47 [*Wong*]. It should be emphasized that these two cases only dealt with private audio and video surveillance in the context of investigating specific offences, and not with any type of public surveillance.
[30] *Kang-Brown*, *supra* note 15; *R. v. A.M.*, 2008 SCC 19, [2008] 1 S.C.R. 569 [*A.M.*].
[31] *Duarte*, *supra* note 23; *R. v. Garofoli*, [1990] 2 S.C.R. 1421.
[32] *R. v. Wise*, [1992] 1 S.C.R. 527 [*Wise*]. (See Boa 2007 for a more extensive discussion of the Supreme Court's approach to novel search technologies.)

To constitute a search within the meaning of section 8, the particular act must violate an individual's reasonable expectation of privacy. If this expectation is breached, then the search must have been reasonable so as to not violate the *Charter*. Section 8 presumes that any activity that is determined to be a search and was conducted without a warrant is unreasonable, and the onus is on the government to prove that the search was authorized by law, that the law is reasonable, and that the search itself was conducted reasonably.[33] Using this approach, a wide range of police searches have been found to be reasonable in the absence of a warrant, though these have generally been restricted to situations of emergency and public safety, where there is no time to appear before a judge.

The vital question in section 8 is whether a particular activity, tool or technology constitutes a search. If it does, section 8 will apply, requiring that the search be reasonable. If the activity is found not to be a search, then section 8 does not apply, and there will be no Charter restrictions on the use of the activity or technology in question. The question of whether the activity constitutes a search is complex, context specific, and requires that an individual's reasonable expectation of privacy be breached. This is both subjective and objective: an individual must subjectively expect privacy, and this expectation must be objectively reasonable.[34] Surveillance deals with informational privacy, a type of privacy identified as deserving protection by the Supreme Court. Whether an expectation of informational privacy has been breached depends on the meaningfulness of the information collected. The more that the collected information relates to "intimate details of the lifestyle and personal choices of the individual," the more likely it will be that an individual's reasonable expectation of privacy has been breached.[35]

In the case of public camera surveillance, this analysis will be complicated by the public nature of the technology. It is difficult to reconcile the idea that an individual has an expectation of privacy while they move about in public, capable of being seen by anybody who should choose to look. In fact, the traditional legal view is that an individual does not have any expectation of privacy while moving about in public. However, there have been a number of recent cases which suggest that in certain situations, despite being in public, an individual stills enjoys a measure of privacy; courts have referred to this as a "diminished" expectation of privacy. There have also been a number of recent British and European cases that have identified aspects of public lives that should nevertheless be granted a measure of privacy, which will be relevant to any future consideration by Canadian courts.[36]

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[33] *Collins*, *supra* note 14.
[34] *R. v. Edwards*, [1996] 1 S.C.R. 128 [*Edwards*].
[35] *Tessling*, *supra* note 15 at para. 25.
[36] See e.g. *von Hannover v. Germany*, no. 59320/00, [2004] E.C.H.R. 294 (Eur. Ct. H.R.) (preventing the publication of photos taken in public); *Peck v. The United Kingdom*, no. 44647/98, [2003] E.C.H.R. 44 at para. 59 (Eur. Ct. H.R.) [*Peck*] (release of surveillance recording of individual attempting to commit suicide on public street); *P.G. and J.H. v. The United Kingdom*, no. 44787/98, [2001] E.C.H.R. 550 at paras. 56-58 [*P.G. and J.H.*] ("Private-life considerations may arise, however, once any systematic or permanent record comes into existence of such material from the public domain."); *Campbell v. MGN*

Former Supreme Court Justice Gérard La Forest suggested that it is the continuous nature of surveillance that is problematic. He argued that while Canadians "may not have a reasonable expectation that the police will never observe our activities in public spaces, …surely it is reasonable to expect that they will not always do so."[37] In addition to looking at the effect of surveillance cameras; for instance, whether they create a "chilling effect" on particular types of activity, Courts will also likely look to the nature of the information collected. Surveillance recordings will likely be of particular concern to Courts due to their potential to convey intimate details about individuals, especially as computers provide the ability to collate, compare and analyze recordings together, allowing new conclusions to be drawn from what would otherwise be meaningless information.[38] Any additional connections to biometric systems will likely be met with even greater concern.

The Courts will likely follow one of two recent Supreme Court decisions. The cases of R. v. Tessling and R. v. Kang-Brown highlight two results that can be obtained utilizing section 8. In Tessling, the Court considered whether the use of Forward-Looking Infrared (FLIR) cameras constituted a search. The police had flown over a residential neighbourhood in a helicopter equipped with FLIR technology, which allows heat signatures within buildings to be identified. This camera is capable of identifying high temperatures, which are often indicative of the presence of a marijuana grow operation. The Court characterized these heat signatures as "meaningless," therefore Mr. Tessling had no reasonable expectation that they would not be collected by the State. Because the use of the FLIR camera does not violate a reasonable expectation of privacy it is not a search; thus, section 8 of the Charter is not applicable.[39]

In contrast, the Supreme Court considered the use of sniffer dogs in the two companion cases of R. v. Kang-Brown and R. v. A.M.. In these cases, the police had taken sniffer dogs into a school and a bus station. The police did not have any specific suspicion that drugs would be found, but in both cases the dogs identified the presence of drugs, which led to arrests. In Kang-Brown, though the result is complex due to the fact that four different Justices had different views as to the outcome, the Court unanimously accepted that the use of the dogs constituted a search. Justice Deschamps, noted that the odors emanating from the bag revealed

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Ltd., [2004] 2 A.C. 457 (H.L), (the Court recognized a "reasonable expectation of privacy" (at para. 21) and Lord Hoffman argued that merely being in public does not imply that an individual loses their expectation of privacy (at para. 74)); *Douglas v. Hello! Ltd.*, [2005] 4 All ER 128 (claimant has a privacy interests in photographs taken in public, partly because "a photograph is more than the information you get from it"); see also Moreham 2002.

[37] Legal Opinion from Justice Gérard La Forest to George Radwanski, Federal Privacy Commissioner (5 April 2002), online: Office of the Privacy Commissioner of Canada <http://www.privcom.gc.ca/media/nr- c/opinion_020410_e.asp> [*La Forest Legal Opinion*].

[38] The resulting profiles are often referred to as human mosaics. See e.g. Paton-Simpson 2000; Nissenbaum 1998; and Steeves 2008.

[39] *Tessling*, *supra* note 15.

that the individual was likely to have come into contact with a controlled substance either as a user or a trafficker, or to have been in the company of drug users. The nature of this information was "very personal," and therefore engaged section 8 of the Charter.[40]

The Court will need to determine whether public camera surveillance is more like FLIR technology or the use of sniffer dogs. Both involve situations where information is collected as it emanates publicly, but differ as to their informational content. In any future case considering the constitutionality of public surveillance, a significant question that will need to be addressed is which of these two analogies the Courts believe is more appropriate.

If the Court determines that surveillance constitutes a search, the inquiry does not end there. The second question is whether the search was conducted reasonably. In his legal opinion, Justice La Forest concluded that if surveillance is found to be a search, "then it follows almost inexorably that it violates section 8 of the Charter."[41] Justice La Forest reaches this conclusion because of the lack of statutory authority that specifically provides for public camera surveillance. Despite the presence of a number of information collection statutes, none are likely sufficient to authorize surveillance if it falls within the ambit of section 8. The requirements imposed by section 8 are rigorous, and cannot likely be satisfied by broad information collection authority, such as provincial FIPPA legislation.

The Court may impose a warrant requirement for the installation of camera surveillance if it determines that surveillance practices constitute a search. As mentioned earlier, warrantless searches are presumptively unreasonable. Judicial authorization, on the other hand, almost always makes the resulting search constitutional, assuming that proper procedures have been followed and reasonable cause exists. In the case of public camera surveillance, a judge could be responsible for ensuring that the proposed scheme addresses a specific public safety concern and that other enforcement options have been considered and rejected. Further, such a warrant would limit the surveillance system to the geographic areas approved by the judge, and for a defined period of time. Such an approach would also give the courts the ability to oversee the collection, retention and use of any footage or images collected by the surveillance system. Furthermore, there is precedent for this type of broad decision.[42]

Alternatively, the Court could insist that Parliament explicitly authorize surveillance before any searches, other than where the police possess reasonable and probable grounds, are found to be constitutional. In past cases, the Courts have authorized

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[40] *Kang-Brown*, *supra* note 15 at para. 175; *A.M.*, *supra* note 27.
[41] *La Forest Legal Opinion*, *supra* note 34.
[42] In *R. v. Duarte*, *supra* note 23, for instance, the Court interpreted section 178.11(1) of the *Criminal Code* (now section 184(1)) to include participant surveillance, and that using this investigatory tool requires a warrant. The Court could potentially do the same with public camera surveillance.

novel investigative techniques in the absence of legislative authority. However, in Kang-Brown a plurality of Supreme Court Justices refused to do so, arguing that legislators are in a better position to balance the various considerations and interests that are relevant to questions of search and seizure.[43] Once Parliament defines a legislative scheme for surveillance the Courts can evaluate whether the law is Charter compliant.

If the Court were to find that surveillance constitutes a search, it is most likely that they would impose a warrant requirement for its use or rule that it is unconstitutional without legislative authority, though this is far from certain. Until the Courts have the opportunity to fully consider the issue, it is impossible to predict the result of this question with any certainty. Regardless, the foregoing should indicate that surveillance raises complex legal issues, which will not be easily answered. There are also indications that the Supreme Court has some misgivings about its entire section 8 approach,[44] and may take the opportunity presented by public surveillance to reconsider altogether the legal framework for novel technologies that present complex privacy and criminal law challenges.

Non-Binding Guidelines

The current Privacy Commissioner, Jennifer Stoddart, has turned to non-binding codes of conduct as a means of ensuring that existing surveillance institutions meet certain basic privacy guidelines. This approach has been adopted, in part, because of her predecessor's (Commissioner Radwanski) unfruitful attempts to directly regulate surveillance. The various provincial information and privacy commissioners have adopted a similar approach.

These codes of conduct tend to adopt a proportional approach to surveillance, by mandating that such systems should not be used more than necessary in order to regulate prescribed activity. The most stringent set of provincial guidelines in Canada is published by the Commission d'accèss à l'information du Québec, which contains 20 "rules of use." These rules outline strict conditions that must be adhered to for the use of surveillance to be 'reasonable'. In contrast, Ontario's guidelines are much more permissive. This is evident in the language used in the two documents: where Quebec's rules consistently provide that surveillance operators "shall" comply with certain limitations, Ontario's guidelines provide that certain aspects of surveillance "should" be restricted. In legal interpretation, "shall" is a mandatory term while "should" is not.[45]

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[43] *Supra* note 15.

[44] See Justice Binnie's decision in *A.M.*, *supra* note 27.

[45] Commission d'accès à l'information du Québec, "Rules for use of surveillance cameras with recording in public places by public bodies" (June 2004), online: Commission d'accès à l'information <http://www.cai.gouv.qc.ca/06_documentation/01_pdf/new_rules_2004.pdf> at 3-6; Information and Privacy Commissioner/Ontario, "Guidelines for Using Video Surveillance Cameras in Public Places" (2001), online: IPC <http://www.ipc.on.ca/images/Resources/video-e.pdf>.

Due to the fact that such codes of conduct are non-binding, they are not technically "legal". There are no sanctions for non-compliance, and such codes permit no basis for judicial oversight. However, non-binding guidelines do fill in the gaps left by law by defining what constitutes reasonable surveillance use. They also attempt to strike a balance between concerns over civil liberties and those of law enforcement. Furthermore, such provisions may be of assistance to the Courts in evaluating surveillance. Given that section 8 of the Charter prohibits only unreasonable search and seizure, it is possible that such guidelines could provide a starting point for a Court in determining whether any particular search was conducted reasonably.

Conclusion

As a novel technology, public camera surveillance raises issues that the Canadian legal system has not yet had the opportunity to fully consider. The only case that has raised these issues was dismissed on technical grounds. Existing surveillance systems operate under the questionable authority of statutes granting broad information collection exceptions for law enforcement purposes. Until such an interpretation is challenged these surveillance systems remain "legal." Once challenged, the Courts will have to wrestle with the application of section 8 of the Charter, a constitutional provision that was designed to deal primarily with physical searches. If section 8 is found to be applicable, then a range of requirements will be imposed to ensure that the use of the technology is "reasonable." If section 8 is not applicable, then the status quo will continue for the foreseeable future.

The Technical Context of Camera Surveillance in Canada

Chiara Fonio and Patrick Derby

Selling Camera Surveillance: The Master Narrative of Technology

Of late we are routinely reminded of the uncertainties of contemporary life. News stories and media images help fuel our insecurities about the possibility of the next pandemic, the international 'war on terror', or local crime. The response to these sources of insecurity has been, in part, the implementation of sophisticated surveillance assemblages. That is, the formation of networks of corporations, agencies, individuals and technologies to collect and analyze information about, or otherwise monitor, the activities of both humans (citizens, travellers, workers and consumers) and nonhumans (animals and transportation flow). Camera surveillance technology has been enrolled in efforts to combat each of the above sources of insecurity. For instance, in response to the recent outbreak of the H1N1 virus governments worldwide are deploying thermal cameras in airports, searching for individuals with an elevated body temperature that might suggest infection (Howell 2009). Public open-street and private camera surveillance systems are often touted as a significant tool in the 'war on crime' and now also in the 'war on terror', as camera surveillance technologies are deployed at borders, in airports, and also on the combat field.

Figure 1: Advertisement for Samsung's A1 Series Surveillance Camera.

While this social and political context of insecurity may appear to guarantee the continued and rapid expansion of camera surveillance technologies, there is another crisis – the global economic recession – that might act as a countervailing factor. David Murakami Wood (2009: 1) suggests that, at least in the UK, "CCTV might be one of the first casualties of the global recession". While market forecasts are always tentative, projections for one segment of the camera surveillance industry – the Internet Protocol (IP) video market – suggest that the 2009 growth rate will slow by 66% compared to 2008 as a result of the current economic climate; however, the IP market will still grow by 15% this year.

For several reasons it is still too early to speculate on the real impact this economic crisis will have on the surveillance industry or the proliferation of camera surveillance. First, the depth of this crisis remains unclear. While time will tell how

long this current period of recession will last and its impact on the camera surveillance industry, in the short term mega events such as the 2010 Winter Olypmic and Paralympic Games in Vancouver will help cushion the blow. The security cost alone for the Vancouver Olympic Games is expected to reach $1 billion CAD (CBC News 2008). While it is unclear exactly how much of this money will be earmarked for the implementation of camera surveillance systems at Olympic venues and public spaces surrounding them, there is no doubt that cameras will make up part of the security assemblage (Huey, this report; see also Boyle and Haggerty 2009)[46]. Further, in the lead up to the Olympics the provincial government of British Columbia plans to add 110 new red-light traffic cameras at a cost of $20 million CAD (CBC News 2009).

Second, while the North American automotive sector is taking a hit, at least in part, because they are out of touch with the market demand for smaller and more efficient vehicles, the opposite may be said about the camera surveillance industry. According to a white paper released by MultiMedia Intelligence, a market research and consultancy firm, the camera surveillance industry is expanding because of a heightened emphasis on security, improvements to the technologies and lower equipment costs (Kirstein 2008: 1). While government and business may in fact be looking to cut back on operating costs in these difficult economic times they must also continue to respond to other sources of insecurity, such as the threat of terrorism and the risk of crime. This new generation of camera surveillance technologies may appeal to government and business because it, at least in their minds, allows them to achieve their security needs at a lower cost than employing human security personnel, and with little or no human error.

Third, urban areas hit hardest by this current economic crisis and the downturn in the manufacturing sector will soon seek to position themselves so that they can compete for capital investment. As some of the camera surveillance research from the UK suggests in efforts to attract consumers, tourists, and/or business cities need to engage in a "politics of image" (Coleman 2004). That is, they need to present themselves as a safe place to visit and/or do business. This is achieved through urban regeneration strategies that, as Coleman (2004: 200) argues, "promote the development and funding of street safety initiatives in which street camera surveillance figures prominently." For a Canadian example one only need look to the city of Hamilton, Ontario. As Kevin Walby (2006) explains the open-street CCTV in Hamilton was initiated in consultation with business entrepreneurs who expressed concern that fear of crime in the downtown core was hurting economic activity as well as the sustainability of the city's semi-pro hockey team.

It is essential to situate camera surveillance within this broader social, political, and economic framework in order to understand camera surveillance as an industry in which many technology manufacturers and suppliers have vested interests. Many household brands, from Panasonic to Sony to General Electric, have a stake in the

[46] More information about the security buildup for the 2010 Olympic Games can be found at: http://www.no2010.com.

camera surveillance market[47]. While China is among the world leaders in producing surveillance cameras, with major export markets in North America and Europe, several North American companies are also innovators in the field. Leading Canadian security technology and surveillance camera manufacturers include Extreme CCTV (acquired by Bosch Security Systems in 2008) and General Electric (GE) Security. Bombardier Inc., one of the largest military contractors in Canada, also manufactures and supplies civilian transit vehicles (i.e. airplanes, trains and light rail) equipped with onboard security systems, including surveillance cameras.

Extreme CCTV, based out of Burnaby, British Columbia, is a manufacturer of cutting-edge surveillance equipment and an industry leader in infrared imaging solutions that allow for the production of clear camera images in all light and weather conditions[48]. Extreme CCTV won the "Smaller Exporter Achievement" award at the 2003 Canada Export Awards Ceremony, only weeks after being named the fastest growing high-tech company in the country (Extreme CCTV 2003). Further, after 10 years of continuous revenue growth the company's sales surpassed $40 million in 2007, an increase of $13 million from the previous year (Export Development Canada). Although now a company with global reach, General Electric (GE) has been in operation in Canada for over 100 years and was named the North America Video Surveillance Company of the year by Frost and Sullivan in 2008. GE Security, a wholly owned subsidy of the General Electric Company focuses on security related information and communication technology, including camera surveillance (GE Security).

Despite the current global recession the camera surveillance industry remains big business and surveillance technology companies interested in selling their products exploit our fears and insecurities. A perusal of camera surveillance advertisements and product brochures available on the Internet reveals that the fear of crime and terrorism, and the search for safety and security are utilized to pitch camera surveillance to potential clients. Take for instance the following advertisements by Extreme CCTV and Samsung:

> Recent world events have demonstrated the effectiveness of video surveillance at transit hubs. Cameras help detect suspicious behavior, confirm potential threats and identify the people involved. In one pre-dawn murder case that made international headlines, an Extreme camera strategically positioned by a bus stop provided key critical evidence, enabling authorities to make the arrest. The District

[47] The leading manufacturers of camera surveillance technology and equipment in the world include: Altronix Corporation, Automatic Control System, Bosch, CMS Security Systems, General Electric Security (Aritech), Ikegami, Panasonic, Pelco, Samsung and Sony.

[48] A complete profile of Extreme CCTV Inc. can be found at the Industry Canada website: http://www.ic.gc.ca/app/ccc/srch/nvgt.do?lang=eng&prtl=1&sbPrtl=&estblmntNo=234567042917&profile=cmpltPrfl&profileId=1861&app=sold

> Attorney went on record to praise the "great surveillance cameras" that helped solve the case (Extreme CCTV).[49]
>
> Imagine 24/7 perfect safety and security. Samsung Techwin dreams a world where the word 'worry' does not exist in dictionaries. To turn our world into such a place, we are committed to protecting the safety of society and its property at all times by offering state-of-the-art security products (Samsung).[50]

The following advertisement narrative suggests that modern camera surveillance systems allow security administrators to fulfill their security obligations while reducing their operational budgets – precisely what is expected of them in these hard economic times.

> Achieving the optimum level of security in today's increasingly complex environment is a real and ever-present challenge. Security obligations are growing while operational budgets are shrinking. Perhaps most critical, video surveillance systems are reaching maturity. New technology is increasing capabilities and driving a new standard of security. Risks and potential threats must be addressed with more than cameras—they require a system that is complete and integrated (General Electric Security).[51]

As the above advertisements indicate security technology companies tap into contemporary insecurities in order to pitch and sell their product to potential clients. Surveillance technologies are presented to security administrators as a panacea to security related concerns in the public and private realm. The emphasis is on technological capabilities and specifications, and the dream of a 'crime free' or 'worry free' society is promised as a possibility through investment in state-of-the-art security systems, which include camera surveillance technologies. This utopian promise forms the "master narrative of technology" and helps explain, at least in part, the proliferation of surveillance systems.

Understanding the Technical Capabilities of Camera Surveillance Systems

Camera surveillance technology emerged in the 1960s with slow technological progression for the next two decades. It was not until the mid 1980s that camera surveillance technology began to advance in quantum bounds (Cieszynski 2007). With the acknowledgement that the information presented will be basic and likely

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[49] http://www.extremecctv.com/markets_transit.php
[50] http://www.samsungcctv.com/product/file_data/CTV/cctv_070726_e.pdf
[51] http://www.gesecurity.com/GESecurity/images/email/804-3060_VideoPlatform_52129finA.pdf

outdated in a short time, this section aims to provide the reader with general understanding of camera surveillance technologies.

Cameras

Surveillance cameras comprise both a lens system and the camera itself. To produce an image the camera lens collects light from the targeted scenes and focuses it into the camera image sensor. The camera electronics then transforms the visible image into an electronic signal suitable for transmission to a remote monitor or recording device (Kruegle 2007).

There is great technological variation when it comes to contemporary lenses and cameras. Surveillance cameras may be equipped with fixed focal length (FFL) lenses that offer a predetermined field of view (FOV), whether that be wide-angle, medium, or narrow. Zoom lenses on the other hand offer more versatility than fixed focal lenses, allowing the camera operator to remotely modify the FOV. Of course numerous factors, not the least of which is technological innovation, will impact the overall quality of the zoom capabilities. Currently, zooming-in on an item of interest narrows a camera's FOV; however, a Canadian research team is currently working to develop a "hybrid eye" camera that would allow for a sharp focus while maintaining a peripheral view. York University professor James Elder and his research team have developed a prototype camera that is equipped with two lenses, one fixed focal lens capable of providing a low-resolution wide-angle view of an entire scene, the other a zoom lens mounted to a motorized pan-tilt base that allows for a section of the wider scene to be selected and viewed at high resolution.

Cameras may be analog, digital, or internet protocol (IP) (IP Cameras will be discussed under the 'transmission' heading). Analog surveillance cameras dominated the security market until the year 2000 when digital signal processing (DSP) became more common. DSP cameras are less expensive and offer more features (i.e. digital zoom, higher image resolution) than the analog versions. The digitization of surveillance camera technology has also led to innovations in automated image analysis. Software algorithms can be incorporated into digital cameras transforming a basic surveillance camera into a 'smart camera' (Kruegle 2007: 122). While analog systems transmit images to security personnel for decision-making, digital 'smart' cameras analyze the image, automatically alerting security personnel as required.

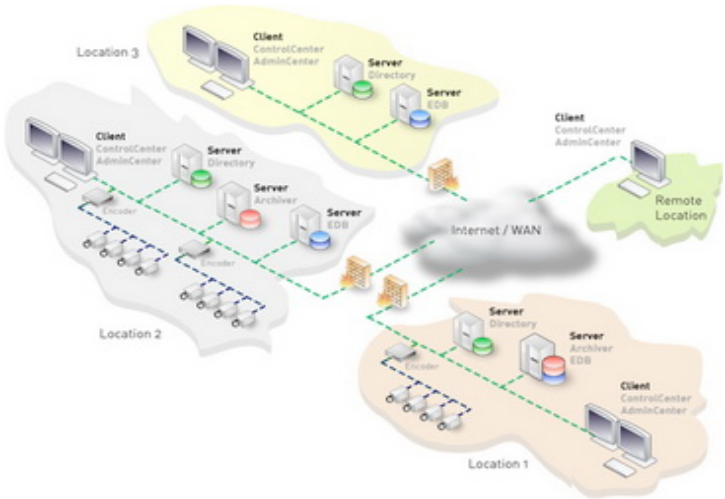

Figure 2: Example of a CCTV network. ***Image Source: www.securework.co.th***

This may include, but is not limited to facial recognition analytics and automated licence plate recognition.

Surveillance cameras may also be equipped with pan-tilt zoom (PTZ), infrared (IR) or thermal infrared capabilities. More areas can be monitored with PTZ cameras as the operators can remotely control the direction of the cameras gaze through the use of a joystick. While some surveillance camera have PTZ capabilities designed into their casing, otherwise fixed position cameras can also be secured to an external mount that has pan and tilt capabilities. Infrared technology allows for the visualization of images captured by the camera in low light or poor weather conditions through the use of a light amplifier situated between the camera lens and the camera image sensor. Thermal imaging systems, on the other hand, respond exclusively to heat energy emitted, allowing the cameras to detect humans and any other warm nonhuman object, even in total darkness (Kruegle 2007: 34).

Transmission

Once an image is captured by a remote camera and converted into an electronic signal that signal must be transmitted to a monitor for viewing and/or a recording device for storage. Methods of transmitting the signal may also be analog or digital. While many camera surveillance systems have upgraded to digital cameras, the switch to digital modes of signal transmission has been slower. Kruegle (2007) indicates that most systems still rely on analog technology for transmitting camera surveillance data.

The most common form of analogue signal transmission is the use of coaxial cable, especially for smaller area indoor installations. Fiber-Optic wiring gained prevalence in the late 1990s, especially for outdoor surveillance cameras as the technology allows the signal to be transmitted several miles with little to no image degradation. While Fiber-Optic wiring is more difficult to install than coaxial cable it is also more difficult to tap into the surveillance feed, making it a more secure option. Several wireless analog transmission methods also exist for instances where camera surveillance needs to cover even greater area or where cameras are placed in locations where it would be difficult to run wire. Radio frequency and microwave technology allow for video signals to be transmitted from the camera to the monitor through the atmosphere (Kruegle 2007).

Historically, camera surveillance systems were proprietary networks, closed and controlled by security managers; hence the name closed circuit television surveillance (CCTV). However, developments in Local Area Networks (LAN), Wide Area Networks (WAN), and the Intra- and Internet have revolutionized video transmission capabilities by creating computer networks with global reach and providing a digital backbone that can be used to transmit video and/or audio virtually anywhere in the world (Kruegle 2007). This means that surveillance camera images can now be potentially transmitted to any computing device anywhere on the network. Advancements in WiFi technology also means that cameras and monitoring devices can potentially communicate wirelessly worldwide, or at least where WiFi or other wireless technology is available. The

camera surveillance equipment communicates openly over a basic network infrastructure using the Internet Protocol (IPv4), allowing many users to control the camera(s) remotely and monitor the scene captured by the camera(s) from any computer plugged into the network[52]. Open circuit television surveillance (OCTV) systems, such as those transmitted over the Internet are vulnerable to hackers and a plethora of viruses. The systems must be safeguarded using password protection, virtual private networks (VPN) or WiFi protected access (WPA), and encryption standards such as the digital encryption standard (DEA) or advanced encryption standard (AES).

Monitoring

The use of a "switcher" is required where the camera surveillance network being monitored employs more than one camera, allowing the images from the cameras to be viewed on one or more monitoring device. There are various types of switchers currently marketed for and employed within the security industry. Standard switchers may be manual, sequential, or alarming. Manual switchers connect one camera to one monitor or recording device at any given time. While sequential switchers rotate through various cameras displaying them sequentially on a monitoring device, alarming (or signal input) switchers automatically display the images from a camera when the camera's alarming mechanism is triggered. For instance, cameras may be linked to a motion detector so that when motion is sensed the camera's images are automatically displayed on the monitoring screen, overriding what images were previously selected, or the images may be automatically transmitted to a recording device.

More sophisticated camera surveillance networks typically employ a microprocessor-controlled switcher. Most manufacturers of such switchers make computer-operated consoles that integrate the functions of the switcher and pan-tilt joystick. Such software-programmable switchers provide flexibility and expandability not available with Standard switchers. The software allows for systems to be easily reconfigured and for such functions as 'automatic scanning', where a camera controlled by the software randomly moves through its full pan, tilt, and zoom ranges. Among the numerous other features offered by microprocessor-controlled switchers is the availability of pre-set camera positions that can be enacted at the press of a button or the triggering of an alarm. Multiplexers are utilized when the images from more than one camera need to be displayed on a single monitoring screen. Multiplexers work by memorizing the image data captured by numerous cameras, compressing the data, and displaying the scenes from multiple cameras on a single screen. Up to 32 separate scenes can be displayed on a single screen. The multiplexer can also be configured so that the video images

[52] For readers interested in surveillance themed art, the website eyesoflaura.org is an interactive blog/art exhibit that allows viewers to take control of an IP surveillance camera from their personal computers. The camera is installed on the roof of the Vancouver Art Gallery and overlooks the immediate vicinity of the gallery, and provides a particularly clear view of Howe St., between Robson and Georgia.

from different cameras are display sequentially. The resolution of the images displayed on the monitoring screen decreases with every additional scene added.

Various types of screens can be used to display camera surveillance images. Until the late 1990s the most popular screens utilized were the nine-inch monochrome cathode ray tube (CRT) monitors (Kruegle 2007). While numerous surveillance systems still utilize colour CRT monitors, digital liquid crystal display monitors (LCD) have gained popularity because of their smaller size, as well as their popular use personal computer and laptops screens, especially as cameras surveillance moves toward an open system using the Internet. The most recent monitor technology to enter the security market is the plasma screen. The advantages of the plasma screen are its brightness and high contrast ratio, making it ideal for use where infrared surveillance camera technology is employed. Plasma monitors can be produced in much larger sizes than other types of monitors - some measuring up to 80 inches diagonally (ibid.) - and are available in high definition (HD). Further, the transmission of camera surveillance images over an open system such as the Internet also means that surveillance footage can also be displayed on WiFi enabled devices such as hand held computers and personal digital assistants (PDA), or even cellular phones.

Recording and Printing

Instantaneously, an image is captured by a surveillance camera, transmitted to and displayed upon a monitoring screen to be scrutinized by a camera surveillance operator. However, at the same moment an event reveals itself on the screen it disappears forever, unless a record of the event is made. Until recently videocassette recording (VCR) was the dominant means of recording camera surveillance footage. VCR recording required the use of many videocassettes and the space to store them. Searching cassettes for evidence was a lengthy process and duplicating the images resulted in degradation. Today, most camera surveillance systems utilize digital video recorders (DVR). Even sites where analog equipment is still in use converters can be purchased to digitize and compress the footage for recording. DVR technology allows for images to be retrieved more quickly, and duplication can be achieved with no degradation. The newest generation of DVRs are network video recorders (NVRs), which allow for the digital recording of surveillance footage from numerous networked cameras and DVRs. Security administrators also use hard-copy video printers to preserve surveillance images. Hard-copy video printers capture and print still images from camera surveillance footage. Security personnel may operate the printer manually or it may be configured to print when an alarmed camera has been triggered.

Beyond Technological Capabilities: The Technical Context

Thus far we have examined the broader political and economic context in which camera surveillance technology is currently proliferating, and have explored, in general terms, the technological components of cameras surveillance. Camera surveillance systems, however, equate to more than the sum of their technical parts. Camera surveillance is socio-technical, meaning that both the technical and the

social contribute to the shaping of camera surveillance outcomes. Thus, any discussion of the technical aspects of camera surveillance must push beyond a merely technological focus toward what we refer to as the technical context of camera surveillance. In addition to the technical capabilities of the camera surveillance assemblage, the technical context refers to the socio-technical space of the camera surveillance control room, as well as the technical skills of the camera operators.

Technology and Control Room Dynamics

All aspects of the technical context vary in relation to the different types of spaces where camera surveillance is commonly employed. In public (i.e. open-street, parks, etc.) and semi-public spaces (i.e. shopping malls, entertainment venues, universities, etc.) surveillance camera images may be monitored from local control rooms or from a centralized police station. In private spaces (i.e. shops, banks, homes, etc.) control rooms are rarely utilized, or camera operators for that matter. Finally, surveillance cameras deployed in the context of public transportation systems, from airports to trains to taxicabs is even more multifaceted as camera images may be monitored from a centralized control room, from on board the transport vehicle only, or even only by downloading the stored images.

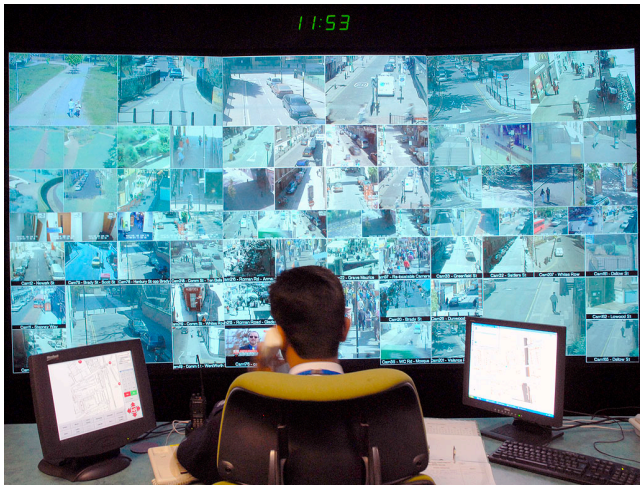

Figure 3: Town Centre Camera Surveillance Control Room. ***Image Source: www.barco.com***

Most control rooms – whether local or centralized – are very similar, hosting working consoles equipped with computers linked to display screens. Typically only a few operators will be responsible for monitoring several screens[53], traversing the cameras – if they are not fixed, that is – and zooming them in on objects and persons of interest. The physical aspects of the control room, from the lighting to the size and shape of the room, as well as the configuration of the monitoring area need to be taken into account. The tasks of the operators are both physically and psychologically demanding; the act of monitoring several monitors is quite taxing. As such, it is crucial not to undervalue the "realities of a control room culture" (Smith 2004: 391).

Attention needs to be paid to such things as the alienating and monotonous nature of camera surveillance work, as well as operator resistance. Camera operators routinely break the monotony of their day by using the cameras for "unofficial"

[53] In some cases few screens may be utilized but each screen will host images from several camera. This is achieved through the use of multiplexers. See Figure 3 above.

ends. At a Canadian surveillance site – a shopping mall - researched by one of the authors, surveillance cameras are sometimes trained on television sets so that the camera operators can watch "Hockey Night in Canada" (Derby 2007). All of the above demonstrate the limits of human operated cameras surveillance schemes, and any attempt at understanding camera surveillance cannot ignore control room dynamics.

While the physical aspects of the control room are part of the "visible" technological environment where camera operators work, there is also a less tangible technical context. This includes the electronic network employed to transmit camera surveillance data, the software relied upon for smooth integration of disparate components, and more. Generally, the technological infrastructure of a camera surveillance control room also consists of software, databases, mobile phones, as well as other electronic devices.

It must be borne in mind that while a camera operator's monitoring behaviour is enabled by their skills it is also influenced by the technology itself. As cameras become more sophisticated – consider the 'smart cameras' described above – algorithms increasingly automate the surveillance process requiring less human intervention. Automation can take the less sophisticated form of "auto-scanning", where a PTZ camera automatically and randomly rotates and zooms through its full range of motion, capturing images within it field of view, to the more sophisticated use of intelligent scene monitoring, which analyses the minute details – at the pixel level – of the scene to alter the camera operator of pre-determined events. Alerting the operator of items left behind or of vehicles travelling the wrong way on a one-way road are just some of the capabilities of software enabled surveillance cameras.

While the technology can enable surveillance camera operators it may also be a hindrance. Like all technological tools camera surveillance systems are not completely reliable with technical problems arising quite frequently. This may be especially so in Canada where cameras and their wiring are exposed to inclement weather. Camera surveillance systems require regular inspection, preventative maintenance, as well as the replacement and/or upgrade of various components, to ensure the assemblages smooth functioning. As Lynsey Dubbeld states it, while the technical artifact is a precondition for the execution of camera surveillance, it might also be a limit because such systems do not always function properly (2004: 137). As a consequence, the technical context goes beyond simply mechanical issues to exploring the numerous technical problems that camera operators routinely face, and the impact these problems have on the effectiveness of cameras surveillance. Consider one example from a Canadian university campus. A new camera installed in the fall months broke down when the winter weather caused the newly laid wiring to contract and break. Because the winter weather precluded the camera's immediate replacement the camera security division lost visual surveillance of one of the campus' main grounds, creating a blind spot of several acres (Derby 2007).

Operator Training

Camera operator training is also a component of the technical context. Usually their training, if they receive any, is technical, focusing on the how the camera system works. It should not be taken for granted that those behind the cameras and monitoring the screens have comprehensive training. In some cases training consists merely of learning the locations of cameras so that items or persons of interest can be easily located and tracked with the camera network. A camera operator, interviewed by one of the authors, indicated that playing video games more effectively prepared him to operate surveillance cameras than the actual training he received (Derby 2007).

Despite the obvious need for training camera operators in the areas of privacy and data protection few appear to have been exposed to relevant privacy legislation. Although often being responsible for deterring and preventing crime, or providing increased security, few camera operators received any criminological training from within the organization for which they work; however, many working in this realm may have post-secondary education in criminology or policing. Further, despite the potential consequences of camera surveillance, especially with regard to the discriminatory and exclusionary manner in which it is often employed, operators receive no training on its social impacts.

Codes of practice can be used to ensure that camera surveillance systems are run ethically and within the parameters of the law. In the Canadian context, where most camera surveillance appears in semi-private and private spaces, such codes of practice are rare. Specifically, a code of practice should include topics such as human rights, privacy and data protection, discrimination, and purpose specific use of the cameras. With the above identified need notwithstanding, camera surveillance training tends to remain narrowly focused on the equipment, operating and reporting/recording procedures, and general operator responsibilities.

Conclusion

In sum, while it is important to understand the technical capabilities of cameras surveillance, it is incorrect to assume that the rise of camera surveillance is technologically driven. In order to understand the proliferation, and even the impact, of camera surveillance we must understand camera surveillance in its sociotechnical context.

At a macro-level camera surveillance is currently marketed, sold, and procured in a social and political climate of insecurity. The camera surveillance industry is tapping into public fears of crime and terrorism, and the quest for security in order to sell their products. The narrative often provided is that camera surveillance systems provide a technological solution to the various social and security concerns of modern everyday life. The emphasis tends to be placed on the technological specs, as well as the promise that these technological systems can provide a utopian worry-and-crime free society.

Camera surveillance systems comprise of an assemblage of diverse – and sometimes incompatible – technologies and equipment, from camera technology to the various transmission, monitoring, and recording technologies. How these technologies are assembled and implemented relies on human decisions that are made in particular social and cultural climate. In some societies, cultural and social concerns about privacy will have an impact on how camera surveillance technologies will be integrated.

At a more micro level camera surveillance outcomes are shaped by both the social and the technological. The camera surveillance control room must be viewed as a sociotechnical environment, and attention needs to be given to the control room culture, as well as the interaction between human operator and machine. Finally, camera operator training suffers from an emphasis on the technical, whether this is about the operation and maintenance of the camera surveillance equipment or the technical process of report writing. However, given the possible consequences of camera surveillance for some segments of the population, it is imperative that training about the human rights and social implications of camera surveillance also be provided to camera operators.

Views From Behind The Camera's Lens: Exploring Operator Perceptions

Patrick Derby

Many perspectives and themes are presented throughout both parts of this report on camera surveillance in Canada. For instance, discussions about informed consent, deterrence, and camera effectiveness are provided from academic perspectives, while themes of security and fear of crime are analysed through public perception. This section seeks to provide yet another viewpoint on some of the themes surrounding camera surveillance – that of the camera operator.

Drawing on interviews conducted with surveillance camera operators at eight sites in the provinces of Ontario and Québec, this section provides readers a glimpse of the perceptions held by those operating these technological surveillance systems. Specifically explored are the views of camera operators on the prioritization and targeting of risks, the issue of terrorism, operator prejudice, operator scrutiny, and camera effectiveness. While this is not an exhaustive list of the themes that could or should be discussed with camera operators, these discussions do provide a window through which to examine the human dynamics of camera surveillance practices, as well as insight into how camera operators think about and understand their work.

Research Methods

The data presented in this section was collected as part of a small-scale graduate research project undertaken by the author to explore factors influencing camera operator decision-making (Derby 2007). As part of that research project interviews were conducted with surveillance camera operators at eight institutional sites. The sites that make up the research sample are comprised of both public and semi-public institutions[54], and were deliberately chosen for their diversity. Where the opportunity presented itself at particular sites, interviews were conducted with a second camera operator.

Interviews were conduced in a semi-structured manner with the use of an interview guide to ensure that the line of questioning was consistent across sites. At the end of each interview the research participants were also asked if there where any important questions or themes that were neglected in the interview. Many of the participants used this opportunity to provide additional information, examples, and in some cases suggest areas for further research. Questions posed to the participants were open-ended and the interviewees were provided as much time as required to respond. As a result, the average length of interviews was 2 hours and

[54] The sites that made up the sample for this research included: two downtown department stores; a large suburban shopping mall; a small downtown shopping plaza; a downtown university campus; a museum; a government-run casino; and a police-run centre town open-street camera scheme.

15 minutes, and produced approximately four hundred pages of transcripts and notes.

Coding of the transcripts was conducted in two phases. The first phase consisted of the 'initial coding', which was very detailed, and attempted to generate imaginative ideas (Charmaz 2004). The second phase of coding emphasized an exploration of the most common and revealing themes. This required that some of the themes be further divided or combined in order to create new ones or improve upon old ones (ibid.). What is presented in this section are the most prevalent themes that emerged during those interviews. While the researcher must inevitably undertake some analytic work, care was taken to remain true to the ethnographic method. Thus, as much as possible, the data is presented in the words of the camera operators who participated in this research. They have been provided pseudonyms to protect their identities.

Perceptions On Institutional Risks

When asked to describe the top three crime or security risks for the institution in which they work, the camera operators interviewed prioritized the following concerns, which have been grouped into three broad risk categories: the risk of theft; the risk to personal safety; and many of the operators identified the 'flawed consumer' as risky.

Camera operators identified theft as something that requires their attention. Included under the umbrella category of theft are such behaviours as shoplifting, stealing, credit card fraud, price switching, violating discount policy, skimming [stealing information from debit or credit cards], and cheating, which are site specific. While some participants, such as those who work at shopping malls, simply identified dealing with theft, in this broad sense, as a priority, camera operators at department stores were more likely to break down the 'theft' category and further prioritize these sub-divisions, as the follow statement from Michael demonstrates.

> There's the obvious 'shop theft', that's pretty big. Although, it's not necessarily just external shop theft, it's internal – employees - as well. I don't know if you want to class those two differently, but we do. Third, I would say probably fraudulent transactions, things like that. Like, maybe not necessarily fraud per se but people doing things like using other people's credit cards. Stuff like that! Trying to get better deals on things on certain days, you know. [That's] pretty much the top three.
>
> (Michael, Downtown Department Store)

Camera operators also prioritized the risk to personal safety. While camera operators expressed concern for the personal safety of the users of the site (i.e. consumers patrons, etc.), in most cases the camera operator's felt that their

personal safety[55] and the safety of their security colleagues were at risk. Some participants described inadequacies in the security procedures at their site, which may place them at additional risk. While operators James and Xavier, indicated that they had no means of identifying individuals who gain access to their site or the public parking garage below the small downtown shopping mall they monitor, Andre indicated that the casino he works at has no metal detectors at its entrance and that the security agents have no weapons to secure the site from armed robberies. Prevalent among participants was the perception of risk when confronting users of the space, be they shoplifters or loitering youth. The following statement from Shawn, from a downtown department store, summarizes the concerns expressed, and indicates that in some cases security personnel will not risk their personal safety to confront suspects if they do not have the staff to back them up.

> It's dangerous to have sometimes only two or three security officers working when you have sometimes ten guys walk in and you have to go out there and stop these guys. Sometimes you're outnumbered. Sometimes security officers see the crime committed but they can't do anything about it because they don't have enough staff on backup.
>
> (Shawn, Downtown Department Store)

It should be noted that while camera surveillance operators and security personnel often work with the police and rely upon their services, calls to police usually do not occur until an arrest has been made or the alleged culprit has been detained in the first instance by security staff. In some situations police are contacted where a person has been asked to leave or has been barred from a premises, however refuses to oblige. Thus, as described above by Shawn, understaffed and ill prepared security personnel are required to make quick assessments about the potential hazards of intervention. Further, for liability reasons some security and surveillance staff (predominantly at sites where contracted security agents are employed) are forbidden from intervening. As Barry, who works at a museum, explained, his role is limited to "observing" and "reporting".

While almost all of the surveillance camera operators interviewed insisted that bias had no place in their work, there undoubtedly were some social groups that were deemed to be a 'risk' or 'potential risk' to particular institutional settings, and as such were deserving of more attention from the camera operators. In order to remain consistent with previous academic literature, these groups are referred to here as 'flawed consumers' (Bauman 1997; McCahill 2002). 'Flawed consumers' are those who disrupt the normative images of the 'ideal user' of a particular social space, for instance, a homeless person in a shopping mall.

[55] While at many sites, such as casinos, open-street schemes, or university campuses, the camera operators remain safely confined to the control room, at other sites, particularly shopping malls and department stores, the camera operator must often leave the cameras unmonitored to intervene when incidents arise.

Richard, from a downtown department store, and Ian, from the large suburban shopping mall, respectively described 'shitheads' or 'crackheads' as those who look "stoned, high, cracked out", or "look a little haggard, like life hasn't been as easy on them as most". The camera operators perceived this group as a double threat in the sense that they believed these individuals were present at the spaces they monitored in order to support their drug habits by engaging in drug deals or theft to finance their addiction. Richard also described this group as a safety risk to security personnel and to others in the social space.

> Nine out of ten of them have needles or weapons. It's a stereotype but they're easily identifiable based on their behaviours. Case in point, recently we had an individual in the store who was doing drugs … visibly seen with needles and pipes, lighting stuff in the store. That is a number one priority, because we know that they're carrying [have drugs in their possession]. We know chances are they're diseased. In this location nine out of ten people have the ABCs, all Heps [all forms of Hepatitis] and AIDS.
>
> (Richard, Downtown Department Store)

Camera operators and security staff also target those who are visibly intoxicated because their 'unpredictable' behaviour poses a 'risk' to the other users of the space, as well as a liability for the organization because of their impaired coordination and balance.

> You can usually tell when somebody's drunk as opposed to maybe having a beer or two. You can tell if somebody's intoxicated. You'll automatically watch them. It's not necessarily a theft issue, it could even be a health and safety issue. If they happen to come into the store and hurt themselves, first of all it's good to see because you gotta go help them, I mean you gotta give him first aid, and second of all, I mean, that's a pretty big liability.
>
> (Michael, Downtown Department Store)

Loitering youth, suspected or known members of gangs, and the homeless also form part of the 'flawed consumer' group. The presence of youth gangs is perceived to present safety risks for the users and staff in most of the social settings researched and especially sites of consumption, such as department stores and shopping malls. More important than the 'real risk' that youth and/or youth gangs present is the perception that this group generates a climate of fear within the social space. Surveillance camera operators indicated that they work hard to reduce levels of fear. In general, loitering youth are monitored and excluded as much as possible from the retail settings researched because of the belief, as Ian suggested, that "idle hands get in trouble". In the context of the museum, children are monitored to ensure that they do not damage artefacts; however, they are typically treated with velvet gloves. Finally, while most camera operators appeared to take a more liberal stance when it came to the homeless, this group was monitored for any indication of inappropriate behaviour. In cases where the homeless individual does nothing to warrant intervention, most camera operators indicated that they would "leave them be", unless they received complaints from others who occupy the social space.

Perceptions On 9/11 and the Terrorist Threat

While the initial research project for which these interviews were conducted did not seek to explore the impact that the September 11th terrorist attacks has had on practices of surveillance or securitization, camera operators from three of the eight sites researched did make reference to this event, and terrorism more generally. The first to express the influence that the 9/11 attacks have had was Xavier, who worked at a government complex housing a small downtown shopping plaza that he monitored. While it may not come as a surprise that those working to secure government offices may raise terrorism as a concern, the fact that this concern was expressed again by camera operators at a large suburban shopping mall and a university campus are more surprising. However, most surprising from the conversations with Xavier and his co-worker, James, is the disparity between the perceptions each presented on the issue of terrorism in a post-9/11 world. In light of the fact that the issue was raised during the course of the research interviews, the impact that 9/11 has had at these sites, as well as its impact on the perceptions of camera operators who work within them are here briefly explored.

First, with regard to the securitization of the research sites, it is difficult to determine whether security has increased across the board following the September 11th terrorist attacks. While James and Xavier both agree that following the attacks the number of security guards assigned to access-control duties within the government complex have increased, the mall complex itself has not increased its security. James indicated that despite the current general state of government "paranoia" about terrorism and hints that these particular government departments may be targeted, relatively little has been done to secure such basic things as the underground parking garage. Across all of the other sites researched for this study it appeared that their camera surveillance systems were either recently upgraded, in the process of being upgraded, or upgrading was in the plans for the near future. However, at no site was the impression given that the surveillance systems were expanded or improved as a direct result of 9/11. In fact, several camera operators indicated that the sites have recently reduced the number of security staff. Paul indicated that the ratio of 'protection officers' to students on the university campus he monitors has been reduced, while the number of surveillance cameras has increased in recent years. Andre also pointed out that the recent camera system upgrades at the casino have led to the surveillance personnel fearing job losses.

The September 11th terrorist attacks, and those which followed, have had an impact on the perceptions of some of the surveillance camera operators interviewed. Some of the research participants expressed real concern that their sites could potentially be a target for terrorism, and specifically indicated that the terrorist threat is a "Muslim" threat. The following excerpt from an interview with Ian, the camera operator at a suburban shopping mall, expresses well the sentiment found at the three sites where the operators spoke of their concerns regarding terrorism.

Since 9/11 you become more aware of Middle Eastern people; tend to watch them a little, pay closer attention to them because you never know when something's going to happen here.

Is that a fear? That something like that could happen at this mall?

Oh sure, this is one of the busiest malls in [the city]. There's more traffic through here then the rest of the malls. I have people that I've met [who work retail] and they went off to work at other malls and they come back here and say this one's by far busier. It's got public transport attached to it.

So it's made you more cautious, especially since 9/11?

Yeah.

(Ian, Large Suburban Shopping Mall)

While James and Xavier both agreed that they have become more vigilant with regard to terrorism, they debated amongst themselves from where the risk comes.

Xavier: We know that terrorism is not a particular group of people, you know. It could be - I don't know, man – It's mostly based on Muslims …

James: You're entering tricky ground there, but that's okay, it's your hole. It's not all religion related, look at the guy in Oklahoma[56]. He's …

Xavier: No, that's a different story …

James: That's terrorism …

Xavier: No, it is, but, it's not based on what is really going on right now [in a post-9/11 world]. That's me; this is what's going on right now …

James: You're talking about it as if there was a big clash between western and eastern cultures.

Xavier: Whatever, that's me. I'm talking about most of the terrorism people that explode themselves or put bombs in places, they're mostly Muslim people. This is what I've seen.

(James and Xavier, Small Downtown Shopping Plaza)

[56] James' comment about the "the guy in Oklahoma" is in reference to Timothy McVeigh. McVeigh was convicted and sentenced to death for his role in the 1995 bombing of a U.S. Federal Government building in Oklahoma City. Until September 11, 2001, the Oklahoma City bombing, described as a 'domestic' terrorist attack, was considered the deadliest attack on U.S. soil.

Perceptions On Prejudice, Bias and Stereotyping

It is clear from the excerpts above that following the attacks that downed the World Trade Centre towers, and in the shadow of the 'war on terror' that ensued, to 'look Muslim' is to warrant additional scrutiny from those responsible for providing security, including surveillance camera operators. But what about the roles that prejudice, bias and stereotyping play more generally? The majority of camera operators interviewed for this research acknowledged that stereotyping occurs. However, while some openly admitted its 'use value', others were not as forthcoming, and still others out-and-out denied the employment of stereotypes and prejudice.

Several of the camera operators interviewed described "remaining indiscriminate" as one of the challenges of doing surveillance work, while others indicated that stereotyping has "use value". James, who works at a small downtown shopping plaza, is one of the few operators to openly acknowledges discrimination, suggesting that if one did not employ stereotypes they would be "looking at everybody", alluding to the fact that this would be an inefficient way of monitoring surveillance cameras. In contrast to James, the majority of operators indicated that learning to rid themselves of prejudice is a challenging skill that needs to be acquired in order to be an effective surveillance camera operator. Andre states that the first thing taught to new surveillance personnel at the casino is "not to have stereotypes", while Michael suggested that when he first began working security in the department store he thought he would be able to tell who was going to steal, but insists that since beginning in this line of work he has learned that "it's not like that".

Paradoxically, both using and not utilizing stereotypes, prejudice, and discrimination can be viewed as an inefficient way to conduct camera surveillance work. Either one discriminates and allows everyone not meeting the discriminating criteria to escape scrutiny, or they make an attempt at remaining indiscriminate and perhaps becoming overloaded with visual stimuli. While Richard seems to echo the need for surveillance camera operators to rid themselves of preconceived notions regarding who is likely to commit crime or "be trouble", he does acknowledge that he has his own biases that guide who and what he is going to watch, insisting that they will vary from site to site, depending on the demographic. Richard also explained that biases and stereotypes are formed and reinforced by the fact that those who are watched end up stealing.

> That person stole, so I am going to watch the next person that is similar to that person. Oh, that person stole too. So I am going to keep watching someone who has those similar [characteristics]. It's absolutely reinforcing, that's why typically we watch - quote unquote - 'shitheads' and that's why we have the 'shithead scale'[57]; because they keep stealing. They may be the nicest people in the world, it's nothing personal.

[57] The 'shithead' scale was described to the researcher as an informal scale that ranked individuals based on the number of undesirable characteristics they presented (i.e. colour of skin, wearing

(Richard, Downtown Department Store)

Still other camera operators insisted that they did not discriminate while carrying out their surveillance activities. Frank, who monitors the cameras of an open-street surveillance system, indicated that he is an anti-discrimination activist and that he has been involved in the movement for several years. Shawn goes even further to state that the department store company he works for would never "pinpoint one group of people and [say] they're gonna steal", and that if the supervisor ever caught security personnel conducting their work in such a way they would "be fired".

Of course terms such as 'prejudice', 'discrimination', and 'stereotypes' are value laden, and discussions about their use with camera operators is likely to result in the presentation of a desirable self. That is, because these terms are often thought of negatively no one wishes to admit to them. But it appears that discriminatory categories cannot be avoided and need not necessarily be based on crude racial, ethnic or gender characteristics. Many more of the camera operators were willing to acknowledge their ability to discriminate between suspicious behavioural characteristics from the non-suspicious. Being too sociable with a department store cashier, looking lost on a campus, or appearing to avoid casino cameras are all behaviours that surveillance camera operators use to assess suspiciousness. Travelling in a group is also a behaviour that appears to grab the attention of most of the camera operators interviewed. While discrimination based on behaviour indicators may be more acceptable than if it were based on crude individual indicators, such as race or gender, these are by no means exclusive categories. In a significant number of situations they are considered together. As the following statement by Frank, the anti-discrimination activist, indicates, both types of characteristics are sometimes evaluated together, and in some cases one may cancel the other out. This statement also suggests that not all racial or ethnic discrimination results in heightened scrutiny or negative consequence.

> There are quite a few Asians now in the centre core. Now they tend to, my perception, travel in groups, as friends. Other groups don't travel in this kind of a pack or herd, or whatever. So that's not unusual for me. I wouldn't necessarily pay much attention if I could identify those people as being Asian because that might be part of their culture to travel with many friends as opposed to … other ethnic groups.
>
> (Frank, Open-Street Initiative)

Perceptions On Being Watched Themselves

Shawn's suggestion above that if a camera operator got caught profiling they would be fired opens a theme that has not been emphasized in the literature on camera

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camouflage patterned clothing, or a baseball cap, etc.). The more characteristics an individual presented, the higher they ranked on the scale and the more likely they were to be scrutinized. Ironically, this was the only 'objective' criterion presented at any of the research sites – with the exception of the casino - that may have served to guide the surveillant gaze of camera operators.

surveillance; a discussion regarding the perceptions of camera operators on having their work monitored.

It is questionable whether camera surveillance produces the self-disciplining effect assumed under the panoptic metaphor. Perhaps being subject to potential monitoring through surveillance cameras does not deter citizens from engaging in unwanted behaviour. However, it must also be borne in mind that the automatic functioning of power described by Bentham in his writings on the panoptic prison did not end with the subjugation of the inmate. The architectural design of the Panopticon also subjected subordinate prison guards to the same conditions of visibility in relation to their supervisor or the head inspector (Bentham, 1995).

Interestingly, Shawn was not the only surveillance camera operator to suggest that his actions were potentially monitored by his supervisors, making it necessary to explore the degree to which current camera surveillance technology allows for the monitoring of the operator's actions on and off of the cameras, as well as their own perceptions on being watched.

Current electronic and digital technologies, such as those employed by contemporary camera surveillance systems, make it not only much easier to monitor the activities of the general population, but also the activities of surveillance workers, both on and off camera. In addition to regular in-person site visits to ensure that security officers are not sleeping on the job, technology such as "registered wands" can be used to monitor security staff. Some of the camera operators interviewed indicated that their duties may include routine physical patrols of the environment, which requires that they carry an electronic wand that registers its interactions with electronic devices strategically placed throughout the premise. The electronic information recorded to the wand can then be downloaded to a computer and reviewed by the supervisor to ensure that the security officers are conducting their patrol rounds appropriately.

While this example describes how the off-camera actions of security personnel can be monitored, contemporary digital technologies also permit supervisors to potentially scrutinize what the camera operator chooses to watch. This can be accomplished in real-time or after the fact. Fibre-optic and IP (Internet Protocol) technologies not only allow the camera operator to monitor what is going on in real-time from the security control room, but supervisors or other individuals that form part of the surveillance assemblage may also remotely monitor what the operator is viewing live. In some cases the camera operator's supervisor, or even managers from the head office, hundreds of kilometres away, can override the local camera operator's control of the cameras.

Further, the digitization of surveillance camera technologies recently means that the mass storage of camera surveillance footage is now possible, and images are easier than ever to retrieve and review. Camera operators at several of the research sites indicated that the footage captured by each of their cameras is recorded and stored

for varying lengths of time. In simple terms what this means is that the watching habits of camera operators are now recorded and stored for potential viewing by their supervisor(s). Richard, the security supervisor for a downtown department store, indicated that his staff is aware that they should not "zoom in on something stupid because there's no point … They tape it [the CCTV footage] for a month and if [they] do it, I'm going to know".

Richard's claim that he will find out is unlikely given that the particular camera system he is responsible for consists of 60-70 cameras each of which is constantly recorded. Surely, it would be impossible for Richard to review the footage retroactively to monitor the surfing behaviours of the camera operators he supervises. Nor can one supervisor, as Andre from the casino explained, "catch every little thing". However, supervisors may not be the only ones monitoring the watching habits of the camera operators. Several research participants indicated that others might also come into the security office and catch them misusing the camera technology; be they managers from head office, colleagues from other departments, or members of the public. In other cases it may be a fellow operator who informally addresses the misuse of the surveillance equipment.

Regardless of whether every instance of camera misuse is identified, what is important is whether the camera operators believe their actions to be monitored and whether this belief serves to restrain the inappropriate use of the system. While the majority of camera operators did believe that their on-camera actions were open to scrutiny, their responses were mixed when discussing whether this belief was enough to keep them from using the cameras in ways deemed inappropriate. Despite acknowledging a fear that his actions would be caught, Ian indicated that he still occasionally zooms in on "bucksome looking women". Shawn, however, insisted that the cameras are used for business purposes only, suggesting that if one wishes to watch attractive women, they "can get on the floor [of the department store] and watch that kind of stuff".

For one operator the knowledge that his on-camera watching behaviour was open to scrutiny was not only enough to dissuade him from inappropriately using the cameras, but his fear of having what he is watching misinterpreted has served to constrain who he is willing to watch for legitimate purposes.

> I think that females could be suspects the same as men. However, I'm not comfortable … because I'm being monitored. Someone else may have a different idea of why I'm looking at one individual and may not understand the fact that that person's a criminal, or whatever. I think it somewhat limits what I do look at because of the fear that it might be misunderstood by someone else who's not there.
>
> (Frank, Open-Street Surveillance Initiative)

Similar to the surveillance of citizens in public and semi-public spaces it appears that camera operator knowledge that their actions may be monitored has not – at

least in many cases – had a self-disciplining effect. The degree to which camera operators self govern what and whom they monitor based on the knowledge that they themselves are potentially being watched appears to vary by individual operator.

Perceptions On The Effectiveness of Camera Surveillance

While academic evaluations on the effectiveness of camera surveillance exist, no study has discussed perceptions of surveillance camera effectiveness with the individuals who operate them. This research asked camera operators how they understand or measure the effectiveness of camera surveillance technology. While the following is not an exhaustive list of the ways camera operators indicated that they measure the success and failure of the system, it does address those which most commonly emerged, specifically their views on deterrence, observation capabilities, and fear reduction.

The majority of operators did not perceive camera surveillance to have much of a deterrent effect. On the one hand, while the more optimistic of camera operators believe that the cameras do have a deterrent effect when the cameras are noticed, they also acknowledged that most citizens do not see the cameras and/or the signage warning that cameras are in use. On the other hand, pessimistic camera operators questioned whether criminals cared that they were potentially being monitored, stating that while people know that the cameras are there "people still do what people want to do". The majority, however, believed that the cameras potentially deter those who are 'first-timers' or amateurs, while doing very little to discourage the habitual or professional criminal or casino cheats.

In addition to these perspectives, some camera operators go so far as to suggest that they do not believe that cameras are intended to deter criminal or deviant behaviour. They support their position by indicating that in environments such as department stores, signs are rarely erected to warn that cameras are in use and that over recent years surveillance cameras have been reduced in size, making them less conspicuous. This leads into examining a second purpose for surveillance cameras - simply improving observation.

It is in the domain of improving observation and the management of resources that operators applaud the effectiveness of camera surveillance. Almost all operators interviewed appeared to agree that camera surveillance allows them to see and monitor things that they simply would not be able to see at ground level. Not only do cameras provide the operator with a better vantage point, and a panoramic view of the space under surveillance, it also allows for tight zooms in order to see what one could not see without the mediation of the technology. The following statement by Shawn sums up well the overall sentiment by most CCTV operators interviewed.

> Well I think it's very effective because you and I couldn't get close enough to see a lot of stuff compared to the camera. I think the camera helps us to get closer than ever, especially if its [encased] in a dome. They don't know where the camera [is] pointing, so it could be right on top of them, pointing directly over their hand, seeing what their hand is doing. Where's their hand going? You can see. If you're standing behind them you see their hand go in their pockets, but you don't know exactly what they're doing with their hand, right. CCTV is part of the tools that security uses to get a lot of people because they can say for a fact that that individual did pick it [an item] up with his left hand, look at it and with his right hand place it in his pocket and exit the store. They can tell you exactly what happened.
>
> (Shawn, Downtown Department Store)

The camera operators also explained that even if they are not certain of what you saw in real-time, camera surveillance technology allows them to go back and monitor the incident again. The participants also suggested that recorded footage could be submitted to the courts in corroboration with, or in lieu of, eyewitness testimony. However, some participants did raise concerns regarding the use of camera surveillance footage as an alternative to eyewitness testimony, especially as it relates to the interpretation of recorded image. Barry suggested that at the right camera angle the camera operators might misinterpret even the most benign behaviours as malignant.

A few of the participants also discussed the ability of camera surveillance to impact perceptions regarding the prevalence of crime, as well as reduce the levels of fear among those who use or work within social spaces. While not all sites expressed the reduction of fear as a primary objective for their surveillance systems it appears that the cameras have had this effect at some of the locations, at least from the perspective of the operators. Frank pointed out that while the open-street surveillance scheme may not be deemed to be an effective tool if measuring its success against the impact it has had on the city's crime rate or the number of arrests made with the assistance of the surveillance cameras, it may be considered successful in the sense that there is a perception among citizens that the cameras are effective (also see Dawson, this report; and Leman-Langlois 2009), thus fear has been reduced, especially among those who live and own businesses in the city's downtown core. At the casino, patrons are asked to complete a customer satisfaction survey which, according to Andre, reveals that the surveillance cameras provide the clients with a sense of security.

Some of the operators who applauded the surveillance cameras also provided a critique of the technology stating that while the system is great when functioning properly there are often equipment break-downs and crashes that interfere with its effectiveness (see also Fonio, this report). Operators also suggested that in some cases the equipment used could serve to constrain the surveillant gaze. Whether it is because the viewing monitors are too small to make out details or the surveillance cameras cannot be rotated, what the human operator can do (or view) is limited by the technology's capabilities.

> You could do a better job than a patrol officer at viewing stuff, but your boundaries are set on those cameras. Let's say you have a camera that you can't rotate, but yet there's something that's happening behind the camera. You can't see it because you can't rotate [the camera]. Your boundaries are set on that camera.
>
> (Barry, Museum)

The reverse, however, is also true in the sense that the technology may be under-employed by the operators because they simply do not know how to use the system to its full potential. An example of this could be found at the small downtown shopping plaza, where in the opinions of James and Xavier the cameras were not appropriately installed by human technicians preventing the effective monitoring of the loading dock and the parking garage. Another instance can be found at the open-street site where bureaucratic lines of communication hinder prompt responses to crimes in progress. Interestingly, the recommendations made by the research participants to improve the surveillance systems they monitored focused on upgrading the technology used at their sites.

Conclusion

This section explores many of the themes identified by other researchers in this report, this time from the perspective of camera operators. While camera operators identify context specific forms of theft (i.e. shoplifting, employee theft, or casino cheating) as a primary risk that requires management, they also prioritize ensuring the physical safety of others, including themselves and colleagues, within the social spaces that they monitor. Operators indentify specific groups, commonly referred to by scholars as 'flawed consumers' (e.g. youth, drunks, drug addicts, and the homeless), as being a prominent source of these risks and worthy of heightened scrutiny.

Conversations with camera operators reveal that the September 11th terrorist attacks sensitized them to the threat of terrorism. Some of the operators view the sites they monitor as susceptible to similar attacks. For some of the operators increased vigilance means becoming more aware and suspicious of people, especially men, who appear Middle Eastern. In short, the terrorist threat is viewed as a "Muslim" threat. While this and other examples offered in this section, provide a clear indication of profiling and the reliance on stereotypes, the camera operators were split with regard their willingness to acknowledge prejudice, discrimination and stereotyping based on crude categories such as race and gender. This reticence can be partially explained by negative connotations applied to such terms. It is apparent that monitoring cameras requires one to discriminate between different visual stimuli, be they crude choices based on ones appearance or more complex assessments of what constitutes suspicious behaviour. While it should be noted that not all racial or ethnic stereotyping results in heightened scrutiny or negative

consequence, this does not take away from the fact that some groups are disproportionately monitored by camera operators.

So what sorts of formal accountability structures are built into cameras surveillance assemblages to address potential problems of racial profiling or sexual voyeurism? Based on this research, the short answer appears to be that there are none. Ensuring the ethical use of surveillance cameras falls to the moral compass of individual operators. While the same camera surveillance technologies that produce and record the images within the camera's field of view also have the ability to make visible the monitoring habits of camera operators, given limited resources and the sheer amount footage that they would be required to review, it is unlikely that surveillance supervisors would undertake such a task with any regularity. Further, despite acknowledgment from camera operators that others may view their on-camera activities, in many cases this was not sufficient to dissuade inappropriate camera use.

Finally, with cameras having little self-disciplining effects on their own actions, this section explores camera operators' perceptions regarding the effectiveness of camera surveillance. Not surprisingly cameras operators were mixed in their opinions on the camera's ability to deter crime, while some even questioned whether deterrence was even an aim. Instead most operators insisted that camera surveillance is most effective at improving observation, assisting in the area of resource management, and reducing fear of crime. However, many of the camera operators also provided a critique of the technology. They indicate that while the systems are great when functioning they experience numerous malfunctions that negatively impact the effectiveness of camera surveillance at their sites. Further this section reveals that while the camera technology employed impacts the overall all success of human camera surveillance workers, human decisions and abilities preclude the use of the technology's full potential.

Broadly this section reveals the interplay between the social and the technical. From its invention to serve a specific social purpose, to its implementation within a specific social space, and finally to the manner in which it is thought of and used by those who operate it, camera surveillance technology is socially constructed. The social nature of camera surveillance work must be borne in mind in order to understand surveillance practices, as well as what guides the 'selective gaze' of camera operators.

Understanding Public Perceptions of Camera Surveillance in Canada

Danielle Dawson

Introduction

Camera surveillance is increasingly being implemented as a mechanism of crime reduction and criminal apprehension within the private sector, police services, and government agencies on an international level despite lack of definitive evidence that these systems have the ability to reduce crime (see, for example, Short and Ditton 1999; Philips 1999; Welsh and Farrington 2002; Hier and Greenberg 2007). Studies of camera surveillance have been limited in their ability to contribute to a discussion of whether camera surveillance is effective and why it is continuing to be implemented at the expense of citizens' tax dollars and government allocation of funds and resources. As for public opinion on camera surveillance, research in North America has been left primarily to market based investigation of political organizations and media outlets. These evaluations of public opinion vary widely in method and approach but have managed to paint a broad picture of public attitudes toward the use of camera surveillance in public spaces.

Media and Market Based Opinion Polling on Camera Surveillance in Canada

Media and market based opinion polling demonstrates considerable support for the use of camera surveillance. Positive public response is reportedly due to the system's perceived ability to reduce crime and prevent possible terrorist activity.[58]

Such loosely conducted types of opinion polling are somewhat unreliable for two main reasons. First, media and market based opinion polling of camera surveillance are generally preceded by some heavily publicized tragic event in which camera surveillance is presented to the public in a positive way. For instance, in 1993, a blurry image of 2 year old James Bulger being abducted from a shopping centre in Bootle, England was looped in the media and came to be considered by the public as the primary investigatory tool in the search for the missing child. As such, when the Bulger case was solved, camera surveillance was heralded a 'silver bullet' for crime solving (Marx 1992). Second, the wording and placement of questions within these polls often leads respondents to answer more favourably towards surveillance cameras as a solution (see Ditton 2000). For example, when questions referring to camera surveillance are preceded by questions regarding crime, fear and security, responses consistently show greater support for the use of cameras (ibid).

[58] See Table 6.1 in "Camera Surveillance in Canada Report: Part One", p. 43, available at: http://www.surveillanceproject.org/projects/scan reported in Wiecek and Saetnan 2002.

A clear gap exists in the literature surrounding cameras surveillance amplifying the need for more extensive research that can offer a comprehensive picture of public perceptions. This section discusses the homogenous definition of camera surveillance, issues about privacy, and public knowledge of the technology. The Globalization of Personal Data (GPD) international survey data, made available by the Surveillance Project, is used to help provide a more holistic conception of public perceptions of camera surveillance in Canada.

The GPD Survey

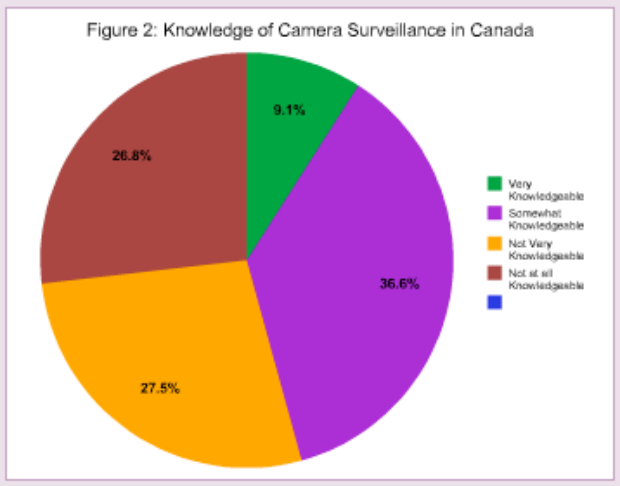
Launched in 2003, the GPD Project traced the effects that new uses of personal data, in relation to mobility, globalization, and governance, have on ordinary people. This includes research into the ways that personal data are being systematically collected to influence, manage, sort, categorize or otherwise process various aspects of social life via the proliferation of surveillance systems. Recently (2006), the GPD conducted an international survey of nine countries to gain insight into the response of ordinary citizens to the increased flow of personal data. This is the first major cross-national study that deals with issues surrounding surveillance and privacy. The detailed analysis of focus group interviews conducted in Canada, Brazil, China, France, Hungary, Japan, Mexico, Spain and the USA, coupled with intense background research on each country gave shape to a questionnaire designed to reveal public attitudes toward increasing surveillance methods.

One of the topics addressed in the survey is public camera surveillance. Given the increasing use of cameras as a mechanism of surveillance on an international level, the GPD Project's inclusion of questions regarding camera surveillance is of particular relevance. A survey of such magnitude provides the opportunity to build a more comprehensive framework for understanding the rise of cameras as a system of surveillance and the response it elicits across different cultural settings. The comprehensive approach of the survey provides a unique opportunity to study public perceptions of camera surveillance and to gain insights into the formation of social policy on an international level. This paper explores the findings of the international survey's questions regarding camera surveillance, using a Canadian perspective as a guide. Comparison of the way different demographic variables influence public perceptions of camera surveillance as well as the cross-tabulation of camera surveillance questions with other relevant topics explored by the survey offers an in-depth understanding of the public's opinion about camera surveillance than hitherto realized.

Knowledge of Camera Surveillance

Question 1.4 of the survey regarding camera surveillance asked: "In general, how knowledgeable are you about Closed Circuit Television (CCTV) in public spaces?" Would you say you are very knowledgeable, somewhat knowledgeable, not very knowledgeable or not at all knowledgeable?" The results show that just under half of Canadian respondents (45.7 percent) classify themselves as being at least

somewhat knowledgeable about closed circuit television. Thus, while a slight majority of respondents feel that they are not very knowledgeable about CCTV in public spaces (54.3 percent) the largest concentration of respondents feel that they are somewhat knowledgeable (36.6 percent) (see figure 2).



Demographic variables reveal some of the differences in Canadian responses regarding their knowledge about camera surveillance. Regional comparisons uncover slight variations in the response of Canadians. For the purposes of creating a statistically significant representation of the population, Canada was split into six regions: British Columbia; Alberta; Manitoba and Saskatchewan; Ontario; Quebec; and the Atlantic Provinces. The strongest claim of knowledgeability comes from British Columbia (see Figure 3). This is perhaps due to the extensive body of camera surveillance systems already in use in British Columbia (Walby 2006). The lowest levels of knowledgeability were reported in Quebec (31 percent) with 9.8 percent claiming to be very knowledgeable and only 21.2 percent claiming to be somewhat knowledgeable. This provides an interesting contrast since Quebec has also utilized systems of camera surveillance for a number of years for the purposes of crime deterrence and detection and for the apprehension of criminals (ibid).

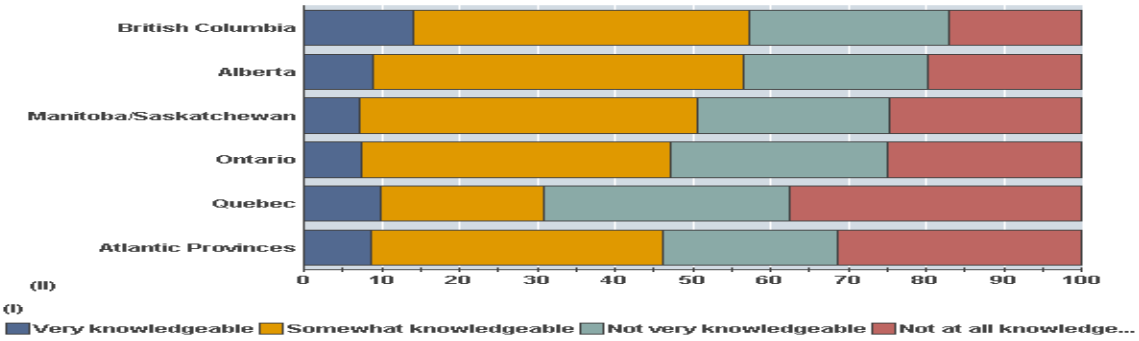


Figure 3: Canadian Knowledge of Public Camera Surveillance by Region

When broken down by gender, some interesting trends emerge in the data. Males are more likely to claim they are very knowledgeable and significantly less likely to state that they have no knowledge at all (see figure 4). This trend was also found on an international scale. The majority of other countries involved in the survey demonstrated the same type of pattern except for the Chinese who displayed little to no variation in response rates when broken down by gender.

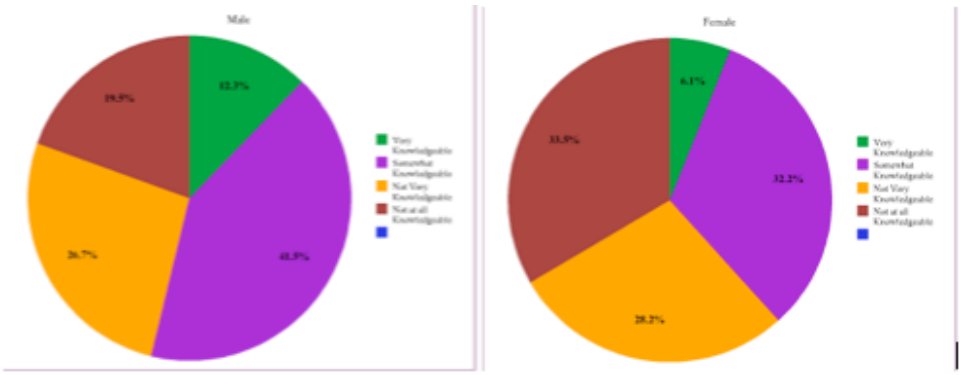


Figure 4: Canadian Knowledge of Camera Surveillance by Gender

Only negligible differences arose from the study of the other assessed demographic variables. The differences for age breakdowns were mostly marginal. The strongest indicator came from those belonging to the 65+ age bracket who were the most likely to respond that they had no knowledge of camera surveillance at all. No other age groups stand out in the Canadian sample (see figure 5).

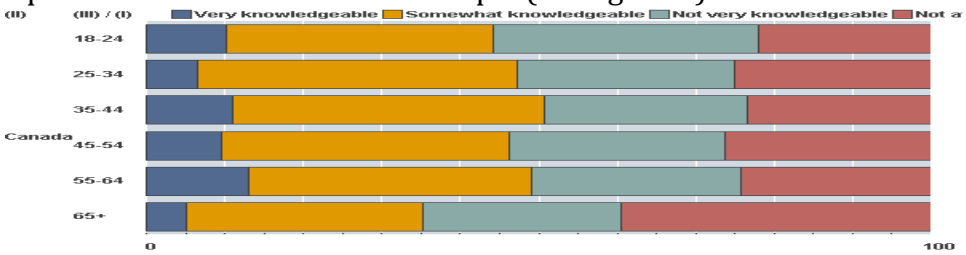


Figure 5: Canadian Knowledge of Camera Surveillance by Age

Again, there were negligible differences when split according to ethnicity. Within Canada, 45.4 percent of those who identified themselves as Caucasian felt they were at least somewhat knowledgeable about public camera surveillance. While those who identified as Black/African were the most likely to say that they were not knowledgeable about camera surveillance. Only marginal differences were existent amongst the other documented groups (see Figure 6).

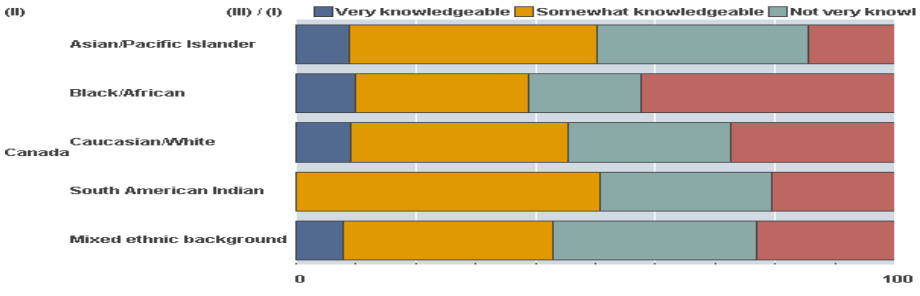


Figure 6: Canadian Knowledge of Camera Surveillance by Ethnicity

When question 1.4 was broken down by respondents' highest level of formal education completed, slight variations in response were rendered visible. Those

whose highest level of formal education was grade school or some high school were the most likely group to answer that they had no knowledge at all about public camera surveillance (43.2 percent). Those with the highest degree of formal education, those with a Graduate Degree, were the most likely to say that they were very knowledgeable about public camera surveillance (15.2 percent). Other variations within education were only marginal.

In relation to the other eight countries involved in the survey, the Canadian response sits in the middle. Claiming less knowledge about CCTV is Mexico, Japan, Brazil and Hungary. Claiming slightly more knowledge than Canadians was the USA, France, Spain and China (60 percent), which claimed the largest amount of knowledge (see figure 7). The fact that respondents' answers were more heavily concentrated below 50 percent indicates a lack of knowledge of camera surveillance across the board. The fact that 60 percent of the Chinese felt they were at least somewhat knowledgeable about camera surveillance is perhaps indicative of the widespread use of CCTV in China[59], as well as of the urban origin of all Chinese respondents as that is where most of the cameras reside (Liang and Huili 2007).

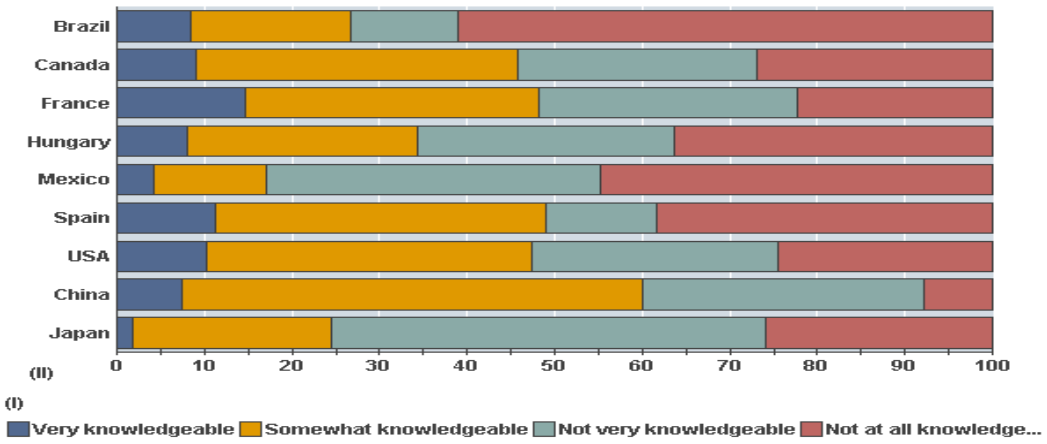


Figure 7: Knowledge of Camera Surveillance Internationally

Effectiveness of Community Camera Surveillance

GPD survey question 20.1 asked respondents: "Some communities and private companies are using surveillance cameras, also known as Closed Circuit Television or CCTVs to monitor public places in order to deter crime and assist in the prosecution of offenders. In your opinion, how effective are community CCTV (such as outdoor cameras in public places) in reducing crime? Are they very effective, somewhat effective, not very effective, or not at all effective?" Response to this question demonstrated that the overwhelming majority of respondents from the nine countries surveyed believe that CCTV is at least somewhat effective at reducing crime.

[59] Take Beijing for example, which is reportedly home to more than 263 000 systems of camera surveillance for the purpose of monitoring public spaces (Liang and Huili 2007).

Among the countries that stand out the most based on their response are Hungary, Brazil and Mexico. Hungary demonstrates the strongest response in favour of community CCTVs ability to reduce crime with 90.5 percent of respondents believing it to be at least somewhat effective. This is followed by Brazil's 81.9 percent response in favour of community CCTVs effectiveness with 44 percent believing it to be very effective. This is the highest recorded number of responses in the 'very' category found in all other questions related to camera surveillance. The overwhelming majority of Mexicans (84.3 percent) also hold the belief that camera surveillance is at least somewhat effective. The overwhelming majority of respondents believe community CCTV to be at least somewhat effective (see Figure 8).

Similar responses have also been replicated by previous research on public opinion in the UK where 80 percent of respondents believe that camera surveillance would have significant impact on crime reduction (Spriggs et al. 2005) (For more examples of similar results see also: Dixon, Levine and McAuley 2003; Honess and Charman 1992; and Phillips 1999 who each report that community response to camera surveillance has been predominantly positive which is correlated with the public belief that camera surveillance is an effective means of crime deterrence and detection).

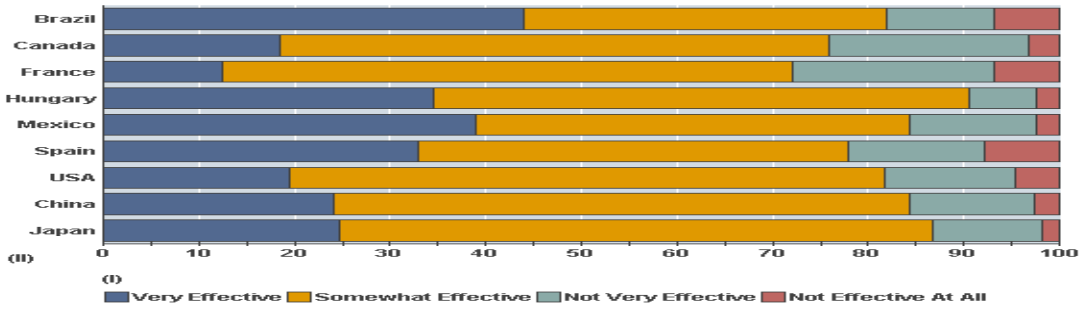


Figure 8: Internationally Perceived Effectiveness of Community Camera Surveillance

Within Canada, only minimal variations emerge in response to question 20.1 on a regional level (see figure 9).

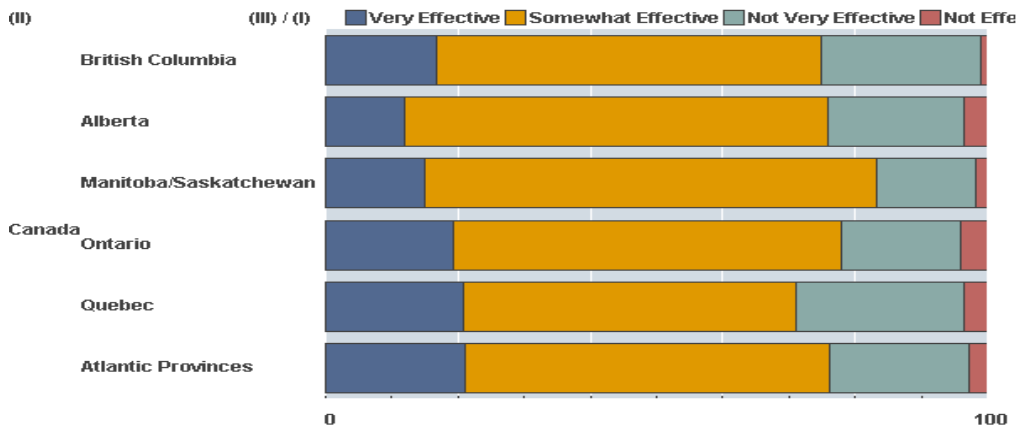


Figure 9: The Canadian Perceived Effectiveness of Community Camera Surveillance by Region

When broken down by gender, no significant differences are visible. Women are almost equally as likely to respond that community CCTVs are very effective (females 18.7 percent, males 18.4 percent), somewhat effective (females 59.2 percent, males 55.3 percent), not very effective (females 19.5 percent, males 22.4 percent) or not at all effective (females 2.7 percent, males 3.9 percent) as males. The other eight countries involved in the survey demonstrate the same pattern of negligible differences.

When broken down by age, again variations are only marginal (see figure 10).

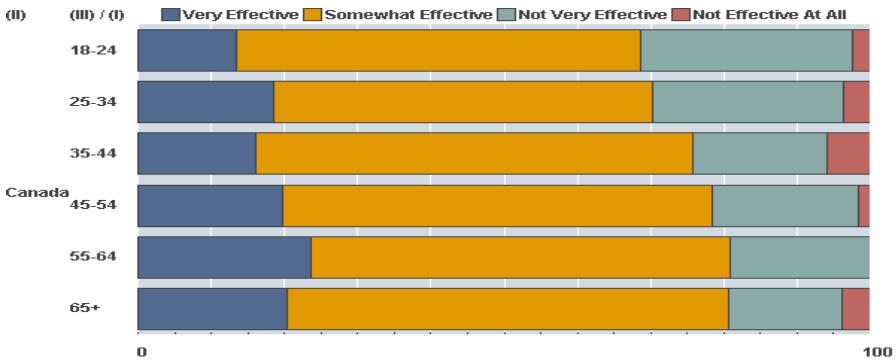


Figure 10: Canadian Perceived Effectiveness of Community Camera Surveillance by Age

For education, the strongest indicator amongst Canadians came from those whose highest level of formal education was grade school or some high school. This group was the most likely to respond that public camera surveillance was effective (91.3 percent) with 27.1 percent claiming it to be very effective and 64.2 percent responding that it was somewhat effective.

For ethnicity, those who identified as South American Indian were the most likely to cite community CCTV as being at least somewhat effective at reducing crime (85.3

percent). The black/African group were the least likely to believe community CCTV was effective with only 39 percent citing it as such. Of the remaining 61 percent, 39 percent thought it not very effective and 22 percent not effective at all (see figure 11).

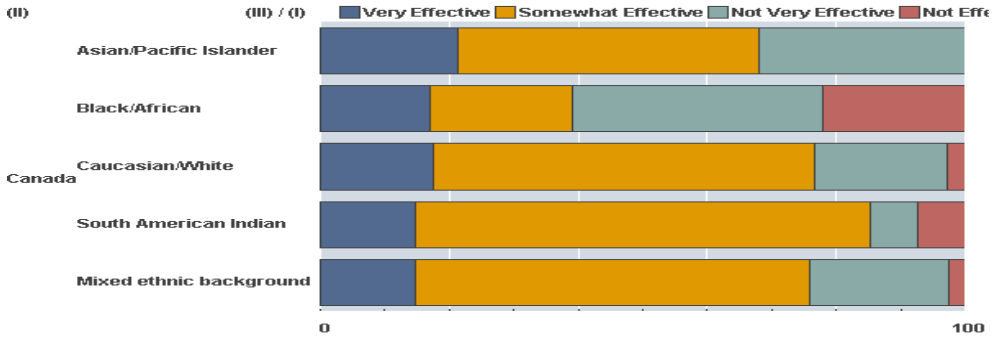


Figure 11: Perceived Effectiveness of Community Camera Surveillance by Ethnicity

Results from question 20.1 were cross tabulated with the results from question 1.4 in an attempt to understand if knowledge of CCTV was an indicator of how effective one believes community CCTV to be. The data suggests that those who claimed to be knowledgeable were just as likely to claim the effectiveness of CCTV as those who claimed to be not knowledgeable at all. Seventy-eight point two percent of those claiming to be very knowledgeable about public CCTV responded that it was at least somewhat effective. 77.4 percent of people who claimed to have no knowledge of public CCTV whatsoever made the same claim about its effectiveness. As such, knowledge of public camera surveillance is not a good indicator of whether the respondent will think it is an effective means of deterring crime.

Responses from question 20.1 were cross-tabulated with question 5 which asked: "What level of trust do you have that your government is striking the right balance between national security and individual rights?" Very high and reasonably high levels of trust that the Canadian government is striking the right balance between national security and individual rights corresponds with beliefs that community CCTVs are effective at reducing crime. Of the Canadians who believed community camera surveillance to be very effective, 60.2 percent of them also had very high or reasonably high levels of trust in their government. Correspondingly, of the Canadians who claimed that community camera surveillance was not at all effective, 62.5 percent of them had fairly low or very low levels of trust in their government. This suggests that those who have trust in their government are more likely to think that the government would not employ a system that is incapable of performing the service it is designed to provide.

Effectiveness of In-Store Camera Surveillance

The perceived effectiveness of in-store camera surveillance is measured by question 20.2 which asked: "Some communities and private companies are using surveillance

cameras, also known as Closed Circuit Television or CCTVs, to monitor public places in order to deter crime and assist in the prosecution of offenders. In your opinion, how effective are in-store CCTVs? Are they very effective, somewhat effective, not very effective, or not effective at all?" An overwhelming majority of respondents believe in-store CCTVs to be at least somewhat effective at reducing crime. Responses indicate that people are more likely to think of in-store CCTVs as being slightly more effective than community cameras. This perception exists on an international scale (see Figure 12).

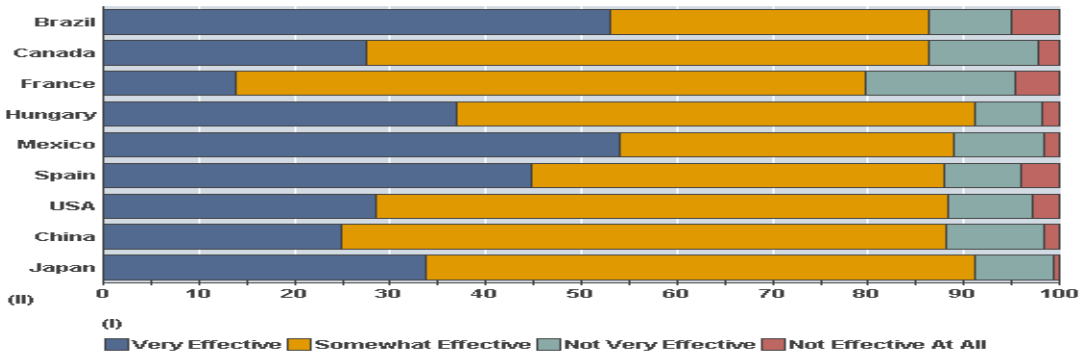


Figure 12: Internationally Perceived Effectiveness of In-Store Camera Surveillance

Regional differences within Canada are minimal. The Atlantic Provinces (89.3 percent) believe in-store camera surveillance to be at least somewhat effective. This is followed tightly by British Columbia (87.9 percent), Ontario (87.4 percent), Alberta (86 percent), Manitoba/Saskatchewan (84.6 percent), and Quebec (83.2 percent) each believing in-store camera surveillance to be at least somewhat effective. As such, all the regions of Canada are in agreement that in-store camera surveillance is an effective means of crime reduction.

When broken down by gender, the response rates for question 20.2 are almost equal (see figure 13). From an international level, the same trend is demonstrated in most of the other countries involved in the survey, except for in the USA, China and Japan, where gender may be considered a more statistically significant indicator of perceptions of effectiveness for in-store camera surveillance.

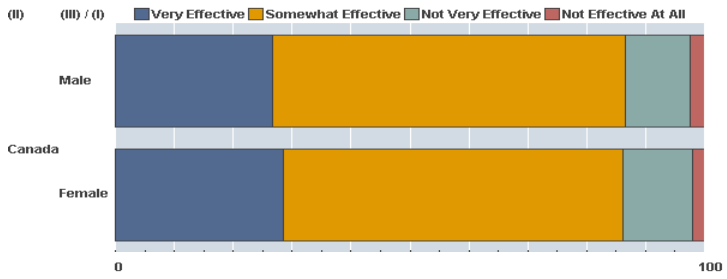


Figure 13: Perceived Effectiveness of In-Store Camera Surveillance by Gender

There is little difference between age groups as the vast majority of respondents in agreement that in-store camera surveillance is an effective means of reducing crime (see figure 14). This trend has been demonstrated in other research on the topic which suggests that age has an influence on the way citizens feel about crime. For example, the elderly tend to fear crime more and are therefore more likely to answer favourably toward cameras (see Leman-Langlois 2009).

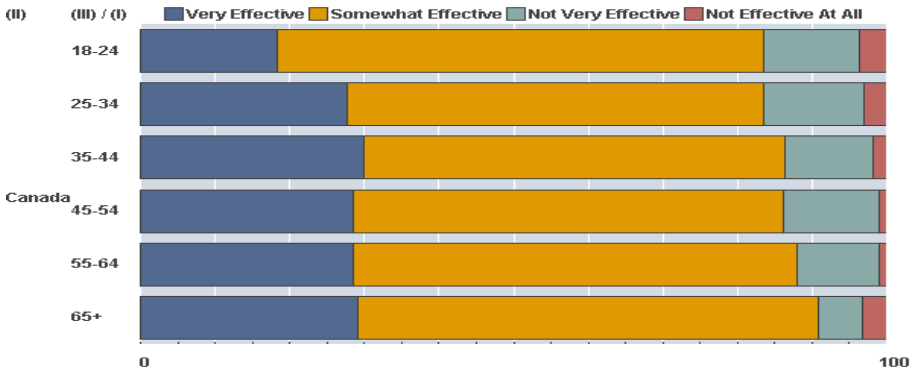


Figure 14: Perceived Effectiveness of In-Store Camera Surveillance by Age

In terms of ethnicity, those who identified as Asian/Pacific Islander (84.4 percent), Caucasian (87.3 percent) and those from mixed ethnic backgrounds (81.9 percent) had the majority thinking in-store CCTV is at least somewhat effective at reducing crime. On the other hand, those who identified as Black/African (58.6 percent) or South American Indian (69.1 percent) were far less likely to believe the in-store camera surveillance is an effective means of crime prevention (see figure 15).

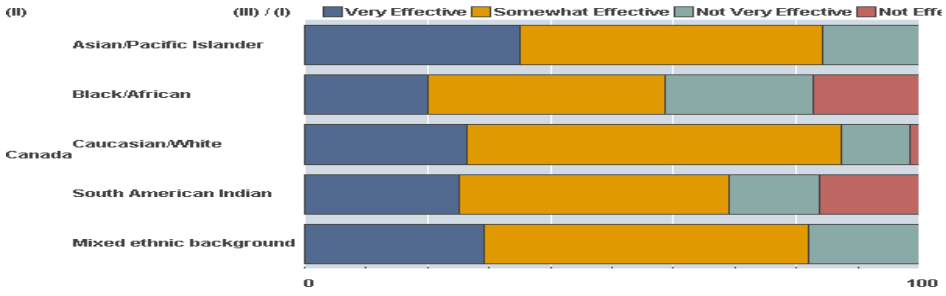


Figure 15: Perceived Effectiveness of In-Store Camera Surveillance by Ethnicity

When comparing question 20.2 with question 1.4 regarding knowledge of public camera surveillance, no strong connection in responses could be made. Those who claimed to be very or somewhat knowledgeable about camera surveillance were as likely to claim that the method was as effective as those who claimed to be not very or not at all knowledgeable. No correlation between knowledge and perceived effectiveness could be made.

Results from question 20.2 were cross-tabulated with question 6 which asked: "What level of trust do you have that private companies will protect your personal information?" This comparison made visible a trend which suggests that the higher the level of trust one has for private companies, the more likely one is to think in-store CCTV will be effective. Eighty point four percent of people with a very high level of trust in private companies thought in-store camera surveillance to be at least somewhat effective at reducing crime. Of that number, 32.8 percent thought it to be very effective. Correspondingly, 62.8 percent of Canadians who reported having a very low level of trust in private companies believe in-store camera surveillance to be somewhat effective. Of that number, only 13.3 percent thought it to be very effective. This relation suggests a connection between the way people think about private companies and how people perceive in-store camera surveillance. The more trust a person has in a private company seems indicative of how effective they believe in-store camera surveillance to be.

Interpreting the Data

A presentation of the findings from the GPD survey demonstrates several points that work toward providing a more thorough understanding of public perceptions of camera surveillance. The responses show that approximately half the Canadian public considers themselves to be at least somewhat knowledgeable about the use of video cameras as a method of surveillance. Further, responses tell us that the vast majority of the Canadian public feels that camera surveillance is at least somewhat effective in its ability to reduce crime. Canada was shown to diverge most widely from Brazil, Hungary and Mexico, and exhibit answering patterns the most similar to France, Spain and the United States. So what does this information tell us about what the public thinks about camera surveillance, or how the Canadian public feels about the implementation of camera surveillance in their area? To answer this question, it is helpful to consider sources of information regarding public opinion toward camera surveillance that have been completed in the UK, previous Canadian research, GPD focus groups in Canada and resistance to implementing surveillance at Canadian sites.

The widespread use of camera surveillance in the UK makes it the leading user in the world. The perceived success of these schemes has made UK systems the basis of many existing Canadian schemes (Walby 2006). While there are several differences between the use of camera surveillance in the UK and Canada, the extensive body of literature available on the systems in the UK makes it a useful point of reference. Research from the UK works to compliment and extend existing Canadian research.

In an attempt to measure the level of support for the installation of surveillance cameras in public areas, the Home Office survey of the UK (2005) asked how respondents would feel if a new CCTV system were installed in their area. Response was measured on a scale ranging from 'very happy' to 'very unhappy'. The level of support was positive with about 82 percent of people responding that they would be at least 'fairly happy' about installation (Spriggs, et al. 2005). This has been a

consistent response amongst surveys completed in the UK. For example, Bennett and Gelsthorpe (1996) found that 64 percent of respondents from Cambridge thought CCTV to be a 'good' or 'very good' idea. Similarly, Ditton (1998) found that 69 percent of people interviewed 'didn't mind' being watched by CCTV. This majority, which was in favour of the implementation of CCTV in their own neighbourhoods, was also of the opinion that camera surveillance has the ability to reduce crime (Spriggs et al. 2005). A strong relationship has been found between the perceived effectiveness of camera surveillance, and the attitude toward installation in one's area. In the UK, respondents are more likely to be happy about installation in their area if they believe the technology to be effective at its proposed uses. Whether a positive correlation can also be found amongst Canadian responses cannot be ascertained from the GPD Project's selection of questions. Other North American research has helped to demonstrate this point. Social science and opinion polls have demonstrated that while about one third of participants recognize camera surveillance as a threat to privacy (Leman-Langlois 2009), this is not to say that these same respondents do not support the implementation of CCTV systems, as people seem to be willing to trading privacy for security (see Wells, Allard and Wilson 2006; Lyon 2003).

An examination of the focus group transcripts that guided the formation of the GPD Project's questionnaire, help to both supplement and challenge the notion that Canadian attitudes surrounding the implementation of camera surveillance would mimic the positive perceptions of the effectiveness of camera surveillance at reducing crime. Given the nature of the qualitative research, the findings from the focus groups cannot be considered to be a statistically significant representation of the Canadian public. However, for exploratory purposes, the transcripts provide valuable insight into the perceptions of the Canadian public.

Transcripts from the focus groups reveal much about the way that Canadians define camera surveillance. The dialogue suggests that ordinary people do not pay much attention to camera surveillance. A reading of all the available transcripts (four focus groups based in Toronto in May of 2004 averaging about 7 members per group) reveal that people easily point to several ways that surveillance cameras are used, but examples rarely include police or government operations. The most commonly cited schemes are private systems belonging to apartment buildings, banks, malls, convenience stores and those used by employers to monitor their employees. On only one occasion did a participant speak about the camera-monitored streets of London without being prompted by the moderator.

This suggests that people are likely to think of public camera surveillance as private monitoring as opposed to the social monitoring of a public space by government or police officials. There are upwards of 14 systems of camera surveillance currently in use in Canada[60] and this estimate is predicted to increase. By 2003, there were more

[60] Current evaluations tell us Hamilton, London, Peterborough, Sturgeon Falls, Sudbury, Thessalon, Toronto, Thunder Bay, Windsor Ontario (ON), Edmonton Alberta (AB) Antigonish Nova Scotia (NS),

than four million publicly or privately owned cameras in operation in the UK (McCahill and Norris 2003) which may prove to serve as an indicator of the direction of Canada (Walby 2006). A reading of the focus group transcripts implies that Canadian citizens are unaware of the extent to which government and police forces are using camera surveillance as a proposed method of crime control. This works to further illuminate the dichotomy between a lack of public awareness and the perception that camera surveillance is effective in its proposed uses.

When discussion shifted to the usefulness of camera surveillance, there was generally positive consensus, reflective of the data from the GPD survey. However, when prompted to talk about the widespread implementation of surveillance cameras in the participant's own city, responses within the focus groups were rarely supportive. Participants expressed feelings of unease about the idea of being personally monitored in a public place. Therefore, while the responses in the survey indicate that it is commonplace to believe camera surveillance is a successful crime deterrent, the extent to which Canadian citizens feel positively about the implementation of camera surveillance in their area is uncertain. Further, this implies that when responding to questionnaires participants fail to acknowledge that these situations may apply to them.

This mix of public perceptions may be partially accounted for by the variations in approaches used to study the topic. As mentioned above, the information provided to participants and the order in which questions appear on a survey can have significant influence on the way questions about camera surveillance are answered (Ditton 2000) which suggests that public support for camera surveillance may be exaggerated (ibid; Ditton and Short 1999; Graham 1998). Other questions appearing on the GPD Project's survey called attention to violent victimization, property theft, threats to civil liberties and invasion of privacy which have been shown to impact participant response to questions about camera surveillance (ibid). Similarly, the questions in the survey regarding camera surveillance mention CCTV being installed 'in order to deter crime and assist in the prosecution of offenders'. Positive response may be a result this type of questioning. Within the focus group setting however, participants were often probed to talk about privacy and civil rights issues prior to expressing their opinions about camera surveillance and may be indicative of why the responses reflected differential attitudes.

Further evidence suggesting that the public may not be so accepting of the implementation of camera surveillance comes from Canadian examples where CCTV initiatives have already been put into operation and been resisted. In the late 1990s, the public of Brockville demonstrated substantial opposition to the local CCTV project (Walby 2006). Similar public reactions led the Chief of Police in Guelph to reject the implementation of CCTV initiatives there (ibid).

Kelowna British Columbia (BC), Montreal and Baie-Comeau Quebec (QC), operate open-street camera surveillance programs with many more locations having used systems in the past or are considering/have considered the implementation of a system (Walby, 2006: 6).

It has also been suggested that positive assessments of camera surveillance are at least somewhat dependent upon the public's limited and inaccurate knowledge of the capabilities of camera surveillance (Honess and Charman 1992). This may be partially explained by public's reliance on media outlets to form their opinion (Reiner 1997; Norris and Armstrong 1999). The functions and capabilities of camera surveillance are often disproportionately portrayed by the media, giving the public a false sense of the ability of these systems at reducing crime (ibid).

Since camera surveillance is perceived as an effective tool of crime deterrence and detection, its numerous consequences for civil and privacy rights, freedom of movement, and freedom of association as well as the insufficient evidence for the success of its proposed uses, are often sidestepped. At a time when the pace of technological change far surpasses the rate of policy and regulation alterations, the increasing implementation of camera surveillance may be negatively assessed. Social sorting (Lyon 2003), operator bias (Walby 2005; Norris 2003), function creep (Hier 2004), and the questioned ability of camera surveillance to actually reduce crime should be taken into account when considering the implementation of such systems. While more research is required to determine the social and ethical consequences of camera surveillance, these things are certainly worth concern in the debate surrounding the implementation of camera surveillance.

In Canada, the oversight of these systems happens at the federal and provincial level. The *Privacy Act* of 1983, and the *Personal Information Protection and Electronic Documents Act* (PIPEDA) of 2006 are meant to protect the citizens' right to privacy. In Ontario, the privacy commissioner set out guidelines to the use of CCTV systems (IPC 2001). Signage is heavily relied upon to ensure public notification and consent, but the guidelines fail to ensure the signs include appropriate information or that signs are placed in a location suitable for viewing purposes such that proper notification and informed consent are achieved (Lippert 2009a). Lack of informed consent problematizes the use of camera surveillance and is suggestive of the need to revisit current applications of policy in regards to camera surveillance.

While the right to privacy has long been a backdrop to the history of Western culture (Gallagher 2004), the current social climate, in a post-9/11 risk society, is dominated by a public that is more willing – as they would say -- to trade privacy for security (Lyon 2003). With the majority of respondents believing that camera surveillance is at least somewhat effective at reducing crime, the success of the CCTV initiative comes from the documented increase in the public's sense of security (Lai 2007). This perceived effectiveness also seems to be the root the political agenda in inducing in the public a feeling that something is being done about crime (Norris, McCahill and Wood 2004). However, what is critical to a democratic society is the need for restrictions and limitations to be securely in place when it comes to any type of social monitoring device. These things should be

accomplished prior to the implementation of camera surveillance, and not the other way around.

Conclusion

Analysis of the GPD survey results provides the critical means for understanding public attitudes to camera surveillance in Canada. For knowledge of camera surveillance, demographic variables revealed some differences by region, where British Columbians claimed the most knowledge and Quebec claimed to know the least. Gender also played an interesting role in respects to acting as an indicator of knowledge of camera surveillance with women claiming to have considerably less knowledge on the matter. While age, ethnicity, and education were also explored, these variables had very minimal impact on the results.

With respects to the perceived effectiveness of camera surveillance, a large majority of citizens are of the opinion that camera surveillance is an effective way to reduce crime. With such a strong majority in agreement, little demographic variation could be ascertained. When the results to the effectiveness questions were cross-tabulated with other questions in the survey however, some relationships could be determined. It was found that those with a high level of trust in the government were also more likely to think community camera surveillance to be highly effective. Similarly, those with a high degree of trust in private companies were more likely to believe in-store camera surveillance was a highly effective means of crime reduction. With respects to all three GPD questions directly relating to camera surveillance, Canada was shown to diverge the most greatly from Brazil, Hungary and Mexico (who were the most likely to claim both knowledgeablity and the greatest effectiveness) and demonstrated answering patterns the most similar to France, Spain and the United States (who were the most conservative in their claims of knowledgeability and effectiveness).

Additional avenues of research indicate that the picture is not as straightforward as the numbers portray however. Further research into the attitudes of citizens in regards to being personally affected (or not) by public camera surveillance systems will help to ascertain a more nuanced understanding of the picture in a time when camera surveillance is fast becoming a predominant method of social monitoring.

The Surveillance Legacy: What Happens to Vancouver's Camera Surveillance Systems After the 2010 Olympics?

Laura Huey

Previous research on proposals to install public camera surveillance systems in Vancouver reveals this site as a contested space in the politics of surveillance (Haggerty et al. 2008). Attempts by police to implement closed circuit television cameras (CCTV) in the City's Downtown Eastside (DTES) were successfully resisted by residents and local activists in 1999 and 2001. In 2005 the focus of police efforts shifted, and the City's Granville Mall Entertainment District was proposed as a potential alternative site. Politically, the Mall is in many ways an ideal location for implementing a CCTV system that might otherwise be controversial. The space is concentrated with liquor license seats that contribute to high rates of crime and disorder, and it is inhabited by shoppers during the day and club-goers at night, thus there is no one community that would be sufficiently affected by police oversight to engender vocal opposition. Although the police plan for the Entertainment District proceeded to an early development stage, by 2008 it had been quietly shelved with no public explanations provided. On the surface, this action seemed to make little sense; with crime and disorder rates spiralling upwards on the Mall, the police appeared to have an excellent 'test case' for the implementation of a public surveillance system.

Wary local activists feared that although the police plan appeared to have been abandoned, that it would be resurrected under a different guise in the very near future. Indeed, with the 2010 Olympics in Vancouver looming, they predicted that the police would use the Games as the perfect vehicle for implementing a camera surviellance network throughout the City's streets that would continue to operate long after the Olympics were over. Such a prediction is not without merit; as the examples of Athens, Sydney and Torino suggest, security infrastructure – including systems for enhanced electronic monitoring of citizens – is one of the many 'legacies' of hosting an Olympic games (Boyle and Haggerty 2009; Samatas 2007). Using documents acquired through provincial and federal Freedom of Information legislation and interviews with local stakeholders, I explore the potential for surveillance systems to be one of the enduring legacies of the 2010 Olympic Games, situating this likely development within the context of the ongoing battle over public surveillance in the City of Vancouver.

This report is presented in five parts. First, I provide a brief overview of the methods used to acquire the data presented here. The section following provides some historical context for understanding the politics of public surveillance in Vancouver. The third section examines the 'surveillance legacy' of recent Olympic Games in previous host cities. Looking at the examples offered by Torino, Athens

and Sydney[61], we find that in advance of the Games, host cities view public surveillance systems, as 'legacy' infrastructure to be converted for routine policing purposes once the Games are over. In the fourth section, I look at the available evidence to assess whether, or to what extent, it is likely that surveillance systems implemented for the 2010 Olympics will be converted into a local policing resource for more mundane 'criminal threats' once the Games are concluded. The paper concludes with a brief review of the material presented and some final remarks.

Method of Inquiry

My interest in public surveillance in Vancouver began in early 2000 in response to the Vancouver Police Department's (VPD) proposal to install CCTV cameras in the City's Downtown Eastside neighbourhood (Haggerty et al. 2008). For this study, we conducted interviews with proponents of the plan (police and local business interests), as well as with those arrayed against it (local community groups, area residents and civil liberties organizations). Our research was temporarily abandoned in 2001 when the police quietly killed their plans, only to be resurrected in 2007 following the announcement that the VPD were looking at the Granville Mall Entertainment District as an alternative site (Haggerty et al. 2008).
It was during an interview in 2007 with two local privacy activists that the specter of the 2010 Olympics was first raised to me as an explanation for why the VPD proposal for the Entertainment District appeared to have been set aside. The two activists suggested that the VPD was now engaged in an elaborate shell game, with the 2010 Games providing an appropriate vehicle for introducing and maintaining a surveillance system that would be otherwise unpalatable to the residents of the City. It was also during this discussion that I was first introduced to the concept of 'legacy' cameras – surveillance systems as part of the infrastructure to be owned and used by an Olympic host city.

In 2008, I decided to explore the extent to which there was any merit to the claims of privacy activists that the police would use the Olympics as a 'trump card' in the ongoing battle over public camera surveillance. Through 2008 and the early part of 2009 I used provincial Freedom of Information (FOI) legislation in an attempt to uncover the current state of the VPD Entertainment District proposal and any post-Olympics plans for surveillance cameras installed in Vancouver for the 2010 Games. Federal Access to Information (ATI) legislation was used to make a similar query to the Royal Canadian Mounted Police (RCMP), who are coordinating security for the event with provincial and civic officials. A request for information was also filed with city officials concerning civic plans for CCTV to be used at 'live sites' (entertainment venues) to be established in the downtown core during the Games. This data is supplemented by relevant comments extracted from interviews

[61] I have opted not to examine the Beijing 2008 games here. While it is the case that the Chinese government used the Olympics as a vehicle to implement one of the most comprehensive state-run surveillance systems, China's human rights record and lack of civil protections does not make it a comparable example.

conducted in 2008 for another study I conducted on policing in Vancouver (Huey and Quirouette forthcoming). And, to flesh out the concept of 'legacy cameras' more fully, information was collected on CCTV surveillance systems used for previous Games, as well as their post-Games use in former host cities. Using Internet search engines, available online material was gathered from a number of sources, including media reports and security company promotional blurbs.

Vancouver and the Politics of Camera Surveillance

In 1999 the Vancouver Police Department began developing a proposal to utilize camera surveillance as a means of addressing what was publicly referred to as an 'open-air drug market' in the City's Downtown Eastside community. The plan proposed called for the installation of cameras in public spaces within and immediately adjacent to the intersection of Main and Hastings, which was cited as 'ground zero' for the City's drug trade (Fredericks 1999).

With its high rates of crime, lack of legitimate economic activity and generally dilapidated physical condition, the DTES has long been considered by many residents of Vancouver as a completely dysfunctional, if not entirely lawless community. In 1999, the VPD offered what they took to be an entirely viable solution to the DTES' problems: they sought to install a public CCTV system consisting of sixteen domed surveillance cameras, touting among other potential benefits, the presence of such cameras as a likely deterrent to crime and disorder (Fredericks 1999). In advance of bringing their proposal forward to the Vancouver Police Board, the police installed a 'test camera' on the roof of a bank located on a corner of Main and Hastings. Once discovered, this 'test camera' proved to be a public relations disaster for the police and helped to galvanize local community resistance to the larger proposal (Haggerty et al. 2008). Local residents and a broad array of community groups launched a vocal and ultimately successful opposition to the plan at community meetings, in the media and in representations to the Police Board. The police had clearly underestimated the ability of local opponents to organize an effective counter-movement.

In the face of public opposition to the plan, the Vancouver Police Board recommended that the proposal be returned to the VPD for 'further study.' In 2001, after community groups had begun to hope that the plan for a public surveillance system in the DTES had been abandoned, a new proposal was put forward. Community groups and privacy activists again rallied. Likely realizing that they would be unable to overcome local opposition to any proposal to implement a public surveillance system in the DTES, in 2005 a senior Vancouver police commander went before the Police Board to recommend withdrawing the DTES proposal in favour of exploring the potential for installing CCTV in other neighbourhoods. Privacy advocates termed this move 'neighbourhood shopping', and waited to see what strategy the police would employ next (Haggerty et al.

2008). The wait was brief; by fall of 2006, news emerged that the VPD had found a new neighbourhood.

Throughout the 1990s the City of Vancouver's downtown core underwent substantial redevelopment. Areas such as Yaletown and Granville South became residential sites with high-rise condominium complexes and local amenities, while the City's Granville Street pedestrian Mall was zoned as an entertainment district with an emphasis on luring customers through the development of a night-time economy. In order to support the 'Entertainment District' concept, Vancouver City Council approved an additional 1,000 liquor license seats for the area in 1998 (Gordon and Barth 1998). This was followed in 2003 by City Council approving an increase in the operating hours of liquor establishments in the Entertainment District. By 2006, approximately 25,000 visitors a night were congregating along the Granville Mall to visit one of the 5,000 liquor-licensed seats now concentrated in a six block strip of the City's downtown core (Bohn 2006). With night-time partiers consuming quantities of alcohol in a number of multi-seat venues densely concentrated in a small area, the rates of crime and disorder in the urban core began to increase. Between April and October 2006 alone, police officials reported nearly nine hundred[62] liquor related infractions (CBC News 2006).

Given the openly expressed interest of police leaders to search for an alternative site for a public CCTV system, it is of little surprise that by November 2006 items began appearing in local media about the VPD's belief in the need for a camera surveillance system in the Entertainment District (Bohn 2006; Bermingham 2006; Colebourne 2006). Citing an incident in which a police officer's leg was broken during a fight on the Granville Mall, a senior VPD Inspector stated that cameras were necessary because liquor-fueled offenses, including the "assaulting of police officers ha[d] become too common" (Bohn 2006: B1). The Inspector further added, "We believe we can reduce the disorder we have here with that kind of system … people will choose not to do things, because they realize they're being monitored" (ibid: B1). The VPD's then Chief Constable was quoted as saying that such an initiative would receive wide public support: "What we're hearing is a huge majority of people are supportive of CCTV" (Bermingham 2006: A30).

In abandoning their plans for installing a public surveillance system in the Downtown Eastside in favour of sitting cameras throughout the Granville Mall Entertainment District, the VPD were showing a newfound political savvy. With spiraling crime rates in the downtown core, public outcry over open disorder in the Mall, substantial business community support for the cameras and no identifiable resident groups in opposition, the Entertainment District represented a perfect test site for CCTV. To lend further support for the proposition that public camera surveillance systems would be a viable means of addressing downtown crime and disorder issues, the VPD sought out the expertise of police from the UK, hosting a

[62] Including issuing offenders 310 tickets for drunkenness, 246 tickets for intoxication in a public place, 194 for consuming alcohol in a public place and 113 for public urination (CBC News 2006).

British delegation prior to appearing before the Police Board with their recommendation that a new proposal for public CCTV should be developed. In November 2006, approval for a full-blown study and subsequent proposal for cameras was forthcoming from the Police Board. The VPD's Planning and Research section were tasked with preparing a final report, including budget estimates and implementation timelines, to be received by the Police Board for May 2007. The deadline passed, and by January 2009 no such report has yet to be publicly produced. Local privacy activists began speculating that the looming 2010 Olympic Games in Vancouver might explain why VPD plans had once again appeared to have been abandoned.

In January 2008, the public execution of a local gangland figure in the City's downtown core led to renewed calls for a public surveillance system. Somewhat ironically, while police investigators pursued leads, including reviewing camera surveillance images from as many as thirty privately owned cameras fixed at points at or adjacent to the site of the murder, it was local politicians who raised the specter of even more cameras (Baron and Keating 2008; Bolan 2008). After the killing, Vancouver City Centre Member for Parliament, Hedy Fry, was quoted in local media as calling for a multi-pronged approach that would include public CCTV cameras. According to Fry, "It couldn't hurt to have [cameras]" (Baron and Keating 2008: A1). Vancouver Mayor Sam Sullivan, head of the City's Police Board, advised reporters that "there is definitely a place for [public CCTV cameras]" (ibid). The Mayor's stated rationale was that although he did not believe that cameras prevent crime (a point also raised in opposition by privacy advocates), he opined that their value lies in being "very effective at helping to prove crimes, and to follow up on providing evidence on crimes" (ibid.). The installation of a public camera system was something that would be "discussed in the future", the Mayor added (ibid). In response, a local group opposed to public surveillance condemned suggestions that cameras would have had any deterrent effect in relation to this or other crimes, noting:

> CCTV technology won't start rolling when some hidden 'gangster radar' goes off. In fact, whoever would be sitting behind the banks of cameras watching the city streets would probably be glued to the activities of everyday citizens a whole lot more than they ever would the likes of Scarpino, or his killers (VPSN 2008).

Notably absent from the voices in this public discussion were those of local police representatives. Again, privacy and public space advocates in the City read this absence as an ominous sign.

In October 2008, anti-surveillance activists were dealt another serious blow. The B.C. provincial government announced that it would provide the cities of Vancouver and Surrey with up to one million dollars in funding in order to implement a 'pilot project' that would employ CCTV in 'high crime' areas (Fournier 2008). This announcement was met with concern by the provincial Privacy Commissioner who

wrote publicly to the Attorney General and the Solicitor General urging that that public surveillance be employed "not [as] a cure-all … [but] only as a last resort" (Loukidelis 2008: 2). Civil liberties groups, beleaguered by the press of so many concerns post-9/11 and in the build-up to the Olympics, were left scrambling by this unforeseen development. It appeared that whether the provincial government directly funds the use of cameras in Vancouver's downtown core, or the city inherits and/or creates CCTV systems that would be re-purposed after the Games, they might be losing the battle against camera surveillance and, despite their best efforts, the installation of a public surveillance system would be an inevitable development. Either way, local privacy activists remained convinced that the Games would play an integral role in the process by serving as a means of introducing the cameras and, once in place, conditioning the public to accept their presence.

Surveillance as a 'Legacy' of Previous Olympic Games

Privacy activists' worries concerning the use of the 2010 Games as a means of introducing permanent public surveillance systems are not without substance. The examples offered by former Olympic host cities strongly suggest that surveillance systems are viewed by Olympic organizers and their supporters as an integral part of the post-Games 'legacy' of the Olympics. Within this section, I briefly examine the installation and post-Games use of public CCTV surveillance systems in three former host cities: Sydney, Torino and Athens.

For the summer 2000 Olympic Games in Sydney, Australia, organizers contracted Honeywell Security and other suppliers to install a CCTV system using multiplexers and time-lapse video-recorders to cover Olympic venues and identified 'high security risks' (Honeywell 2008; Pelco 2008). Their goal was to provide "a total solution to monitor and report on all activities" (Honeywell 2008). To this end, one hundred and twenty cameras were installed at the Olympic Stadium, approximately two hundred more were located throughout other Olympic venues, sixty were placed in Olympic precinct areas including walkways and car parks, forty were installed in Darling Harbour, fifty-six at the Sydney Opera house, and forty at the Sydney Ferry Wharf (ibid). An additional fifty-four cameras were placed at electrical substations in order to prevent possible sabotage that might disrupt the games (ibid). And, to ensure surveillance coverage of major tourist areas outside of Olympic venues, some two years prior to the Games fifty CCTV cameras were sited throughout the City's central business district (ibid).

In their promotional materials, Honeywell (2008) proudly boasts that their "building automation, fire and security systems, supplied for the Sydney 2000 Olympic Games, will benefit Australians for decades to come." And, indeed, it is and will. In preparing for the Games, organizers clearly perceived the continued public use of camera surveillance post-event as a desirable Olympic 'legacy' upon which they could build an expanded system. Not surprisingly then, once the Sydney Games drew to a close, many, if not all of the cameras remained in place (CBC 2008), and

CCTV installations in Sydney are continuing to expand the scope and breadth of surveillance that citizens are subject to. In January 2008, Sydney City Council approved the expenditure of an additional $3.5 million to upgrade their existing surveillance system, which consists of approximately 82 digital cameras in the City's core (City of Sydney 2008). The surveillance system originally implemented for Olympic security is now used for significantly more mundane policing purposes. According to a press release from the Sydney City Council, the enhanced system "allows the City to help police in the detection and investigation of a wide array of crimes including alcohol related crime, anti-social behaviour, stealing and other street offences" (ibid).

For the 2006 Winter Games in Torino, Italy, the first upgrades to existing infrastructure were enhancements to perimeter security at the Torino airport. The newly installed ten-kilometre 'Secure Fence' came complete with CCTV cameras along the fence line (Secure Marine 2008). Should a 'shock' be detected or other alarm condition be sensed, the cameras were programmed to point in the corresponding direction and follow the intruder's movements (ibid). These were only the first of over five hundred cameras installed for the Games in Torino and seven other locations where Olympic venues were sited (IndigoVision 2008). The Torino system was complemented by another fourty-four cameras installed as part of a more complex traffic management system (CST 2006). Yet another CCTV-based system was installed prior to the games by HP systems for Metro Torino; this system uses five hundred and fifty cameras located on trains, in tunnels and throughout metro stations (HP 2008). The hub of Torino's Olympic CCTV security matrix was a 'control center' where operators received image streams fed from the remote locations (IndigoVision 2008).

After the Torino Olympics, many of the surveillance cameras installed for the Games remain in operation or were otherwise 'repurposed'. In some instances it is clear that design decisions with respect to a given system were intended to serve both contemporaneous and subsequent crime control purposes. For instance, during the implementation of the Metro Torino system, Torino Police asked "if they could also receive images for their own criminal surveillance purposes" (HP 2008). A link was added to the police station in order to permit the police to be able to "view the same real-time images on their own workstation" (ibid).

It has been argued "the 2004 Athens Games set the benchmark for the application of security technology for an Olympic Games" (Boyle and Haggerty 2009). Certainly, as the first summer Olympic Games to be held after September 11, 2001, security issues related to the Games were predominant in organizers' minds. Thus, by the time the Games were over on August 30, 2004, the Greek government had spent approximately $365 million USD on a security system that included a centralized command centre and network comprised of 67 subsystems featuring 130 fixed and 5 mobile command centers, a secure digital trunk radio network, biometric identification cards, approximately 1800 CCTV cameras operating a 24/7 feed, and an overhead surveillance blimp equipped with infrared surveillance (Samatas 2007,

2008). Micro-phone equipped cameras were sited approximately every 50 meters, not only at Olympic venues but throughout the Athens city centre. The network also included cameras in 'high target' areas as the Athens airport, the city's metro system, the seaport of Piraeus, and a further 1200 cameras were sited along national highways (Samatas 2008).

Although security for the Games was ostensibly the principal consideration in erecting this network, it was clear that Olympic organizers were also considering post-Games uses. For example, Samatas (2008: 348-9) cites then Greek Minister of Public Order Yiorgos Voulgarakis' justification of the expense of the system: "What matters is that after the Olympic Games we will find ourselves with very sophisticated systems that will allow us to police Olympic cities very well." IndigoVision (2008), which supplied the cameras that ran on the Siemens ATM data network, also acknowledged that post-Games use was a fundamental consideration for organizers: "As well as providing security for the Olympics, the system had to be in use long after the Olympic flame had been extinguished. By choosing an IP-solution, the Athens authorities can be confident that the system will remain in service long after the 2012 Olympics."

Following the completion of the 2004 Olympics, the Greek government applied to the Hellenic Data Protection Authority (DPA) to keep the cameras in place for 'traffic management purposes' (Samatas 2008). This extension was granted for a period of six months; a further extension permitted the use of cameras to 2007 (ibid). Subsequent inspections of the system by DPA personnel found that a number of cameras used by police were being operated in contravention of location, signage and other stated conditions (ibid). In 2005, the DPA implemented new rules that severely limit the use of cameras in public (ibid). Despite these restrictions, in 2006 a DPA investigation turned up a number of post-Olympic CCTV cameras being operated in public spaces illegally by officials, and in 2007 police were fined by the DPA for using CCTV cameras to monitor student protest (ibid).

As the examples of the previous host cities referenced here illustrate, surveillance is one of the many legacies of hosting an Olympics Games. Indeed, event organizers justify the expense of erecting camera surveillance systems as not only necessary for providing security for the event, but as an useful expenditure that will benefit citizens "for decades to come" (as Honeywell (2008) proclaimed of its Sydney installation). Once a surveillance system is in place – as Sydney, Torino and Athens demonstrate – it is easily adapted for more mundane purposes, such as routine crime control and traffic management. Indeed, if we look at the particular example of Sydney, post-Olympics, the City centre's cameras have been utilized largely to respond to minor offences and/or public disorder issues.

The 2010 Olympics and the Issue of 'Legacy Cameras'

In relation to the situation in Vancouver, the Olympic Games represent the worst case scenario for privacy and public space advocates: security requirements at Olympic venues and other local sites clearly operate as a trump card in the politics of surveillance in a way that crime, traffic and other sorts of arguments pitched by pro-surveillance advocates do not. Indeed, attempts at limiting the ability of organizers to take proactive measures to ensure the security of athletes and attendees at this event would be widely seen as foolishness, particularly in a security-conscious post-9/11 world. Framed in this light, surveillance and the attendant loss of privacy in public spaces that the Olympics will entail, becomes, for many citizens, an acceptable 'cost of doing business.'

At present, activists and the public alike are unaware of the extent to which they will be subject to surveillance during or after the Games. As of this writing (March 2009), details as to Olympic security are still closely guarded secrets. In April 2008 media reports stated that the Vancouver Olympic Games secretariat had stopped recording minutes of its meetings, and the Vancouver Organizing Committee for the 2010 Olympics (VANOC) stopped providing minutes of its meetings to the government secretariat, minutes that would likely be subject to freedom of information requests (Tromp 2008). As of November 2008, no public announcements have been made as to what companies have been awarded the tender for surveillance security technology and installation, so even the brands and models to be used are unknown. In January 2009, after having previously confirmed their participation on a 'Privacy and the 2010 Olympics' panel held at the 10th annual Privacy and Security conference, representatives from both the RCMP and the VPD withdrew. Both organizations cited schedule conflicts as the reason for their respective withdrawals.

Of the little information that has been released, we do know that the RCMP – the lead security agency for the Games – intends to install a CCTV network consisting of hundreds of cameras located at approximately one hundred Olympic venues and tourist sites (CBC News 2008). It has also been reported that the RCMP are intending to employ cameras that will utilize face recognition technology in order to track visitors at the Games (Akin 2008). The Office of the Information and Privacy Commissioner of British Columbia revealed that they had sought and obtained agreement that images captured by CCTV cameras during the event, would be "available only to key people", although the number of individuals designated as 'key' is unknown, and assurances regarding retention of images is not publicly available (CBC News 2008).

As to what plans are in place to repurpose cameras installed for the Olympics, again police agencies are providing few details. A request for information to the RCMP in June 2008 on potential legacy cameras had yet to yield any information by February 2009. During a discussion on January 21, 2009 with a RCMP officer on the status of my request, I was informed that searches for relevant documents had just been

completed the previous day. However, I could anticipate another two month delay because the documents found would have to be vetted by the Integrated Security Unit before release. In an interview with a member of a community organization that had been actively opposed to previous attempts to install public surveillance, I was informed that their own efforts at uncovering the extent to which cameras would be repurposed had also yielded little new information:

> There will be legacy cameras, which, of course, surprises no one who's thought about it. The extent of the legacy cameras is not known. We were told that the Vancouver Police Department will commandeer several dozen. When I was told that, personally, I laughed out loud. I said, "Well, the rest must be going to the RCMP because there's a shitload more" …so, there's a little shell game going on.

In August 2008, I utilized the medium of a Freedom of Information (FOI) request to query the Vancouver Police Department as to the status of the CCTV study for the Granville Entertainment District. I also sent a separate query regarding operational plans to acquire cameras from the RCMP once the Games had concluded. In particular, what I sought was data related to the claim raised by local privacy activists that the VPD had quietly shelved the Granville Mall project in favour of inheriting an already established public surveillance system. On September 8, 2008, I received the following reply:

> I confirm that the VPD is currently holding this project in abeyance pending developments of the joint Olympic organizing Committee. I understand that this committee, comprised of various stateholders [sic] including the RCMP, currently has its own proposal for funding, installation and use of CCTV. Depending on the success and degree of implementation of the joint Olympic organizing Committee, the VPD CCTV project may be reinitiated (VPD Information and Privacy Office 2008).

What was not revealed in the correspondence received from the VPD is the fact that they were also actively pursuing another avenue through which to obtain 'legacy cameras.' Internet searches conducted in the summer of 2008 revealed that the City of Vancouver has also released plans to utilize CCTV in public spaces during the Olympics. City officials' plans called for the establishment of 'live sites' in the city centre – public gathering and entertainment spaces – within which they would utilize bag searches, magnetic scanners and video surveillance for area security (maps of the proposed 'live sites' can be located in the Appendix). The proposed camera surveillance component, if implemented, would consist of 24-hour CCTV surveillance within each designated live site, behind entertainment stages and "of the streets surrounding the live-sites" (Lowe 2007: 6). City of Vancouver reports reveal that the 'live sites' will be located at Georgia Street and at the David Lam Park (Lowe 2007; Rudberg 2008). The Georgia Street 'live site' will encompass some 80,800 square feet of public space in the downtown core, all of it to be under the gaze of CCTV cameras (Rudberg 2008). The David Lam 'live site' will consist of a

further 100,400 square feet of public space subject to a "security overlay", including camera surveillance, "deployed to monitor attendees" (Rudberg 2008: 4).

A FOI request was sent to civic officials in August 2008 asking for further details as to any potential 'legacy' plans for proposed 'live site' cameras. In January 2009 this request yielded confirmation of the fact that the City and the Vancouver Police Department are intending to install cameras in the City's downtown that would have "potential legacy components – post 2010" (VPD officials cited in City of Vancouver 2009). Included in released documents were both email correspondence and meeting minutes that indicate police concerns over budgetary and technical specifications necessary for ensuring the operation of "CCTV cameras for the Games and beyond" (ibid). The minutes of a meeting on Olympics security at 'live sites' on February 11, 2008 note that the VPD has asked for funding on public domain cameras and monitoring that has not yet materialized, but … [with Olympics funding] the monitoring [if done at the Emergency Operations Centre (EOC) site], should it become a reality, may work for both Live City sites and for VPD in general" (ibid.). Subsequent minutes from a July 10, 2008 meeting state that it is the position of the EOC that the "biggest legacy" of plans to create a centrally monitored CCTV system at the downtown 'live sites' is "a solid control room/monitoring hub at EOC for post 2010 needs" (ibid). In short, it is the intention of police, civic planners and Olympic officials to make sure that CCTV is one of the enduring legacies of the 2010 Olympic Games.

Privacy advocates rightly worry that once surveillance cameras are operational in public spaces during the Olympics, it will be extremely difficult for those opposed to counter their continued usage for other purposes post-Games. Indeed, as one privacy advocate explained, "we're gonna have to fight [the cameras] on the back end, which is the worst possible fight you can have." Battling camera surveillance post-Games represents 'the worst possible fight' for anti-surveillance activists for several reasons. First, there are economic arguments in support of retaining an operational system. Having already paid for equipment and installation, it becomes significantly easier to convince Canadian taxpayers to tolerate their continued use on the ground that dismantling the system would represent waste. As one frustrated privacy activist exclaimed, "it's a done deal. And what are you suggesting? We should waste all this money we've already spent that belongs to taxpayers? … since you've spent the money, you want the security." Second, activists are concerned that once cameras are in place, citizens will have come to accept their presence and be less concerned about the implications of their continued use, thus becoming complicit in the further erosion of their privacy. A third difficulty activists raise when faced with the specter of fighting 'legacy cameras' is grounded in the legal concept of estoppal. As a civil rights lawyer explained, "you're stopped essentially from bringing a complaint because you've acquiesced for so long."

While the surveillance legacy of the Olympics in previous host cities rightly raises concerns among privacy and public space advocates that fighting a fully operational camera surveillance system will be difficult, local history is also illustrative here.

Examining past political fights over civic policies that infringe on civil liberties suggests that once a policy or practice is in place, it often remains so. Indeed, one privacy activist wryly noted that this is increasingly the case because civic officials have learned from previous battles to bypass public debate through the simple expedient of installing a 'test-project' and then announcing it as 'successful':

> if you want anything to happen, you avoid any public discussion of it, and you make a pilot project … and then, once it's a done deal, you don't engage in any public discussion. You just announce that you're now rolling over your quote-unquote successful pilot project into the new program.

In many ways, the Olympics represent the absolute perfect test case for both camera surveillance and how to bypass public debate on the implementation of security infrastructure.

Concluding Remarks

In the battle over proposals to implement public camera surveillance in Vancouver, proponents have been unsuccessful to date because of the ability of privacy and public space advocates to mount effective community resistance. To avoid further defeats, proponents of public surveillance have adapted their strategies in order to counter concerns identified by resisters. First, they sought a neighbourhood that would lack an identifiable 'community' capable of generating resistance and then sought media attention for the 'crime problems' police faced in that area of the City. Then CCTV proponents hit on what is seen as a nearly unassailable justification: the 2010 Olympics.

It has been recently stated that "security initiatives implemented for an event, whether they be CCTV systems, public-private policing partnerships, legal changes, screening technologies, or informational databases, all have ways of being re-rationalized for other uses once their original application context has disappeared" (Boyle and Haggerty 2009: 19-20). A brief examination of the development, implementation and subsequent post-Olympics uses of surveillance systems in three former Olympic host cities – Torino, Sydney and Athens – offers support for Boyle and Haggerty's claim. As the examples of these cities suggests, such mega-events as the Olympics are "consciously leveraged as developmental opportunities for long-term security legacies, providing the justification and finances for security and surveillance surges that are intended to leave an infrastructure of urban surveillance" (ibid: 25).

With respect to Vancouver's hosting of the 2010 Olympics, the Games represent a near- perfect trump card in the City's ongoing battle over public surveillance. As anti-surveillance advocates are all too aware, public security is viewed as necessary to the smooth functioning of large-scale events, and public support for such security is not likely to be dissuaded by fears as to the use of such systems pre-, during or post-event. Once public CCTV systems are in place, it becomes relatively easy to

justify their continued use on the grounds that the public has already come to accept the loss of privacy within surveilled spaces and that their removal would represent a significant waste of tax payer dollars, among other foreseeable arguments. Indeed, the need for such justifications may even become moot following the introduction of 'test' CCTV systems under the provincial government's new plans for addressing 'crime control.' In short, despite the best efforts of anti-surveillance advocates, it appears that a permanent system of public surveillance system in Vancouver is a foregone conclusion.

Camera Surveillance in Ottawa Taxicabs: A Case Study

Kevin Walby and Aaron Doyle

Introduction: Cab Driving and Camera Surveillance

Cab cameras have been highly touted by taxi licensing boards and surveillance technology companies as providing greater safety for drivers. In this section of the report, we discuss the evidence available so far on the effectiveness of these cameras, discuss some exploratory interviews with drivers about the potential costs and benefits of the cameras and also examine an example of the process by which cab cameras have come to be implemented (in the city of Ottawa). We have two key conclusions: first, the evidence about the effectiveness about the cameras is limited at this time. Second, it is important to ensure a thorough process of consultation takes place among key stakeholders before implementing cab cameras.

According to 2006 figures from Statistics Canada, there are 47,185 Canadians who work in the taxi, limousine and chauffeur industry. More than 38,000 of these people drive taxi. While the public may think of taxi work as simply driving around in a car all day, it is one of the most risky occupations for criminal victimization. Drivers are highly vulnerable to assault and robbery as they are awkwardly immobile in the front seat of the taxi with their back to the passengers. When making decisions about whom to pick up, drivers must quickly assess passengers by their trustworthiness (Hamill and Gambetta 2006; Toiskallio 1998). The driver must evaluate what the passenger says and does based on whether these words and gestures signal a person who is risky (Gambetta and Hamill 2005). Picking up a 'bad fare' can result in violence or even death. A study by Stenning (1996) found Canadian taxi drivers are victimized twenty times more than the average citizen. Taxi drivers face occupational homicide at a rate four times higher than police. Eighty five percent of drivers in Stenning's study had experienced some form of victimization other than fare jumping[63]. One third had been robbed. Fifteen percent report a weapon being used against them.

Gilbert's (2005) research on taxi driving in the USA suggests the occupational homicide rate for taxi drivers is actually six times higher than that of police. One report from the National Institute of Occupational Safety and Health (1996) suggests that taxi drivers in the USA face an occupational homicide rate sixty times higher than the national average. Elzinga (1996) found similar patterns in the Netherlands, showing that likelihood of victimization for taxi drivers increases with city size and frequency of night shift work. Many factors explain these high levels of driver victimization: for example, working alone, working in a confined space dealing with a continual turnover of strangers, handling cash, pressure to pick up fares to cover costs, having to drive passengers to dimly lit and out of the way

[63] "Fare jumping" refers to when a customer takes a ride but then flees the cab without paying.

places, and working at night. Seventy five percent of taxi homicides occur at night (Knestaunt 1997). Ninety five percent of robberies and eighty nine percent of assaults occur at night (Seattle Taxi Report 2004). It is difficult to know whether these figures are deflated since police do not always identify victims as cab drivers. Sometimes two or more crimes are recorded under one category. Taxi drivers do not often report victimization because they feel the police will do nothing. The time it takes to file a complaint is time off the road, which means less income.

Most existing research regarding taxi driver victimization, however, was conducted before surveillance cameras became commonplace in taxis. In cabs everywhere from Little Rock to San Francisco, from Winnipeg to New York, industry representatives are pursuing cab cameras with the idea of trying to provide safety to drivers and security to customers. These cameras record a series of images, usually one per second, which are accessible after an incident. In North American cities, cameras have been used in cabs since 1997. Having surveillance cameras in taxi cabs is not only a North American trend – cameras were installed in Beijing taxis before the 2008 summer Olympics. Some cities start out permitting but not mandating cab cameras; others adopt cameras for the whole fleet straight away, making them mandatory for all licensed taxis. Some cab company owners adopt cameras to attract drivers to their fleet. Not any camera will do, however. Software must be compatible with police computers. Hardware must prevent unsolicited access to the images. Lighting can impact the image quality. Camera technology companies thus specialize in providing not just the technology but the training for installation, the software, the signage, and more.

Cab Camera Usage in Canada

Cab cameras are operational or being pursued in many Canadian cities. In February of 2005, VerifEye Technologies installed seven hundred cab cameras in North Delta, British Columbia. The Vancouver Taxi Association installed Honeywell FareView and VerifEye cameras in over five hundred taxis in 2006. Eight Vancouver drivers had been killed in the previous twelve years. A Report to the Minister of Transportation and Highways (1999) had called for cab cameras years earlier. As of March 31, 2009, all taxicabs in Victoria and surrounding area must have a camera. The two largest cab companies in Prince George use cameras, as do the two largest cab companies in Williams Lake. The camera contracts in Victoria, Prince George and Williams Lake are with VerifEye. Cabs in British Columbia are subject to province-wide regulation, whereas it is more common elsewhere in Canada for municipalities to regulate such matters. In particular, this helps explain the widespread adoption of cab cameras in the province of British Columbia (Passenger Transportation Board ruling 2008).

In Saskatoon, United Blueline decided to mount digital cameras in one hundred and fifteen cabs in July 2008. Gary Dickson, Saskatchewan's Information and Privacy Commissioner, questioned the initiative. According to the City Treasurer's office,

there were no cab cameras in Saskatoon as of March 2009. There has been discussion regarding whether shields between the driver and the passenger should be mandatory - it has been left to individual cab owners to decide. In January 2008, cab drivers in Edmonton faced public complaints (Diotee 2008) regarding poor service and not being on the road enough at night. Edmonton taxi-drivers said more of them would be working if cameras and/or shields were installed for protection (Ruttan 2008). The Edmonton cab commission considered making shields and cameras mandatory in 2005 but faced resistance from cab officials concerning cost of installation. Drivers also believed the cameras would do little in the case of a serious attack: "Cameras are not going to stop our heads from being blown away," said one driver (Landry 2008). The Chief Livery Officer for the City of Edmonton, who makes decisions about certain kinds of property related to travel, said that, as of March 2009, cab cameras in Edmonton taxis are permitted but not mandated. There are only about fifteen cameras in Edmonton's fleet of approximately twelve hundred regular taxi cabs. All thirty-five of Edmonton's Accessible Taxi vehicles have mandated operational digital video recording devices. There have been no instances where the camera images were used to help solve a crime or similar incident. The City of Edmonton passed a regulation making it mandatory to have safety shields installed in all taxis by the end of May 2009.

Cabs in Mississauga, Ontario were mandated to install cameras as of October 2005. While Verifeye Technologies installed six hundred twenty cameras, about fifteen operators opted for the Honeywell Fairview cameras. The cost at that time was $850 per unit. The City of Mississauga is currently retraining all drivers for robbery prevention. In London, Ontario, the City Council's environment and transportation committee accepted a proposal to make cab cameras mandatory on 11 December 2007. "It's a good day for cabbies in London," said councilor Steven Orser, a former taxi driver, and "it's a bad day for the criminals that want to rob cabs" (Maloney 2007). London's Taxicab & Limousine Licensing by-law L-126-256 stated that each cab must be equipped with a fully operational security camera satisfactory to the City Clerk by 31 October 2009. Access to the information from the camera will be limited to the London Police Service for law enforcement purposes. However, at present, no camera technology has been approved, and no contract has been struck, because the City of London is without a manager of licensing.

Cab cameras have also been considered many times in Halifax, Nova Scotia. The Halifax Regional Municipality, Taxi and Limousine Advisory Committee consulted with Jerry Kozubal of the Manitoba Taxicab Board in March of 2006 about safety and surveillance issues, Mr. Kozubal being one of the foremost proponents of cab cameras in Canada (see below regarding the Winnipeg case). In the winter of 2006 the Halifax Taxi and Limousine Advisory Committee requested Mr. Gary Jollymore, member of the Halifax Taxi Drivers Association, to conduct a survey regarding cameras and shields in taxi cabs. Two hundred fourteen taxi drivers responded. Drivers suggested they did not want cameras or shields to be made mandatory, but would like financial assistance to cover the cost of the safety equipment/installation if a driver did decide to install a shield or camera (Halifax regional municipality, taxi

and limousine advisory committee minutes, May 11 2006). As of March 2009, the move to introduce cab cameras was still stalled in Halifax. The City of Moncton in New Brunswick has also considered cab cameras, but there is no planned date for installation.

Claims About Cab Cameras

There is a lack of independent research concerning cab camera surveillance. Yet there is no shortage of reports produced by taxi licensing boards and camera technology companies regarding the purported efficacy of cameras in reducing taxi driver victimization. There are three major claims about cab cameras made by the companies that sell them. The first claim is that cameras are useful before any potential incident, as a deterrent. The second claim is that cameras are useful during an incident – the driver can point out the camera to the assailant. The third claim is that cameras are useful after an incident, in apprehending and prosecuting attackers and thieves.

Though there has never been a definitive study published, many claims have been made about the deterrence effect that cab cameras can have. One set of figures concerning reduction of victimization due to cab cameras come from Winnipeg, Manitoba. The murder of driver Pritam Deol on 17 July 2001 led to a campaign to make shields and cameras mandatory. Winnipeg Police Service crime statistics indicate that there were twenty fewer reported taxicab robberies in 2002 compared to 2001 – a reduction of seventy one percent. Winnipeg Police Service crime statistics for 2003 indicate a further eight percent reduction in taxicab robberies. Meanwhile, during 2003, reported crime in Winnipeg actually increased by ten percent: "although crime in general has increased in Winnipeg and other major cities in Canada, taxicab crime and taxicab driver risk has been reduced significantly due to the use of the in-cab camera" (Harries and Kozubal 2004). Winnipeg police also reported an increase in arrest rates with respect to taxicab robberies and assaults, the arrest rate being thirty five percent in 2001 and sixty six percent in 2003, after camera installation. Over eighty six percent of Winnipeg taxicab drivers reported in a survey that they felt much safer because of the cab camera. The Manitoba Ombudsman found the cameras and police protocol for accessing stored information did not violate privacy legislation.

While violence against cab drivers is a reality in all cities, not all cab drivers favour camera installation. Drivers say they can still be robbed outside the car or at the driver's window in the camera's blind spot. The Cab Drivers Welfare Association of Hamilton formed in January of 2008 under the banner 'shields not cameras', referring to plastic partitions that can be used to prevent attacks. Though shields prevent through-the-seat stabbings, passengers can still reach around the shield unless it is a full partition. But the full partition prevents drivers from communicating with passengers; shields were rejected for this reason in Vancouver because drivers argued such partitions are not "tourist friendly" (Seattle Taxi

Report 2004) and limit the ability of drivers to earn the tips, which are a key part of their income. An intense debate about the benefits and drawbacks of cab cameras played out in Windsor, Ontario, in the summer of 2008, with the Windsor Licensing Commission arguing that cameras prevent violent attacks and independent cab drivers arguing instead that cameras would increase job stress in various ways. A Windsor cab driver said he would resist camera installation: "I'm not putting one in…If someone is going to attack me or rob me, the camera just gives them another job to do -- get rid of the camera" (Puzic 2008).

While it is an open question whether cab customers prefer or oppose the cameras, one survey by Hempel and Töpfer (2004) in Norway found that forty seven percent of Oslo taxi passengers thought camera surveillance was a good thing, while twenty five percent were neutral and twenty eight percent thought it was a bad thing. Public opinion concerning whether camera surveillance is a good or bad thing in a particular space may depend on how much privacy is expected in that space to begin with.

Cab camera companies work hard at selling surveillance technology to municipalities and taxi licensing boards. For example, VerifEye, responsible for cameras in over 45,000 taxis in seventy cities and twenty countries, is a skilled marketer of its cameras. VerifEye is good at selling the idea of surveillance as necessity, and is the company that provided the cameras for cabs in Ottawa. Below we discuss the process of implementing the cameras in Ottawa as it offers some insights concerning what constitutes a thorough consultation process.

Studies show taxi drivers are a tightly knit group and taxi work involves a high level of worker solidarity (Hoffman 2006; Mathew 2005). This solidarity amongst cab drivers emerged front-and-center in debates concerning surveillance cameras in Ottawa cabs. In 2007-2008, the City of Ottawa proposed to install cameras in Ottawa taxis, at the drivers' expense. Taxi drivers refused installation, and staged protests at City Hall to demonstrate their frustration. Did the drivers feel the cameras would violate their privacy or the privacy of their customers? Not so. In fact, various taxi driver unions in Ottawa had been calling for cameras since 1997. Cab drivers in Ottawa are not overwhelmingly for or against camera surveillance in their vehicles. Some cab drivers we spoke to describe the cameras as useless (eg. 'real' thieves know how to find the blind spots) while other drivers argue that cameras protect them against claims by passengers regarding sexual assault. The Ottawa cab camera protests instead erupted simply over the process through which the particular cameras were selected and purchased. It seems from this example that worker perceptions of autonomy, control over work conditions and control over decision-making about technology is key in such situations. In other words, it is very important to consult adequately with the drivers before any decision is made with regard to implementing camera surveillance in taxicabs.

At this point we should explain how we gathered our information. We interviewed 31 female and male taxi drivers in Ottawa, as well as Toronto and Winnipeg as part

of a larger research project on risk and work. Twelve of the drivers were from Ottawa, four of the drivers were from Toronto, and fifteen of the drivers were from Winnipeg. Sixteen of the drivers were male, and fifteen of the drivers were women. Our interviews feature a very high proportion of women cab drivers, as women constitute less than five percent of the total number of taxi drivers in North America, but we were interested in their experience in particular as part of the larger study. However, as the concern is sometimes expressed that taxi driving is particularly unsafe for women, it may be appropriate to pay particular attention to the views of women drivers in a study of a taxi security measure. Nevertheless, because of the nature of the sample, our interviews should thus be treated as exploratory, rather than as a survey representing the views of all drivers.

In Ottawa, interviewees were contacted through the taxi union as well as through a local eatery where many of the male drivers eat lunch. In Winnipeg, the interviewees were contacted through the taxi licensing board. Interviews typically lasted between 40-70 minutes. Taxi drivers are a tough group to interview given that time off the road costs them money. The first author attended two days of protest by taxi drivers at Ottawa City Hall in February of 2008 and made field notes. We have also collected newspaper articles concerning taxi drivers and victimization as well as cabs and camera surveillance. Finally, with a more acute focus on the Ottawa case, we filed an access to information request with the City of Ottawa concerning their correspondence with the VerifEye cab camera company. Several of the requested documents were redacted under the Municipal Freedom of Information and Protection of Privacy Act for the following reasons: "prejudices significantly the competitive position or interferes significantly with contractual or other negotiations of a person, group of persons, or organization; could reasonably be expected to be injurious to the financial interests of the City; could reasonably be expected to prejudice the economic interests of an institution," and a variety of other stated reasons.

Cab Drivers' Views on Camera Surveillance

Taxi drivers have numerous opinions when it comes to cab cameras. A number of drivers say they use the cameras to deter customers from engaging in rowdy behaviour. Discussing tactics she uses to manage customer behaviour, a female taxi driver from Ottawa said "the younger generation, they would ask, 'Is that a camera?' And I would say, 'What do you think?' Just to keep them on their guard". The cameras are sometimes used as a tool for taxi drivers in other ways. Commenting on the prevalence of fare jumping and robbery in Winnipeg, a female taxi driver from that city felt "since we got the cameras, people don't stiff me anymore like, you know, ride without paying". Cameras were preferred over shields by most people in the industry, the drivers said, since shields do not provide much protection and decrease the ability of the drivers to keep an eye on the customer or engage them in conversation. While some drivers feel the camera is a deterrent, others feel it is only useful for establishing a list of suspects in case of assault or robbery. "Shields don't

really do nothing and they never really will do anything. I think the camera was the best instrument…if something's going to happen it's still going to happen, but at least the odds are that they're going to catch the guys," said another female driver from Winnipeg. In May of 2006, for instance, a Toronto cab driver was stabbed to death despite the cab being equipped with a camera. Jonathan Forder, the suspect, was eventually caught in Vancouver.

Not all cab cameras are equally sophisticated. Some cameras provide only grainy images, while others provide a direct, digital feed to the cab company. The "fishbowl" perspective of some cameras can distort the image. People who try to rob cab drivers may be aware of ways to work in the camera blind spots, although others may not understand the technology. For example, a male Toronto taxi driver who had been using cameras in his taxi for almost a decade told us that two thieves "saw the camera on the inside window, well they smashed it down but what they don't realize is that's only the lens. It's digital. It goes right into a computer box so here we've got pictures of them smashing the camera lens". This same driver had installed several private cameras on his car:

> The reason I have the external camera is I said in my own mind, if I'm going to be robbed where am I going to be robbed from? I'm going to be robbed from the backseat, usually from the back passenger side or if they don't rob me from there then they're going to rob me from outside. If they're going to rob me from outside where are they going to approach? They have to approach the driver side. So what I do is if I'm out at night and somebody approaches the driver side, all I got to do is either manually activate the camera by pushing a button or just push my meter on.

Whereas some taxi drivers feel the cameras provide more safety, other drivers feel the cameras cannot deter real violence. In the words of another female taxi driver from Winnipeg, "if somebody is really crazy on drugs or wants to do something stupid he doesn't care if the camera is taking his picture". Drivers are also concerned with the financial costs of cameras, which are on average about $1,000 regardless of the camera company (more details on the cost of Ottawa cameras are discussed below). Drivers always end up shouldering a large part of this cost. One male taxi driver from Ottawa, with sixteen years of experience, said:

> The cost is on your plate, you have no choice if it's mandatory you have to pay, which is too bad. If it was being subsidized or…if there was a plan where you didn't have to pay it, if you had to pay a certain percentage and the government or the city would pay a portion that would be a good thing, but to pay it all on your own it's a bad thing.

Often the choice to install cameras in cabs is not up to individual drivers, but is a matter decided upon by unions, taxi regulation boards, and municipal governments, as in the Ottawa case. Even though the Ottawa taxi drivers' union had been asking for cameras for over a decade, in 2007 the City of Ottawa pursued cameras without consulting the union about what technology and what set of costs best suited

drivers. In response, Ottawa drivers mobilized opposition around the issues of accountability, cost, and privacy.

Ottawa Cab Cameras: The Story So Far

As with other types of surveillance cameras discussed elsewhere in this report, the push to introduce surveillance cameras into taxis often follows highly publicized crimes. The first call for cameras in Ottawa cabs came in 1997. Three drivers from BlueLine Taxi were robbed in the Byward Market late on a Saturday night in July 1997. The drivers were given fake addresses, and after a few blocks the suspects demanded money at knifepoint (Rogers 1997). Drivers proposed a surveillance system that would have included satellite tracking, a panic button activated camera, and an overhead video screen displaying advertising. The hope was that the advertising would pay for the cameras. This was a union-led drive for cameras. Drivers preferred this proposal over the provision of safety shields, which were available in their contract, since these shields prevent communication with customers, important for generating tips, and do not prevent attacks from behind. Marc Andre Way, general manager of Capital Taxi, said at the time he was skeptical of the cameras and also worried whether customers would appreciate the violation of privacy.

At this point we should provide some background on the particular cameras in question in the Ottawa case. Gerald Manley of Toronto installed a small camera in his taxi in 1997 – the first in North America. One year later, cameras were in more than 500 cabs worldwide in countries including the United States, Australia, New Zealand, the United Kingdom and Mexico. The developer of that cab camera technology was the Toronto-based VerifEye Inc. The VerifEye technology was innovative in that the camera required no spool of film – all images were stored digitally in a small controller unit separate from the camera inside the vehicle, downloadable upon request. VerifEye technology includes the Taxicam Model 1000, equipped with an infrared illuminator, which can see in the dark even when a bright light is directed at it. The company's cameras are Microsoft Windows compatible so the images can be stored and transferred in standard bitmap format. Proprietary image transfer protocol is meant to prevent unauthorized access. VerifEye argued that since cameras were everywhere else – in banks, corner stores, etc. – having cameras in cabs did not upset one's reasonable expectation of privacy (van Straaten 1998). The camera can be 'triggered' into recording when a door is opened, a button is pressed or the meter starts running. There is also a G-trigger option, which is a sensor that triggers the camera when the car moves or stops abruptly. The G-trigger became contentious when the City of Ottawa proposed it for the city's cabs because drivers believed this technology could be used to spy on them and control their work. Even though municipalities, licensing boards and drivers themselves often desire camera implementation, the entrepreneurial drive of VerifEye also seems to play an important role in the process. VerifEye takes a proactive approach to

marketing, focusing on municipal governments and licensing boards that set taxi regulations.

On New Year's of 2000, two taxi drivers were murdered in Toronto, and there was a push for cameras to be installed in all cars. Following in the footsteps of Toronto, the Ottawa BlueLine drivers' union, Ottawa's largest taxicab drivers union at the time, called on the city to require cameras in taxis. Stabbings of taxi drivers in 2004, in Cornwall, prompted Ottawa's taxi drivers to press again for safety/security initiatives, including cameras. At this time, there was an amalgamation of disparate Ottawa taxi unions into Local 1688 of the Canadian Auto Workers Union. In November 2002, Toronto police for the first time posted photos from cab cameras on the Toronto Crime Stoppers Web site, part of their "Rob a Cab - You will be Nabbed" program.

In 2005, City of Ottawa officials and BlueLine Taxi proposed cameras and global positioning system (GPS) tracking. While drivers agreed with the cameras, they thought the GPS system was a tactic for the City and the company to keep track of them, which would be an invasion of drivers' privacy according to the union (Weeks 2005a). Mr. Hanif Patni, the president and chief executive of Coventry Connection, Ottawa's largest cab company with 1,500 drivers, said GPS would be used mainly when drivers encountered some trouble. The cost of each camera was estimated at $850, while the cost to drivers for GPS was estimated at over $2,000[64]. A surcharge and fare increase was proposed to help taxi drivers cover their costs for camera installation. The City's community services committee moved for ratification on 5 November 2005, approving the City's Taxi By-Law (No 2005-481). March 1st 2008 was set as an installation deadline for the cameras. Debates about the cameras took place at the same time Edmonton taxi driver Hassan Mohamud Yussuf, 41, was found dead in the trunk of his Yellow Cab in July of 2005 (Kent 2005) – a grim reminder of the dangers taxi drivers face.

Calls for cameras do not only come from taxi unions or taxi licensing boards. Sarah McCarthy died 27 November 2005 in Ottawa, after being dragged more than a kilometre by a taxi cab. Sarah and some of her family members had been drinking,

[64] At the same time that the taxi cab cameras were proposed, the City of Ottawa's by-law services department proposed a compulsory training scheme for new drivers and mandatory refresher courses for experienced drivers. Existing drivers would have to take sensitivity training every five years. Yusef Al Mezel, president of Canadian Auto Workers, Local 1688, responded to the City's proposal by arguing new drivers "will not get the training from a course or going to a school to get to learn how to serve the public, or how to deal with the passenger" (Weeks 2005b). Older drivers, it was argued, were already customer service professionals so did not require this additional training and assessment. A three-week course at Algonquin College in Ottawa was all the training required for certification. The City's training proposal was part of a larger project of harmonizing taxi by-laws. There were inconsistent by-laws remaining from the former municipalities that make up the amalgamated city of Ottawa (Weeks 2005c). One contentious issue at this time was the idea of collapsing the three-zone taxi system into a single zone. Taxi drivers were only licensed to work in one zone, and could not work across zones.

they tried to get into a cab, and the cab driver did not feel comfortable with the conduct of the potential customers. Sarah somehow became stuck under the vehicle. The police and the Crown Attorney jointly determined that McCarthy's death was an accident, and there was not enough evidence to lay charges against the driver. Demanding an inquest into her death, McCarthy's family requested that cameras and GPS units become mandatory for Ottawa taxis (Proudfoot 2006). "This is not just for Sarah, but to help protect cab drivers and the whole industry from being victimized" said McCarthy's uncle. The family of Sarah McCarthy came to Ottawa City Hall 19 April 2006 to urge the taxi business to bring in greater safety measures, including cab cameras. McCarthy's aunt also demanded vision checks, annual criminal record checks and drug testing for drivers, and driver training (Dare 2006). McCarthy's parents wrote to the Ottawa Citizen and argued for the importance of "global positioning systems with an emergency call button; cameras and audio recording; a silent flashing 'call police' alert in the taxis' back, and rear sensors on all taxi vans…Sarah's death was preventable" (Pam and Sean McCarthy 2007). This unfortunate accident provided a further impetus for all stakeholders to pursue cab cameras in Ottawa.

In order to understand the events, it is necessary to examine how the City came to purchase cameras from VerifEye. Before any correspondence with the taxi union, two cab camera companies actually came to Ottawa in the summer of 2007 for equipment demonstrations. One of these was VerifEye; the other was Eagle Eye Technology. The City sent the invitation for an in-vehicle camera demonstration on 18 May 2007. The City decided upon VerifEye because the company provided an installer training plan. VerifEye was alerted on 14 September 2007 that they had been awarded the contract. VerifEye questioned whether the fifteen-day image retention period was necessary, and the City responded "yes" without explaining the justification for this. The issue of image retention eventually became a major stumbling block in negotiations with the taxi union.

Orders for one thousand one hundred and six VerifEye camera units and G-triggers were being processed on 26 October 2007. The City was already trying to schedule the training for camera installation technicians on 6 November 2007. VerifEye's camera system has a set of coloured lights that indicate the status of the camera, so the training would be for technicians who would install the cameras but also cab company owners to relay to drivers. On 22 November 2007, Mr. Walker of VerifEye wrote in an email to the City "experience has taught us that educating the driver's on the correct operation of the cameras is very important…we find that drivers are generally more receptive to the cameras if they can be assured that the images will only be downloaded in the event of a 'serious incident' and only for purposes of a criminal investigation". All of this indicates that the City and VerifEye had no intentions of conducting consultations with Ottawa taxi drivers as it regards the type and price of camera. The approach instead was to make a deal and then enlist support from the drivers after the fact.

Drivers, municipal politicians and other stakeholders seemed to be in support of the introduction of cab cameras in Ottawa in 2007. "The taxi environment is a very dangerous environment, for drivers working late at night especially," said Hanif Patni, president and chief executive of Coventry Connections, which operates BlueLine and Capital cabs (DeRosa 2007). Ottawa Councillor Alex Cullen said "I'm sorry to say it has come to this, that this is what needs to be done to protect taxi cab drivers, but it appears to be the trend in the world we live in". Days before, an Ottawa cab driver was robbed at gunpoint and forced into the trunk of his cab. On 5 July 2007, a city committee voted to require all Ottawa taxis to have cameras, emergency buttons, and the other safety measures recommended after an inquest into the death of Sarah McCarthy (Rupert 2007). Recommendations included increased training for drivers in conflict management, equipping all cabs with GPS, installing emergency buttons that activate cameras, and flashers outside signaling a need for police assistance. Whereas earlier camera equipment cost estimates were closer to $1,000, the new cameras required to comply with the recommendations would reportedly cost $3,000.

Though Ottawa cab drivers had long sought after cab cameras, they had not sought the G-trigger technology (which switches the cameras on and off with any abrupt starts or stops) since this technology puts control over monitoring more in the hands of taxicab companies. With the G-trigger technology, drivers felt they would not know when they were being monitored since they would lack control over when the camera became operational. This animosity over the G-trigger technology and the associated costs erupted into two days of protest at City Hall in February of 2008. When it came time for the by-law requiring cameras to be considered by City Council, almost 600 taxi drivers crowded City Hall to protest. "I've been doing this now for about 24 years and I haven't seen our people so angry before," said Mohamad Alsadi, a national representative of the CAW union. "I don't believe it is about driver safety," said Mr. Alsadi, "I believe it is going to be used as a witch-hunt and they're going to use it to discipline drivers for minor infractions" (Bird 2008).

Rather than picking up fares on the morning of 13 February 2008, many Ottawa taxi drivers protested in a convoy snaking from Coventry Road to City Hall. Coventry Connections, which operates the two largest cab companies in Ottawa, supported the union and their claims that this cab camera surveillance package was not the one for Ottawa drivers. President and chief executive of Coventry Connections Hanif Patni argued the price of the cameras was more expensive than promised, and that these costs would not be covered adequately by the proposed fare increase. In a statement during the council meeting, Ottawa Mayor Larry O'Brien put customer security ahead of driver safety. This comment "prompted outrage and shouts of 'f---you' as about 60 drivers filed out of council chambers before the 16 to seven vote in favour of the cameras was taken" (Rupert 2008). O'Brien's remarks were criticized by taxi union leader Yusef Al Mezel, who accused Mr. O'Brien of treating cab drivers like second-class citizens during a heated exchange outside council chambers. Mr. Al Mezel said "We are hardworking taxpayers, and they are treating us like criminals". Another reason that the union dug in their heels was that taxi drivers had faced

forty by-law modifications between 2004 and 2008, making for what they saw as an undue amount of work regulation.

There were two central issues behind the protests. First, cab drivers were angry that the proposed expense of the cameras was growing while the proposed fare increase remained the same. At the protest, Mezel shouted to the crowd of drivers "They picked the most expensive camera, and we have to pay for it. This is unfair". In an interview, one male taxi driver from Ottawa said "the City always said about 200-300 bucks, now they say 1500 bucks". A key problem was that, as we discuss below, the City had already negotiated the type and cost of the camera to be installed without consulting drivers about what they preferred. Second, taxi drivers were concerned about the G-trigger component of the VerifEye camera system. G-trigger activates the camera when the driver makes a quick turn or stop – which happens all the time during a day or night of driving. Cab drivers felt they would be under surveillance more than they had bargained for. At the protest, one driver addressed the crowd:

> You see this blue box. This is a GPS enabled box, when you move your car, they will be tracking your every move, 24 hours a day. See this cable. We learned about this in the meeting today. The city wants to put this in all your cars. It is a G-trigger. When you move your car it will trigger the GPS and the cameras and you will be under total surveillance. They want to put this in your cars. Did they ask you? Did they ask you if you want to pay for this? First it is the cameras, then this G-trigger, what will it be next, the cars, the tires, the meter…they want to own it all and make us pay for it. [Someone in the crowd yells 'it looks like a noose'].

Taxi drivers had also heard rumours that the City had originally purchased the cameras for the buses. In November 2007, OC Transpo did run a pilot camera project in two hundred sixty five buses. According to one Ottawa driver, "the bus is long and the image was not clear so they transferred [the cameras] to the taxis". This bus camera contract was not with VerifEye, as many had suspected.[65]

[65] City of Ottawa Transit Services' planned a six month trial of event-triggered surveillance cameras for two hundred sixty five buses in November 2007. "A more viable option" than cameras was eventually settled upon, said Nancy Schepers in a report to the Transit Committee 13 November 2007, but not before the City of Ottawa spent at least $250,000 on a Drivecam pilot program for six months. With expenses for wireless infrastructure and technician training, the cost was closer to $350,000. The estimated full cost of equipping all OC Transpo buses with cameras would be $2.65 million plus operating costs. Schepers' report stated that the initiative was loosely connected to Transport Canada's anti-terrorism funding initiative after the Madrid train bombings, though funds were not available at this time. The funds were thus drawn from the 2007 and 2008 capital budgets. Schepers' rationales for the cameras were "to detect terrorist behavior," "intervene in other undesirable behavior…and a variety of public order transgression including drunkenness". The document also states "cautious people migrate to areas covered by cameras. Their caution and vigilance reduce risk".

Ottawa taxi drivers threatened to strike if city officials did not respond to their demands. Drivers felt the G-trigger technology removed driver control over when the camera became operational. Drivers wanted a camera that became operational only when the switch was flipped or the car door was opened. This position was reached after an emergency union meeting 13 February 2008. "We're going to ask for a simple camera without any features that spy on the driver," said Yusef Al Mezel, "we will also ask for those pictures to be downloaded only by the police, and only if there are criminal charges" (Rupert and Bird 2008). One cab driver at the protest, who had been assaulted and robbed the day before, argued "the camera is not enough to protect me". The position of the drivers was that the cameras help keep drivers safe, but, if the cameras would be installed it should be on terms set by the taxi union. The City was criticized for not cracking down on so-called 'bandit cabs,' which were unlicensed and uninsured[66]. Deputy city manager Steve Kanellakos was also dealing with claims that the City had not consulted the Ontario Office of the Information & Privacy Commissioner about camera implementation.

During February 2008, three Ottawa cab drivers were robbed. All three of the robberies occurred at night. Mohamad Alsadi, the national representative for the Canadian Auto Workers, expressed an interest in meeting with Ottawa Police Chief Vernon White about the violence. When asked for a comment, Chief White argued "I think cameras are a huge deterrent to people committing robberies" (Seymour 2008). Alsadi maintained "we're not confident the camera alone is going to do the trick," citing driver apprehension about spying. Largely left out of the debate between the union and the City were public concerns regarding privacy for passengers. One opinion piece in the Ottawa Citizen did lament "I would not want to have a camera recording my conversations, facial expressions or mannerisms while I was riding in a taxi. It is not only an invasion of privacy for the taxi driver but also for passengers. Ottawa council members might have given thought to this issue, but in all likelihood, they have their own agenda" (LaRocque 2008).

Due to pressure from the union, and due to the fact they pushed forward with the VerifEye contract before consulting the taxi union, the City of Ottawa had to strike a bargain with all stakeholders on May 13 2008. The City agreed with all of the union's demands and thus the process resulted in substantial costs to the City. VerifEye reduced its price per unit to $1185. The City reduced the cost of the cameras to drivers from $1185 to $700 per unit, meaning the City was on the hook for $485 per unit. The $700 figure does not account for equipment maintenance and replacement, absorbed by taxi drivers themselves over time. The G-trigger was abandoned, but the door trigger, taximeter trigger, and emergency button trigger were retained. In addition, the storage device was limited to one week worth of memory instead of two. The City agreed that cab camera pictures would only be downloadable by the police. Additional amendments to the Taxi By-Law included a ten percent surcharge on the drop rate of $3.30, even though the City acknowledged

[66] In September 2007, the City of Ottawa did issue fines in one hundred and twelve "illegal taxi-service" offences.

cabs were only eligible for a seven and a half percent surcharge. The taximeter rates also increased two cents per kilometer. VerifEye was paid in full, minus the costs of the G-trigger, which they absorbed.

The City, as they put it in one budget communiqué, "donated" $100,000 to itself to offset the shortfall by taking monies from "excess projected revenues". Plans to recuperate the funds included creating a $35 surcharge on a taxi driver and plate holder fees, increasing plate transfer fees, as well as introducing stiffer taxi broker license fees ($7,255 for brokers having one hundred or more cabs). Drivers had to install the camera before July 31st 2008; otherwise the unit cost would become $750. The City of Ottawa boasted that its per unit cost to taxi drivers was cheaper than in Windsor ($975), Toronto ($1,200) and Vancouver ($1,280). Notices concerning the collection of personal information were soon posted in all cabs.

Once the union was appeased, and the cameras had been shipped, the problems continued. In May 2008, Mr. Walker of VerifEye offered three free units to one cab company in charge of installation so to settle an issue the company had with the rate of pay for technicians responsible for camera installation. In July 2008, during the installation period, the union became concerned about health problems associated with the infrared component of the camera. Mr. Walker of VerifEye stressed that the exposure was "1000 times less than the guidelines" suggested was harmful. By August 2008, it became apparent that either the instructions for camera installation were faulty or the installers were poorly trained since the cameras were triggering when they should not have been, what Mr. Walker of VerifEye referred to as "triggering anomalies".

VerifEye has sold cab cameras in Toronto, Seattle, Windsor, Chicago, and elsewhere the world over. There are more than three thousand cabs with VerifEye cameras in Queensland, Australia. There are over twenty thousand VerifEye cameras in New York cabs, with this number expected to grow to thirty five thousand before 2010. While the contracts are lucrative, there are many cab camera competitors. For instance, based in Richmond, British Columbia, Digital Dispatch Systems Inc. offers very similar technology. Digital Dispatch claims that their camera system, which can be linked to GPS, stores more data. Vehicle and driver identification can be embedded into the file. There is an emergency upload feature drivers can use to send photos to the company in real-time, which can be forwarded on to police (Schick 2002). While VerifEye has almost identical technology, and either company can produce a similar technology once the other has introduced it, the field of selling surveillance is a competitive one. Every contract matters to whether the start-up surveillance technology company will flop or flourish.

As Skok and Baird argue (2005), emerging technology can provide a competitive advantage to cab company owners who seek to increase the size of their fleet. Yet there is only a short window of opportunity between the technology becoming economically viable and mainstream. It is in this short window where cab camera companies aim to make their money.

Conclusion

Few independent studies exist concerning cab cameras and violence against drivers. Based on a limited number of interviews with female and male taxi drivers in three Canadian cities, we can claim that some taxi drivers believe that cab cameras decrease the prevalence of robbery, fare jumping, and verbal abuse. Other drivers, however, feel cab cameras do nothing but provide an image of a suspect after victimization occurs. There are a few cases where, despite operational cameras being installed in the cab, an assailant fatally victimized a driver with a knife or gun. The video image only provided grounds for prosecution – it did not keep the driver alive.

Due to high levels of worker solidarity, taxi drivers mobilize quickly and effectively when faced with a decision made by municipal government that the taxi union disagrees with. With the case of cab cameras in Ottawa, taxi drivers sought to achieve the introduction of cameras on terms more favourable to themselves. Drivers did not want G-trigger technology. Drivers wanted reduced costs of installation and a fare increase that would help cover the expense. Privacy of customers was not an issue per se for drivers. Taxi licensing boards and cab camera companies also do not seem to think cab cameras constitute a violation of privacy for customers or drivers.

Entrepreneurial cab camera companies must sell cameras, but also *the idea of surveillance as a crime control tool*, which requires making claims about the effectiveness of the cameras for deterrence and the usefulness of footage in prosecutions. However, independent studies that support these claims are scarce. Our two reports for the Surveillance Camera Awareness Network demonstrate that cameras and other new surveillance measures tend to be implemented without appropriate consultation or adequate independent evaluation, which is demonstrated by the case of cab camera implementation in Ottawa. Our access to information data demonstrate that the City and VerifEye had no intentions of consulting Ottawa taxi drivers as it regards the type and price of camera before a decision was made. As the Ottawa example suggests, it is very important to conduct thorough consultations and fully involve stakeholders prior to decisions to implement such cameras.

Camera Surveillance in the Shopping City

Stéphane Leman-Langlois and Anne-Marie Pratte

Introduction

An ever increasing proportion of our daily activities are conducted in what has been termed "mass private" property, a hybrid space combining some of the characteristics typical of private property and some usually associated with public spaces. Mass private properties make extensive use of surveillance, and camera surveillance in particular; yet these surveillance practices have attracted less attention than that of public spaces. In this section, we look at surveillance practices within a large (200 shops) modern shopping mall located in downtown Montreal. Our objective is to compare camera surveillance to other forms of surveillance and other activities taking place in the "mass private space" of the shopping city.

Mass Private Property as Life Space

New surveillance opportunities and activities in mass private property settings do not encroach on our capacity to conduct our daily activities without being seen. As is the case with surveillance on the Internet, it is our daily activities that are conducted more and more in sites where surveillance is more intense. Though we can still make use of most public spaces where surveillance is low, we choose more and more to gather in shopping malls, in designer private gardens owned by office tower operators, in retail outlet lots and other "lifestyle," "big box" or "power" centres. Environmentally and gas-price conscious city dwellers and suburbanites alike may elect to live in private towns where apartment buildings, shops, restaurants, daycare centres, parks and other recreational areas merge into a single large complex. So-called "gated communities" are another example of this trend. In all these cases surveillance is not a lesser evil we learn to accept; it is a *feature* we look for. In short, whether by choice, by force or by chance, more and more of our lives are being led in settings – virtual and real – where surveillance capacities are *naturally* more developed.

The expansion of mass private property is the result of our increasing preference for managed, 'clean' and 'secure' spaces. We enjoy the sanitized and convenient atmosphere of the mall, where the weather is entirely predictable and the goods and services — and rest rooms — we may need are close by. New trends, including "mall walking" and social events and meetings, all held in various climate-controlled agoras, illustrate this rather well [67]. Competing malls now add zoos, amusement park-style rides, and even camp fires in order to draw visitors.

Aging populations can only intensify the trend, but demographics notwithstanding the rise of mass private property also has to do with the cultural background of the "risk society." In the risk society, risks must be identified and managed. From the

[67] For more on the various types of visitors found in shopping malls, see Bloch et al, 1994.

point of view of visitors, who see neither the practical methodologies of security nor the actual risk management practices local agents engage in, *symbols* of order become the key element for their evaluation of the premises. From this viewpoint, minutely ordered spaces appear infinitely more predictable — and safer — than the disorganized, irregular social and architectural mosaic of public spaces[68].

In the course of our research we have gathered data on many aspects of surveillance practices in mass private spaces. One rather conventional — indeed, unavoidable — of such practices is the use of camera surveillance, which is a very important aspect of everyday security work on the research site. Nearly every mass private property today is equipped with surveillance cameras, for many reasons, including requirements from insurance companies, their lower costs compared to human agents on the ground, and a general cultural trend towards the quest for technological solutions to various situations presented as security problems. Camera surveillance in mass private spaces cannot be conceived of as a security practice alone. It must be located in the mesh of cultural, political and administrative strings mentioned above. The conflicting goals and demands on camera surveillance in practice is best illustrated through a description of an actual surveillance site.

The Research Site

"Downtown Plaza" (a pseudonym) has a mix of major retailers, shops and restaurants on multiple levels totalling a little under 30 000m^2, in the heart of Montreal. Its two lower floors are connected to the underground city[69], and to a high traffic subway station. Because of this central position Downtown Plaza sees more than 200 000 visitors each day; on special occasions the number raises close to a million (800 000 during boxing day sales). The plaza is also connected to other nearby shopping centres on its two sides, and has its front entrance on busy St. Catherine street.

This area of the downtown core has low crime rates and is mostly frequented by office workers, tourists and shoppers. All housing in the area is extremely expensive and only available in luxury high-rise buildings. Being in a central position it also draws many out of town tourists and suburban families. In the winter it serves as an important link to the underground city and commuters outnumber shoppers during rush hour. Strangely the centre only opens at 10h00, which means that most shops and restaurants entirely miss the early rush hour traffic, with commuters walking through closed shops on their way to work.

Shops on the plaza offer goods and services in the middle of the price scale and attract young adults with disposable income. The site itself is structured with rectangular levels organized around a wide central mall reaching up to a glass roof.

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[68] Though of course there is a trend towards the micro management of public spaces as well, for instance through business improvement districts; see Bewley-Taylor, 2006 and Huey, 2007.
[69] The underground city comprises 32km of corridors and underground squares linking major buildings in the downtown core.

Other levels are visible to visitors walking near the edge of each floor. The central mall also has escalators and a glass elevator. Like most modern commercial spaces, Downtown Plaza is designed to maximize the proportion of the premises visitors are exposed to, in order to draw their attention to consumer goods and services available. Subway users who enter the front door are taken through dozens of shops and advertisements on their way to their train.

From the street the plaza advertizes its shopping opportunities inside but also a range of other events and activities such as festivals, exhibitions, its more than 30 restaurants and the fact that the subway system may be accessed by walking through the mall. Walkers by are also informed that free wi-fi (wireless internet) access is available inside and that they may lounge about and have coffee while surfing the web.

Private Security and Modes of Surveillance

The owners of Downtown Plaza have called on a private security contractor for surveillance and order maintenance but have put one of their own employees in charge of supervising the provided security staff. Under that system, Downtown Plaza can set the security staff priorities and intervention methods, while outside security personnel are tasked with implementation. This is a source of minor friction since the corporation and the contract security staff do not have the same perception of what security consists of or how it should be maintained. While Downtown Plaza management prefers a conciliatory, low-key approach to security issues, many security agents prefer a clearer antagonistic approach in which their authority predominates.

It has been noted elsewhere that the type of order that is sought in mass private spaces is not quite the same as that usually conceived of in relation to public spaces. Ordering public spaces is accomplished mostly through informal social controls effected by ordinary citizens, and by police when this is perceived as inadequate by a sufficiently powerful entity or alliance of entities (an individual, citizen groups, police, politicians, chambers of commerce, etc.). It generally consists of informal and formal sanctioning of immoral, dangerous or destructive conduct. By contrast, in private spaces order aims at maximizing consumption behaviours and protecting assets, a combination that Wakefield (2005) has termed the *governance* of mass private sites, encompassing scores of various missions — among which conventional security (the absence of danger) is far from the most important.

Loader (1999) has shown that the rise of private security in the 1980s and 1990s was the result, among other factors, of a consumer culture that increasingly presented security as a consumer good by industrial and state actors. In the shopping city, security is in fact one of the things being explicitly offered to visitors by mall operators. Though this is not the case in Downtown Plaza, many mall operators place their control room in plain view of visitors as a form of corporate advertisement that security is taken seriously — and also perhaps as a deterrent to would-be troublemakers. To date there is no empirical research that might

enlighten us on whether ostensible security is in fact directly material to consumers' selection of a particular site for their various activities.

Security Personnel Status and Functions

In the Downtown Plaza organisational structure, security personnel have low status, roughly on par with maintenance staff. Their pay rates reflect this, individual agents receiving $13 per hour of work, compared to $10 for maintenance staff. Maintenance personnel, however, benefit from relatively quick seniority pay raises, up to $15 per hour. By comparison, the most senior member of the security staff at the Plaza has worked at this site for 20 years and earns one extra dollar per hour. This low reward for seniority is one reason why, as is common in the private security sector, most employees do not see their current work as a career and are not likely to stay very long. Some have loftier goals of becoming police officers and others are simply discouraged by the extremely limited opportunities for upward mobility. This produces an extremely high turnover rate, typical of the private security industry, which in turn has equally typical consequences: 1) individuals are utterly replaceable and therefore continue to receive low pay; 2) whatever experience individuals garner is inevitably lost to the organisation as a whole; 3) there is neither sufficient time nor financial incentives to train new recruits beyond the basics; 4) the most capable employees are usually the ones leaving early for higher status jobs outside (e.g. the police). Interestingly, this high turnover rate characterizes not only low level employees but all staff, to the top of the short hierarchical ladder: over the last 20 years the Plaza's security chief has changed every two years, on average.

Despite, or because of their low organisational status, the local contingent of security agents is structured in a military-like hierarchy, complete with a military-sounding ranking system. The private security firm's top person on the site is called a "captain" and has "sergeants" under his orders. Sergeants make 40 cents more per hour than their subordinates, who are referred to as patrol agents. The captain is rarely on site and all operational tasks are performed by sergeants and patrol agents indifferently. By and large, the only difference in the daily tasks of sergeants and agents is that the former have the added responsibility or organizing shifts. All wear rather standard private security style uniforms but sergeants sport shoulder patches indicating their function as "supervisor."

In this group, both policing (usually in the form of a college education in policing programs), and military backgrounds are understood as highly relevant expertise and greatly impact an individual's social status. Among other things, higher responsibilities are given on the basis of this status rather than on seniority or experience.

Range of Activities (Staff)

On average days, the Plaza is patrolled by at least 3 security agents, plus one remaining in the control centre, where he can monitor camera feeds but also has other tasks. At night only two staff remain, one doing rounds on the floors and one in the control room. Both of these agents are under apparent surveillance

themselves: the one on the floor must follow programmed rounds and report at bar code stations in order to complete his patrols (see also Derby, this report). The control room is itself under video surveillance, a camera dome plainly visible, hanging from the ceiling. In practice, however, little surveillance of surveillants actually takes place and it is unclear whether recordings made in the control room are ever watched, by whom and for what purpose. Since our observations show that control room rules are routinely ignored, it is safe to assume that whatever surveillance takes place does not have concrete consequences for the staff. At the same time, those engaging in forbidden activities (e.g. using the computer for personal purposes) usually try to position themselves as to avoid the camera's gaze or to hide the computer screen.

Physical surveillance, through foot patrols, takes place in the publicly accessible mall, in the restricted areas between and behind shops, as well as around a large loading dock also serving three other buildings. Agents on control room duty frequently ask to change position with those on foot patrol duty, the latter being perceived as less boring and closer to the "action."

Camera Surveillance

The Plaza has a little under 100 cameras installed, the majority of which are static and pointed in fixed directions, seconded by a few more capable PTZ cameras. The feeds from the cameras are multiplexed towards a half dozen small video screens in the control room, four at a time, alternating every 3 seconds. Separate monitors are set up for closer analysis of a selected camera and for PTZ control if available. The selected image is also sent to the security chief's office, should s/he desire to monitor a situation. The feed from each camera is recorded on hard drives and kept for 2 weeks. Despite control room rules forbidding regular security personnel from watching recorded images, they commonly do so if they feel it is necessary.

Figure 4: rest room camera

The cameras have been installed inside the mall in order to cover most shop front entrances, elevator access points, escalators and underground passages towards other buildings or the subway system. Some cameras are aimed at the main entrances from the outside of the building and provide a view of the sidewalk around the city-block wide structure. Yet, despite the apparently extensive use of cameras, a substantial proportion of the 30 000m^2 of the Plaza remains out of view, for technological, architectural and marketing reasons (large billboards and special event materials hung in front of cameras, for instance). Plans are being made for a more advanced IP system with more cameras to be installed in the near future.

Every camera is housed in the usual semitransparent polycarbonate dome, hiding its angle of view. The only exceptions are the rest room cameras (see fig. 1) which, after litigation from patrons who felt the privacy was being invaded, have been made visible (see illustration). The new cameras are plainly visible from the door of the rest rooms and point to the common area directly in front of the entrance. Stalls and urinals remain out of view.

Objectives

As previously noted, the overall objective of mall security in the Plaza is the maintenance of an environment capable of maximising consumption behaviours. This has three facets. First and foremost, the environment is made of the 200 shops and restaurants that rent space in the mall and whose individual front entrances make up the overall aesthetic of the site. Because closed shops, with their gates and/or shutters down, are unsightly and unpleasant for visitors, the tenants' contracts stipulate that they must open and close with the mall's general opening hours (10:00 to 21:00). Consequently, one of the security service's main tasks is to make sure store owners respect this rule and actually open and close on time. At 10:00 and again at 21:00, cameras are trained on store fronts and verify that tenants are complying with Plaza management rules.

Second, the quality of the environment also depends on the overall good maintenance of the site, including the fast clean up of spills and the immediate emptying of full garbage bins. An important aspect of the video monitoring is the detection of such mishaps and the quick dispatch of maintenance crews. During lunch hour the 30 plus restaurant food court is closely watched for overloaded garbage bins.

Third, the environment is also made up of the people who enter the premises. Camera monitoring aims at keeping out three kinds of visitors; first, there are those who do not respect the rules of the mall, including rowdy groups, drunks and panhandlers. Second, categories of persons whom have been deemed "unfit" to be in the mall, such as the homeless, vagrants and drifters. When detected, members of these first two kinds of visitors are expelled from the premises as quickly as possible. Many repeat undesirables have had their photo taken and are now on a watch list posted on the wall near the monitoring equipment.

The final category is made up of those who actually commit crimes, mostly shoplifters, pickpockets and the rare violent aggressor. In general, if a crime is detected or reported it must be brought to the attention of the security chief, who then determines whether police should be called or if expulsion is sufficient. Sometimes, police are invited into the control room in order to conduct special operations against members of the last category. This is a mixed blessing for management, who see police action as both potentially deterrent for criminals but also rather more intense and brutal than the low-key approach they tend to prefer.

Practice

In practice, camera surveillance is diluted among a series of various tasks, with the majority having little to do with security — that of the employees of the mall, the visitors or the goods on sale. In addition to watching the monitors and the successive 3 second clips of video, 24 at a time, looking for delinquent tenants, drunks and overflowing bins, the agent is also responsible for managing a loading dock used by 4 large buildings, which involves recording the license plate number of each vehicle. He is also alerted to the use of many restricted or protected doors in the mall, among which are emergency exits and the room reserved for breastfeeding mothers. He is also likely to write activity reports and to engage in various conversations with people in the room — though the rules stipulate he must be alone.

In reality, average visitors are unlikely to be actually watched during any portion of their visit, simply because of the limited attention given to ordinary looking persons. By and large, the sea of middle-class looking visitors goes by undifferentiated and only self-identifying persons, through their dress or behaviour, stand out and are watched. They are sorted out and followed, and eventually expelled if deemed necessary.

That said, for the most part control room duties tend to give far more importance to the environment than to the visitors within. That is, in a way, the paradox of mass private property security: it draws in visitors by promising adequate, if not perfect security, through technology and other surveillance activities that are in fact targeted to environmental, symbolic forms of "order" (such as cleanliness) and not at all at security risks. At the same time, security risks are extremely low and the visible security measures are only appreciated because patrons have an exaggerated perception of their risk — based in part on the cleanliness of the premises. What is being produced is a theatre of security that is as artificial, and as disconnected from reality as the rest of the shopping city.

The Transfer and Use of Camera Surveillance Images: The Case of Crime Stoppers

Randy Lippert and Blair Wilkinson

This section explores how camera surveillance images[70]are used by police-supported Crime Stoppers programs through a case study of Crime Stoppers advertisements[71] in Ontario. Privacy and related implications of the use of surveillance images are discussed, in particular the transfer of images from private surveillance sources to police and then to Crime Stoppers website advertisements and/or the video sharing website 'YouTube'[72]. This section also discusses who benefits from the transfer and use of camera surveillance images, and who may be harmed by this practice.

Crime Stoppers Programs

Crime Stoppers is arguably the most well-known and established police-supported crime prevention program in Canada, the United States, and increasingly globally. The program now operates in 20 countries including India, the Netherlands, and South Africa (Crime Stoppers International 2009). In North America each program covers a specific geographical area, such as a city or county. In Canada there are more than one hundred such programs and more than one thousand in the U.S. (Crime Stoppers International 2009). No other crime prevention program is as prevalent in North American cities and towns than Crime Stoppers. Symbolic of this program's prominence and widespread acceptance by local governments and businesses, motorists on major roadways entering Ontario cities and towns are likely to encounter a near billboard-size 'Crime Stoppers' sign, with a toll free telephone number at its base to encourage 'tips'. Crime Stoppers also has expanded into programs specifically designed for school children, campuses and seniors (Lippert 2002).

Crime Stoppers purports to be a "partnership of the public, police and media that provides the community with a proactive program for people to assist the police anonymously to solve crimes" (Toronto Crime Stoppers 2009). Significantly, Crime

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[70] We use 'image' to refer to both CCTV video footage and stills.

[71] We use 'advertisements' rather than, for example, 'news releases' or 'appeals' since there is evidence (see Carriere and Ericson 1989; Lippert 2002) their intent is often as much about promoting or marketing Crime Stoppers (and its sponsors) in an attempt to generate 'tips' generally or about certain types of crime (e.g., drug- related crime) than to generate tactical information to solve a particular crime or capture specific criminals depicted. To illustrate this point, only 3 of the 130 advertisements in this study claimed a suspect had been apprehended.

[72] YouTube appeared in 2005 partially as a result of a shift in video technology comprising inexpensive camcorders (i.e. cell phone cameras) and easier to use video software coupled with the rapid proliferation of the availability of high-speed Internet connections and dramatically increased memory storage capacity.

Stoppers representatives consistently assert the program is independent of particular police services: "Ours, like other programs, is not a police program . . . It is a public program that is run by a Board of Directors. That is ordinary concerned citizens who live in York Region and volunteer their time" (Crime Stoppers of York Region 2009).

Crime Stoppers seeks to generate information about crime by advertising through various media outlets and formats, including radio, print, and television. These marketing efforts are designed to encourage persons to anonymously submit information (a 'tip') about criminal activity to Crime Stoppers, where it is screened and, if deemed appropriate, passed to police. If information is provided that leads to an arrest or seizure of property or illegal drugs, the 'tipster' is offered a monetary reward (Lippert 2002). From the inception of these programs, advertisements have often adopted the form of a 'Crime of the Week'. Such formats tend to consist of a narrative describing a particular incident of criminal activity. By 2000 such advertisements were appearing on local Crime Stoppers websites (Lippert 2002) and, more recently, camera surveillance images (primarily 'stills') seem to be a regular feature within them. Camera surveillance footage is also being transferred by Crime Stoppers to websites such as YouTube for the same purpose. Below is a typical example of the former:

> **Locker Theft and Frauds**
> February 7, 2008
>
> The Ottawa Police Service needs your help in the investigation of a theft from a locker in an East End gym and the subsequent fraudulent use of the victim's credit card.
>
> On December 11th 2007 at about 1pm the victim attended the Newbody Dimensions Gym located at 1800 St Laurent Blvd. She entered the woman's locker room and she began to place her belongings in an empty locker. While she was doing this a female in the locker room placed herself directly behind the victim and began to stare at her. The victim feeling uncomfortable placed her belongings in the locker and she walked to the mirrors to comb her hair. Again the female suspect followed the victim and this led to the victim leaving the locker room.
>
> When the victim returned to her locker, she was unable to open her combination lock. After the gym staff cut the lock the victim noticed that her purse was missing from the locker.
>
> A subsequent police investigation revealed that the female suspect was not a registered member of the gym and that she had purchased a day pass to work out. The victim's credit card was used in several stores near the gym shortly after the theft.

> Surveillance video at the gym and in the targeted stores identified 3 female suspects. They are described as:
>
> 1- Olive skinned female (who was in the gym), heavy set, long dark hair tied in a bun, in her twenties, red shorts and a white t-shirt.
> 2- Black female, slim, early twenties, long black wavy hair wearing a grey 3/4-length coat.
> 3- Black female, slim, early twenties, long black straight hair, dark coat, wearing glasses.
> The 2 black females were not seen in the gym and are suspected of being accomplices.
>
> *Three Images*
> (click on images for larger versions)
>
> If you have any information regarding this incident, or any other criminal activity, call Crime Stoppers at 613-233-TIPS or toll free at 1-800-222-8477.
>
> Crime Stoppers does not subscribe to call display, we will not record your call and you are not required to testify in court. If your information leads to an arrest or a charge, you could qualify for a cash reward of up to $2000
>
> (National Capital Area Crime Stoppers, 2008).

Previous Research

Despite its long-standing presence and expansion since the late 1970s, Crime Stoppers has received little empirical scrutiny (but see Carriere and Ericson 1989; Lippert 2002). Claims of success, which are prominently displayed on Crime Stoppers websites, have never been subjected to careful study. Thus, there has never been a study using controls to determine whether the program is more effective in reducing crime than police appeals to the public for information about an incident (see Lippert 2002). More important for present purposes, existing studies looking into its workings, including its advertisements, largely predate the increased use of surveillance cameras by private and public institutions, as well as private citizens. Given its popularity, Crime Stoppers will serve as a clear window into police-related transfer and use of images produced by surveillance cameras for the purpose of crime reduction. Trends and issues identified in this context will undoubtedly have broader relevance.

Methodology

For this case study we first examined the websites of regional Crime Stoppers programs in Ontario for 'Crime of the Week' or equivalent (e.g., 'crime file')

advertisements. Only those advertisements from official Ontario Crime Stoppers websites from early 2004 through early 2008 that contained camera surveillance images (either stills or footage) were selected.[73] This resulted in 130 Crime Stoppers advertisements comprising surveillance images and adjacent text for analysis. We also drew on the 2000-2001 data set used by Lippert (2002) to compare saturation of camera surveillance images in Crime Stoppers advertisements. At least two Ontario Crime Stoppers programs have begun to take advantage of YouTube as a means of uploading camera footage and crime re-enactments as 'Crimes of the Week' or equivalent for display. To explore this recent trend, all twenty-seven (27) instances of the use of surveillance camera footage on YouTube from 2007-2008 associated with these two Ontario Crime Stoppers programs were selected. Key features such as types of crime, inherent criminal meaning, and apparent camera surveillance source, were identified for both the Crime Stoppers website advertisements and YouTube surveillance footage. The image analysis also entailed determining whether it displayed personal information about a victim, third party or suspect. In three cases, where the sources of the images were identified, the notification arrangements (i.e., camera surveillance signage) were investigated.

Potential Privacy Issues

Potential privacy issues stemming from the use and transfer of camera surveillance images concerns third party transfer of information. This becomes salient in the Crime Stoppers context in two ways: (1) transfer of images of alleged criminal activity held by third parties (e.g., a retail business) to police and the subsequent transfer of images to Crime Stoppers and then YouTube; and (2) the inclusion of identifiable third parties in images released publicly in advertisements (either with cooperation of news media or another website) on Crime Stoppers or YouTube websites.

Crime Stoppers is a non-profit organization with charitable status. As noted above, Crime Stoppers claims to be independent of police to generate information from those unwilling to testify in court and who wish to remain anonymous (see Lippert 2002). Thus, the transfer of the surveillance image from police to Crime Stoppers is tantamount to transfer to a third party. Once posted to a Crime Stoppers website, images can be transferred to anyone with Internet access and an inexpensive storage device (i.e., harddrive). Their transfer and subsequent uses then become unlimited. While it can be argued camera surveillance images are more accurate than mere sketches and physical descriptions in some cases, and thus justifiably used in an attempt to solve crimes, where included in images, third parties can also be better identified and inadvertently associated with criminal incidents that could be detrimental to their reputations and livelihoods.

[73] These data are drawn from a broader study of Crime Stoppers advertisements that is in progress and encompasses programs in Ontario, Australia and the United Kingdom.

Transfer of surveillance camera images from third parties to police is linked to notification issues because potential subjects of surveillance should be made aware that their personal information (i.e., their image) is being collected, stored, and potentially transferred to police, Crime Stoppers, and beyond. Although section 7.(1)(b) of *PIPEDA* states that a lack of notification is acceptable when the "collection is reasonable for purposes related to investigating a breach of an agreement or a contravention of the laws of Canada or a province[74]" this information is also gathered and transferred for other ends such as demographic analysis (Future Shop, 2009) and Crime Stoppers' marketing (i.e., advertisements). Furthermore, guidelines for using surveillance cameras in and by private organizations recently have been made available through the Office of the Federal Privacy Commissioner, one of which is for a private organization to erect signage to communicate the presence of surveillance cameras (OPC 2008). Many businesses deploy camera surveillance systems, but do not erect signs notifying persons of the presence and purpose(s) of surveillance cameras. Although a minority of businesses and organizations have signs in place informing those entering of surveillance cameras and the purposes for which personal information is being collected, typically this signage is exceedingly vague and aimed only at deterring certain behaviours. Thus, signage typically attempts to communicate to those entering the business they are being watched should they decide to engage in theft, robbery, or vandalism, or that the surveillance cameras in place will prevent their own victimization while on the premises. However, even signs erected solely to deter behaviour do not preclude the possibility that customers who read the signs assume lesser transgressions (e.g., theft and vandalism) will be handled by 'in-house' security and informal measures (a warning, a store ban) and not brought to the attention of police and Crime Stoppers. It is well known that many private businesses seek to avoid bad publicity associated with arresting and prosecuting customers caught shoplifting or engaging in vandalism. Thus, even where it is in place, it is not self-evident from signage that police will be given direct access to camera surveillance images as a matter of course or that these images will later be transferred to Crime Stoppers and YouTube websites should an incident deemed to be criminal in nature.

Where images of third parties were captured and where the organization or business could be identified, notification efforts of the business or business franchise or chain were sought. Three highly recognizable national chains (a supermarket, a gasoline station, and an electronics retail outlet)were present in Crime Stoppers advertisements. While the outlets subsequently examined were not those depicted, it is reasonable to assume the signage policy for surveillance is uniform across a retail chain. In the first instance, a national grocery chain was examined. At one of their stores a sign was present on both automatic doors at each entrance. The sign read "PLEASE BE ADVISED our store has video surveillance for

[74] This section seems to refer only to reactionary surveillance in response to specific criminal incidents in an area, rather than to continuous blanket surveillance of premises.

both our customer protection and to help keep prices low." These signs are found on the entry doors below eye level and disappear behind the doorframe as the customer approaches and the doors slide open. The gas station featured signs on the pumps at waist level that read: 'This area is under video surveillance'. In the third instance, a national electronics retail outlet was visited. No signage was detected. The only evidence of surveillance cameras was a somewhat ominous globe presumably containing a surveillance camera hanging from the ceiling more than a metre overhead immediately inside the entrance and other globes throughout the store. While the grocery store and gas station sought to notify the customer of surveillance, this is not true for the electronics store. In all three cases legislative authority for the collection of personal data was not provided. The lack of signage at the electronics retail outlet may mean this private retail chain assumes those entering their establishment understand surveillance cameras will be present and their purposes. Alternatively it may mean that the corporation lacks knowledge of privacy guidelines consistent with federal privacy legislation (OPC 2008).

The transfer of the camera surveillance image from a private business to police and then Crime Stoppers raises the possibility of errors with harmful effects. This reality was seen in 2002 when a Canadian Chartered bank in Winnipeg erroneously transferred two images of a customer thought to have cashed stolen cheques. The images were then transferred by police to Crime Stoppers and included in one newspaper advertisement. The person identified as engaged in this crime then launched a complaint with the federal privacy commissioner (OPC 2002). Once the error was recognized, Crime Stoppers, with the newspaper's cooperation, arranged for a retraction to be printed a week later:

> However, in the meantime, many people had recognized the complainant's image from the first article. Several friends and family members had called to inquire about her trouble with police, and she also became aware that other acquaintances had begun to entertain suspicions about her character. Believing her good name to be integral to her ability to secure work in clients' homes and workplaces, the complainant was very worried that the incident might adversely affect her reputation and her business and was most upset that suspicions about her had been allowed to gather for a full week (OPC 2002).

The complaint was judged to be well-founded following the investigation. The Commissioner stated: "The decision caused the complainant embarrassment and worry about her reputation and her livelihood" and that "the bank should have taken due care to ensure that the information was accurate so as to minimize the possibility of a wrong decision with adverse consequences" (OPC 2002). It is unknown how many others have become the victims of such errors. This is because upon learning of an individual's criminal associations due to viewing a Crime Stoppers advertisement not everyone will contact that individual to inform them of this association. Those individuals who become aware their image has been displayed in error may not know how or want to complain to the Privacy Commissioner about powerful institutions (e.g., private corporations, police, and

Crime Stoppers). It remains unclear whether and how organizations that use surveillance cameras and store their images exercise 'due care' in transferring images to police before they are transferred to Crime Stoppers and beyond. It is vital to recognize that had the surveillance images been also posted on the Crime Stoppers or YouTube websites, many more persons may have viewed or copied the images to other websites or e-mail, thus making the intended effect of a simple 'retraction' likely impossible or at least exceedingly more difficult to accomplish. As well, the acceleration of time between image capture and its use in an advertisement on a website potentially reduces time to identify errors (in comparison to staging crime re-enactments by Crime Stoppers - see below). Furthermore, while most people would not seek these images through Internet back doors, they still are available as archived websites for, at the very least, several years. Using the Internet Archive, camera surveillance images related to crimes dating back to June 10, 2004 were retrieved from the archived website of one Ontario Crime Stoppers program (Internet Archive 2009). It can be assumed that, other than serious 'cold cases', the transgressions to which the images refer have been dealt with in the courts and that those persons depicted may have been long ago acquitted of the crimes they are alleged or assumed to have committed or are no longer prosecutable due to their summary offence status.

The police themselves may not have the means to know whether the image is accurate. Furthermore, if it is an organization's policy to forward all images to police for prosecution purposes, customers should be notified of this, and of the very real possibility that their personal information will be transferred in error. The distribution and display via Crime Stoppers, whose personnel undoubtedly take images' accuracy at face value if transferred from police, and then to YouTube and beyond raises the potential for serious harm to those whose images come to be associated with criminal acts they did not commit. This is why third party transfer – especially without proper notification – is a serious privacy issue.

YouTube and Website Advertisement Findings

A cursory examination of camera surveillance images in advertisements reveals that there is currently significant use of such images within 'Crime of the Week' or equivalent advertisements and this practice is increasing. Crime Stoppers is also increasingly using 'YouTube' (and related formats) to display surveillance camera images under the Crime Stoppers banner to encourage 'tips' from the public.

Increased Use of Camera Surveillance Images

The presence of camera surveillance images in Crime Stoppers is expanding. Though such images may have been sparingly used by at least one Crime Stoppers program in advertisements in the late 1980s to encourage 'tips', there has since been a marked increase. Camera surveillance images are only mentioned once in a previous analysis from this period and not as a central feature of advertisements (Carriere and Ericson 1989: 69). Based on a sample drawn from a study in 2000-2001,

surveillance camera images are present in a small proportion of 'Crimes of the Week' advertisements in some programs and altogether absent in others. But this current analysis reveals that such images now figure larger in programs. It was found that 21.6 percent of advertisements from Ontario Crime Stoppers programs currently use surveillance camera images. The Crime Stoppers programs covering the largest urban regions of York, Peel and Toronto, elicited over 25 percent image saturation. This is undoubtedly due to greater availability of surveillance camera images in urban areas. While only 4 of 48 Toronto Regional Crime Stoppers advertisements (8.33%) used camera surveillance images based on the 2000-2001 sample, by 2007-2008, 30 of 116 (25.9%) of Toronto Crime Stoppers advertisements used images from surveillance cameras. Moreover, previously Toronto Crime Stoppers advertisements for television adopted the form of re-enactments (see Carriere and Ericson 1989; Lippert 2002) but now this program's website states that a 'televised re-enactment *or surveillance video of the crime* is shown on television' (Toronto Crime Stoppers 2009; emphasis added) rather than traditional re-enactments exclusively, thus suggesting that the use of camera surveillance images is now routine practice. Crime Stoppers of York Region includes surveillance images in 72.1 percent of its advertisements. Although our analysis was unable to uncover the number of times the advertisements were viewed the YouTube data shows an average of over 9000 views with a range of 18 views, for a new release, to 130,005, for a year-and-a-half old murder case.

As significant a change as this might be across programs, it is interesting to note that so far Ontario lags behind Crime Stoppers operations in other countries. In the United Kingdom the percentage of advertisements using camera surveillance images is 28 percent (n = 60) and in Australia it is 48 percent (n = 120).

Table 1: International Crime Stopper Advertisements

Crime Stoppers Program (By Country)	Advertisements	Advertisements with camera surveillance images present	Camera surveillance Image Saturation
Canada (Ontario)	603	130	21.60%
Australia	244	120	49.20%
United Kingdom	209	60	28.70%
Total	1056	310	29.40%

This flow of surveillance camera images from point of capture to police to Crime Stoppers has been accelerated by the move to digitization of cameras surveillance technologies, such that the products of surveillance cameras are now easily transferred to a Crime Stoppers website where they are displayed with or without

an accompanying narrative. While banal at first glance, the increased use of camera surveillance images is significant for several reasons. There is evidence from empirical research that persons place more stock in television news coverage (YouTube is televisual) than radio or print media (Ericson, et al. 1991). Some advertisements were posted to the Crime Stoppers websites as 'news releases', and in some cases the made-for-television advertisement was present on the website. Audiences tend to adopt a 'seeing is believing' (Doyle 2003; see Ericson et al. 1991: 23) or 'the camera never lies' adage. This means that surveillance images can make a criminal incident described in an advertisement more believable than accounts without images. One issue raised by Crime Stoppers posting of camera surveillance footage on YouTube is their authentic depiction of violence, as seen in 5 of the 27 (18.5%) instances. Interestingly, this contravenes YouTube's "community guidelines" which forbids such depictions (YouTube 2009b).

In a more technical and mundane sense in many advertisements camera surveillance images were found dominating accompanying text, and in other instances displaced text entirely, leaving only a description of the image and the 'crime'. Of the 27 instances of Crime Stoppers displaying surveillance camera footage on YouTube, nine lacked a written narrative in the information sidebar of the webpage. The narrative in all but one of the nine instances was incorporated as a voice-over into the footage.

The surveillance image is plainly becoming the focal point or centrepiece of advertised incidents. Put differently, the camera surveillance image is increasingly shouldering more of the work of generating 'tips' than before. While potentially trivial on the surface this is significant for a number of reasons, not the least of which is that this helps limit the kinds of crimes displayed as advertisements to a narrow range of activities that can be captured by surveillance cameras. It may be that Crime Stoppers' increasing dependence on the surveillance image for advertisement content solidifies the practice identified in previous research of promoting only a narrow range of 'street crimes' (see Carriere and Ericson 1989; Lippert 2002) to the neglect of other types (see below).

In this way, the results of the analysis mirrors earlier findings. For example, no Crime Stoppers advertisements in the sample portrayed domestic violence, corporate malfeasance, or crimes by police. Compared to the advertisements deploying still surveillance images, the YouTube advertisements contained a greater percentage of violent acts, in particular homicide. The homicides were caught by what appeared to be privately-owned surveillance cameras. The lack of advertisements detailing domestic violence, corporate malfeasance, and crimes by police is also problematic as it depicts certain types of crime as more prevalent, for example, robbery, while ignoring or otherwise implying other crimes with harmful impacts on victims to be less prevalent. To the extent that advertisements increasingly use and depend on camera surveillance images, the fact that most cameras (i.e., private and 'open-street' surveillance camera systems) are operated by businesses, the police, and other government interests, means these other

serious crimes are likely to increasingly be ignored. It is unlikely, for example, a business will turn over surveillance images that may implicate itself in corporate malfeasance.

Moreover, it is important to note that camera surveillance images only provide the most obvious information, that is what a particular subject looked like in a certain location at a given time, while all "other information needs to be coaxed out of them - or read into them" (Phillips 1997: 29). In the one case in which no textual or audio narrative was present, the surveillance footage, had it not appeared in a Crime Stoppers context, could be best described as depicting a transaction between a gas station cashier and customer. Indeed, 13 of the 27 (48.1%) instances of Crime Stoppers surveillance footage on YouTube, and 100 of 130 (76.9%) images in advertisements displayed on Crime Stoppers websites revealed no actions that were obviously criminal in nature. Moreover, most of the Crime Stoppers advertisements deployed the image with a narrative that implied guilt rather than suggesting the criminal act was alleged. While the police and Crime Stoppers have a vested interest in avoiding false arrests, it is possible that others may use images that have been assigned a criminal meaning through Crime Stoppers in nefarious ways. The anonymity of the Internet could allow for the subsequent posting of surveillance footage to damage the reputation or livelihood of another by associating them with criminal activity.

Crime Stoppers Expansion

As revealed in a Toronto Crime Stoppers YouTube video, Crime Stoppers advertising using camera surveillance images is permeating other public areas. In 2007, Toronto Crime Stoppers started the 'Underground Alert' program in Toronto Transit Commission (TTC) Subway Stations, entailing the display of 'crime files' on LCD television screens in the Subway Stations. According to the press release displayed on the YouTube page 'Underground Alert enables authorities to message millions of commuters immediately following a crime in an attempt to catch the suspect.' (YouTube 2009). With the potential for millions of commuters to view the footage, this new Crime Stoppers program underscores the importance of protecting privacy rights.

Privacy and Third Parties

What privacy and related issues are raised from the release of this personal information to third parties? Crime Stoppers is a third party to which camera surveillance images are systematically transferred. While both the Ontario *Municipal Freedom of Information and Protection of Privacy Act* (MFIPPA) and *Freedom of Information and Protection of Privacy Act* (FIPPA)[75] contain provisions that allow for the disclosure of personal information to third parties, in doing so the

[75] Since this case study is relevant to provincially rather than federally regulated organizations, provincial rather than federal legislation is referenced here.

dignity and rights of individuals whose personal information is being released is supposed to be safeguarded. Care is supposed to be taken when distributing this information. More specifically concerning camera surveillance images, the identifying features of victims or third parties could be removed through digital techniques such as blurring faces.

Deterrence

Ironically, each use of surveillance camera images in Crime Stoppers advertisements that seek 'tips' supports previous research that fails to find conclusive evidence that camera surveillance systems are an effective deterrent. Thus, the inclusion of each surveillance image in a Crime Stoppers advertisement is a growing testament to the failure of surveillance cameras to deter or to 'stop crime' on their own. This assumed lack of deterrence was acknowledged during an interview with a Business Improvement Association representative responding to the prospect of establishing 'open-street' closed circuit television cameras (CCTV) in the area: "People commit bank robberies all the time. Everyone knows that almost every bank has camera surveillance and yet people go in there without even a ski mask; it's not a guarantee at all that stuff won't happen" (Interview 1). The effectiveness of surveillance cameras to reduce crime or even secure criminal convictions is currently unknown, though there is reason to doubt its effectiveness (see, for example, the recent Smith case below). In one instance of camera surveillance footage on YouTube the suspect was apparently careful to avoid identification by robbing a convenience store while wearing his jeans inside out, a pillowcase over his head, and no shoes. Instead of being deterred, this person simply innovated to avoid subsequent identification. The use of these images in Crime Stoppers systematically calls into doubt one of the commonly stated justifications for implementing surveillance cameras to collect personal information in the first instance.

Who Benefits and Who is Harmed?

Who benefits and who is harmed through the increased use of camera surveillance images in Crime Stoppers? As noted earlier, one consequence of the increased use and reliance upon such images is that only certain types of crime are advertised. Camera surveillance systems are increasingly present in everyday life, but they are not everywhere; they are typically not in private offices and homes capturing everyday work or domestic practices. This systematically decreases the possibility of including crimes occurring in these sites, even in a generic manner. With re-enactments places and persons that cameras legally cannot (e.g., bathroom stalls), or do not (e.g., private residence) surveil can still be depicted, thus encouraging 'tips' about that incident or like incidents. Thus, types of crime depicted in the 'Crimes of the Week' suggest certain groups benefit more than others due to the deployment of camera surveillance in advertisements.

Table 2 shows the types of crimes reported as 'Crimes of the Week' or equivalent. Of the 130 advertisements, 93 (over 70%) depicted crimes committed against

businesses (Property Crimes against Business). The YouTube data had a greater number of non-business related crimes, and an equal number of homicides and crimes against business (11 each, see Table 3). However, none of the images appeared to be taken from 'open-street' or public surveillance cameras. While this may be due in part to the limited number of 'open-street' camera surveillance systems in Canada, it is significant that businesses are plainly the immediate beneficiaries of the use of camera images by Crime Stoppers.

Table 2: Crime Types in Advertisements on Crime Stoppers Websites

Crime	Number	Approximate Percent
Child Abduction	1	>1
Credit Card Fraud	5	4
Firearms Offence	1	>1
Physical Assault	5	4
Property (Business/Non-violent)	24	18.5
Property (Business/Violent)	69	53
Property (Citizen/Non-Violent)	9	7
Property (Citizen/Violent)	6	4.5
Property (Public/Non-violent)	2	1.5
Sexual Assault/ Other Sex Related Crime	8	6

Table 3: Crime Types Depicted on YouTube

Crime	Number	Approximate Percent
Homicide	11	41
Physical Assault	1	3.5
Property (Business/Non-violent)	7	26

Property (Business/Violent)	4	15
Property (Citizen/Non-Violent)	2	7.5
Property (Citizen/Violent)	1	3.5
Sexual Assault/ Other Sex Related Crime	1	3.5

Given the increasing credence given to the authenticity of ('seeing is believing') camera surveillance images, if victims are unaware of the possible existence of these images (the presence of surveillance cameras) in a given context they may decide to not report a particular crime. A lack of notification to those unaware of the cameras' presence may lead to crimes against persons not being reported. Citizen's, unaware that the images produced by surveillance cameras are being recorded, may feel they have no corroborating evidence to support reports of being victimized. While it is important to notify the public of surveillance cameras to gain 'informed consent', this notification is also required to make individuals aware that their victimization or the victimization of others may have been witnessed and recorded by surveillance cameras, assisting them in reporting such incidents.

The use of camera surveillance images on the Crime Stoppers and YouTube websites raises additional privacy concerns in relation to victims. Of the 130 advertisements (see table 4), 32 (24.6%) contained images with a visible third party or victim. In only two of these 32 images (6.3%) was intentional distortion or digital editing used. In eight of the 32 (25%) images the victim or third party is clearly identifiable. Since these advertisements provided a description of the suspect, the reader may distinguish between suspect and victim/third party. However, the inclusion of third parties and victims may elicit other concerns. While it may be that third parties are included because they are also wanted for questioning about the incident, none of the advertisements appeal to these other persons to come forward to police or Crime Stoppers, and it can be reasonably assumed that victims would have already provided a statement to police. Compared to the advertisements on Crime Stoppers websites, the YouTube camera footage sought to hide the identities of third parties and victims to a much greater extent. However, of the files displaying third parties or victims, 9 of 20 (45%) did not use some form of intentional distortion. It is possible that if apprehended the suspect may seek retribution against one of the third parties believing they were the 'tipster'. This failure to render third parties anonymous starkly conflicts with Crime Stoppers stated focus on anonymization (see Lippert 2002).

Table 4: Victim and Third Party Visibility

Third Party and Victim Visibility	Count	Approx. Percent (total files)
Image - Third Party: Face Visible -distinguishable	6	4.5
Image - Third Party: Visible - no face visible	7	5.5
Image - Victim: Distorted	1	>1
Image - Victim: Face Visible - Distinguishable	2	1.5
Image - Victim: Face Visible – Indistinguishable	1	>1
Image - Victim: Visible - face non-visible	13	10
Video - Victim: Visible - face visible - 'non-distinguishable'	1	>1
Video - Victim: Distorted	1	>1
Total Third Party/Victim	32	24.5

Of the 44 suspects identified in the YouTube surveillance footage, 13 (29.5%) suspects were White, 20 (45.5%) were Black, 5 (11.4%) were other visible minorities, and the 'race[76]' of 6 (13.6) was unidentifiable (due to disguise or poor video quality). The high percentage of camera surveillance footage selected for display that depicts Blacks and other visible minorities committing criminal acts (56%) is potentially harmful to these already disadvantaged groups. These depictions can fuel racist sentiments as seen in some comments left by YouTube users in relation to this footage. The racist tone of comments posted on the Toronto Crime Stoppers YouTube page prompted the organization to make the following statement on its website:

> We had a retired educator write to us about the racist remarks on some of the comments…we don't support racism in any way-- we do support free speech…and we would like to use this comment section to educate as much as possible…and generate tips to solve this crime and many others…please be responsible in your postings…racist comments can come back to haunt you at times of job interviews etc…be tolerant of all…stand up for the good, and correct the wrong.
>
> (YouTube 2009d)

[76] Although these categories are contested and 'race' is to be understood as a social construction, Crime Stoppers advertisements often use these categories to describe suspects.

As previously mentioned, surveillance cameras capture a very limited number of crime types and tend not to capture corporate crime and domestic violence. The use of some images on Crime Stoppers and YouTube to the neglect of other crime types serves to benefit certain groups, while potentially harming others.

The Smith Case

Consider the Smith case in relation to the use of surveillance camera images to solve crime. Criminal charges were recently dropped against Smith and a second person who was depicted in surveillance footage posted to YouTube by police (Dimanno 2009). The footage, of a shooting, was viewed some ten thousand times (Ibid.). Despite being a violation of YouTube's "Terms of Use" (YouTube 2009c), this footage may have been downloaded by individual users (via programs such as GetTube and KeepVid), potentially preserving the image in a criminal context. Similarly the image may be preserved at the Internet Archive. The reproduction of the surveillance image is evident given that an Internet search displays several other websites where this video is duplicated or linked to. This is particularly important in the case of the second accused that might have had no knowledge of the shootings about to happen. The duplication of this footage may remain available for viewing long after the charges have been dropped against the suspects, potentially impacting life chances (e.g., employment, personal relationships).

Conclusion

This section explored the use of camera surveillance images by police-supported Crime Stoppers programs. Since 2001 there has been a significant increase in the volume of surveillance camera images used by Crime Stoppers in its advertisements. More recently Crime Stoppers has also begun posting surveillance footage on the video sharing website 'YouTube'. This increased use raises privacy and other issues. In the past such images have been erroneously shared with police and Crime Stoppers and the error was not identified and rectified prior to their use in advertisements. Such occurrences have potential to detrimentally impact a person's reputation and livelihood. There is now less delay between the capture of video footage and its subsequent release in advertisements, thus there is less opportunity to identify error. Further, images in Crime Stoppers advertisements often appear without masking the identity of third parties and victims, presenting serious privacy and ethical concerns as these individual become implicated in a criminal incident. Questions about appropriate notification are also raised by such arrangements. Individuals should have the option of avoiding situations where their image may be captured and potentially posted to the Internet.

Crime Stoppers' use of surveillance camera images also casts skepticism over claims that camera surveillance has a deterrent effect. It reveals instances where crime was committed despite the presence of a camera. Finally, an increased dependence on images from surveillance cameras over traditional re-enactments has the potential

to narrow the range of crimes portrayed in Crime Stoppers advertisements. Such a narrowing of the types of crime will undoubtedly serve to benefit mostly private business rather than the general public. Finally, our research revealed that the camera surveillance images posted on YouTube by Crime Stoppers disproportionately portray visible minorities as engaged in criminal activity. This is a troubling practice that is potentially harmful to the well being of the specific racial or ethnic groups depicted.

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Appendix A: Maps of Proposed "Live Sites"

Georgia Street 'live site'

Source: Rudberg 2008

David Lam 'live site'

Source: Rudberg 2008