COMMUNITY POLICING CENTRES AND CRIME PREVENTION: THE NEED FOR LOCAL AREA SURVEYS

by

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ABSTRACT

Since 1997, the Institute for Canadian Urban Research Studies (ICURS) has provided support services for a local neighbourhood survey that captures various local areas concerns and positive views. This has been followed by several other community surveys in the City of Vancouver in the Commercial Drive neighbourhood, Collingwood-Renfrew, Mount Pleasant and Yaletown-Granville communities. With the goal of identifying victimization, perception of crime, perceived hot spots and locally initiated approaches to reducing difficulties, these surveys have sparked varying degrees of public debate, interest, and changes in each community evaluated. Surveys of perception of crime, by the local public, while not considered an accurate enumeration of crime occurrences, are a way to assess how the public 'feels' about certain activities (either legitimate or illegitimate) within their community. The thesis explores the value of learning about public perception of crime through local community surveys, and the value of having Community Policing Offices conducting the community surveys. Such information has potential importance for local jurisdiction in developing policies that reflect local needs. The thesis provides summary information from all the surveys but focuses on the surveys in the Yaletown-Granville communities.

Keywords: Community Policing Offices, Perception of Crime, Environmental Criminology, Public Policy, Disorder, Community Safety, Crime Prevention.

iii

DEDICATION

To my parents George and Marie Cecile Guterres and wonderful fiancé, Curtis Les, for showing me their infinite support, faith, and love. Without them, I would not be the person I am today.

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TABLE OF CONTENTS

Appr	oval		ii
Abst	ract		iii
Dedi	cation		iv
Ackr	nowleda	ements	v
	0	ntents	
		2S	
	•	S	
		-	
	-		
		۱	
1.1	•	eginnings	
	1.1.1	Specific Scope	
		Community Concerns: Purpose and Design of Community Surveys	7
	1.1.3	A Quick Review at the Results of the Surveys (for all neighbourhoods currently analyzed)	0
2: Tł	neories	in Criminology	12
2.1	A brief	overview of Environmental Criminology	12
	2.1.1	Answering the 'So What' Question: Environmental Criminology and	
		Perception of Crime	13
2.2	Disorde	er as Ecological in Nature	14
2.3	Social	Disorganization Theory: Physical Land Use and Crime	17
	2.3.1	Land Use and Routine Activities Theory (RAT)	17
	2.3.2	Crime Pattern Theory (CPT)	18
	2.3.3	Broken Windows Theory	
	2.3.4	Attachment to the Built Environment	
	2.3.5	Transitioning from Theory to Disorder (and Fear of Crime)	
2.4		gy of Disorder	
	2.4.1	Identifying Disorder in Literature	27
3: Di	isorder	and Fear of Crime from a Policy Standpoint	33
3.1		Policy and Crime Prevention	
3.2		ction to Vancouver's Municipal Governance	
	3.2.1	An Example of Facilitating Governance: CivicInfo BC	
3.3		es of Public Policy	
	3.3.1	Action Research and Public Policy	
	3.3.2	Evidence Based Research	
	3.3.3	Incorporating Fear of Crime and Public Policy	
	3.3.4	Economic and Social Costs of Fear of Crime	46
	3.3.5	Transportation and Disorder – How Fear is Geographical	48

4: T	he Use	of Community Surveys	50
	4.1.1	Purpose and Design of Surveys	50
4.2	Popula	ation Demographics and the Communities Surveyed	52
4.3	Landm	narks in Perception of Crime Mapping Exercises	53
	4.3.1	Landmarks and Crime (Taylor, 1995)	
	4.3.2	Study on Landmark use (Undergraduate Study)	
		Landmarks versus No Landmarks: Which is more 'informational'?	
4.4		Piece: Findings from the Yaletown Granville Study	61
	4.4.2	Unacceptable Activities and Neighbourhood Concerns: Assessing Yaletown in Detail	65
4.5	CASP	R – Utilizing Vancouver Data	67
5: D	isorder	and a complex policy	70
	5.1.1	The Economic Perspective – Extending the Homelessness Example	
	5.1.2	Definition of Homelessness	71
	5.1.3	Homelessness as a Humanitarian Effort	73
	5.1.4	Other considerations in the definition of homelessness	
	5.1.5	Housing and Income	
	5.1.6 5.1.7	Classification of housing	
	5.1.7	Vancouver's Median Household Income	
		Sustainable Development – Affordable Housing as a Solution	
		Affordable housing in Australia – an example	
	5.1.11	Economic Challenges to Housing	83
	5.1.12	Systems Thinking and Systems Dynamics	84
6: F	uture D	Pirections and Conclusion	87
7: W	/orks C	ited	90
8: A	ppendi	x A – Community Survey Overview	100
0.7	8.1.1		
	-	Commercial Drive Community Survey, 1997 and 2007 Mapping	100
	••••	Results	101
	8.1.3	Collingwood and Mount Pleasant 2008 Mapping Results	101
9: A	ppendi	x B – Definition of Housing	102
10:	Append	lix C – Income Comparisons	103
		Chart 1	
		Chart 2	
11:	Append	dix D – Income, Shelter Costs, and STIRs	104
		Chart 1-Average Household Incomes and Shelter Costs, Canada,	
		1991-2006	104
	11.1.2	Chart 2: Average STIRS by Income Group, Canada, 2001 and 2006	
12: Appendix E – Dwellings by year of Construction			
12: /			
	12.1.1	Chart 1 – Average Monthly Shelter Costs, 2006, Metro Vancouver	105

13: Appendix F – Population Considerations	106
13.1.1 Chart 1 13.1.2 Chart 2	
14: Appendix G – Dwellings by year of construction	
14.1.1 Chart 1: Period of Construction, Occupied Private Dwellings, Vancouver, B.C.	107
14.1.2 Chart 2: Period of Construction Occupied Private Dwellings, 5 CMAs	
15: Appendix H: Systems Thinking and Systems Dynamics	108

LIST OF FIGURES

Figure 1: Crime Pattern Theory	19
Figure 2: Broken Windows Theory from the Policing Perspective	24
Figure 3: Broken Windows Theory to Fear of Crime and Disorder	25
Figure 4: Hunter's (1978) 'Incivility' Argument	27
Figure 5: City of Vancouver Expenditure Breakdown	38
Figure 6: Incrementalist Model	40
Figure 7: The Action Research Cycle	41
Figure 8: City of Vancouver 2006 Census Population Shifts	52
Figure 9: 2009 Map and Hotspot Results	55
Figure 10: 2010 Map and Hotspot Results	55
Figure 11: Map A (Metro Vancouver with Landmarks)	58
Figure 12: Map B (Metro Vancouver without Landmarks)	58
Figure 13: Map C (Simon Fraser University Burnaby Campus with Landmarks)	59
Figure 14: Map D (Simon Fraser University Burnaby Campus without Landmarks)	60
Figure 15: Vancouver Municipality Population	68
Figure 16: British Columbia Population	68
Figure 17: Statistics Canada Calculation of Average Income	78

LIST OF TABLES

Table 1: Visibility and Acceptability Ranks	11
Table 2: Socioeconomic Costs	47
Table 3: 2009 Survey- Top 10 Yaletown Most Visible Activities	61
Table 4: 2010 Survey - Top 10 Yaletown Most Visible Activities	62
Table 5: Four most viewed activities in all communities	65
Table 6: Top 5 Most Unacceptable Activities in Yaletown 2009	66
Table 7: Top 5 Most Unacceptable Activities in Yaletown 2010	66
Table 8:Stakeholder Categories	

GLOSSARY

ARCH	At-Risk Chronically Homeless
B&E's	Break and Enters
BIA	Business Improvement Association
BWT	Broken Windows Theory
CASPR	Crime Analysis System for the Pacific Region
CCPC	Collingwood Community Policing Centre
CFO	Civil Forfeiture Office
CJRS	Criminal Justice Reform Secretariat
СМА	Census Metropolitan Areas
CMAV	Census Metropolitan area of Vancouver
СМНС	Canada Mortgage and Housing Corporation
CPC	Community Policing Centre
CPO	Community Policing Office
CPT	Crime Pattern Theory
CPTED	Crime Prevention Through Environmental Design
CSO	Community Safety Officer
GIS	Geographic Information Systems
GCPC	Granville Community Policing Centre
GSS	General Social Survey
GWCPC	Grandview-Woodlands Community Policing Centre
HEAT	Homeless Emergency Action Team
ICURS	Institute for Canadian Urban Research Studies
MPSSG	Ministry of Public Safety and Solicitor General
PHI	Provincial Homelessness Initiative
POP	Problem Oriented Policing
RAT	Routine Activities Theory

RCMP	Royal Canadian Mounted Police
RSCH	Greater Vancouver Regional Steering Committee on Homelessness
SCBCTAP	South Coast British Columbia Transportation Authority Police
SFU	Simon Fraser University
SPARC BC	Social Planning, Research Council of BC
STIR	Shelter-cost-income-ratio
VANOC	Vancouver Organizing Committee for 2010 Olympic and Paralympic Winter Games
VIVA	Value, Inertia, Visibility and Accessibility
VPD	Vancouver Police Department

INTRODUCTION

1.1 Early Beginnings

Nearly four years ago, when I first discovered the Institute for Canadian Urban Research Studies (ICURS), I did not intend to pursue Environmental Criminology as a full-time career. At first glance, Environmental Criminology appeared to be technical, with the only apparent goal being the application geographic information systems (GIS) to track crime patterns and hot spots. Environmental Criminology however is far more and offers larger options to the field of Criminology, through its commitment to research evidence that our built environment has an influence on current behavioural patterns, and consequently our psychosocial-decision making patterns (Brantingham, 1984). Not only does Environmental Criminology provide options in assessing hot spots, but also it offers valuable insights for public politicians, policing, and other service-based organizations to evaluate their programs, plan action(s), and set long-term goals.

One example of this broader use of Environmental Criminology is the support ICURS provides to communities in action-oriented research through the use of local neighbourhood surveys about what people like and do not like in their communities. The first of these surveys was developed by Eileen Mosca and Constable Valerie Spicer in their role in the Grandview-Woodlands Community Policing Centre in 1997 (and subsequently repeated in 2007) using a process of working with a variety of groups (government and non-profit alike),

stakeholders and local individuals through public meetings and focus groups. The level of attention these community surveys received from the City of Vancouver and other organizations made me realise its sizeable potential local neighbourhood surveys have in influencing public policy and government action.

A community survey such as the one used in Grandview-Woodlands evaluates public perception of disorder by providing a way to assess how the general public 'feels' about certain activities (either legitimate or illegitimate) taking place within their community. The information extracted from the community surveys made me wonder such data could be extrapolated to methods to help shape public policy on safety and security. This is important because reporting crime to police in Canada is falling (General Social Survey, 2004, 2009)

For the purpose of this thesis, I focus on three things:

- The conceptualization, definition, and interpretation of disorder within the North American Context.
- A discussion of how the Community Policing Office uses community surveys in the Metro Vancouver region; their development, findings, and results.
- Using homelessness as an example, discussion on how public policy (at the municipal, provincial and federal levels) could use survey information.

Community Policing Centres (CPC), or Community Policing Offices (CPOs) are evolving into a new 'style' of policing in the Census Metropolitan Area of Vancouver (CMAV). CPCs have been in existence for some time now (about a decade), but the utilization of the CPC as part of a working model in the policing sphere was undervalued in its initial years. Recently, CPCs have become increasingly responsive to the needs of community members, and as a means of providing supplementary the support to maintaining order within a community.

In 2009, while doing research at ICURS, I had the privilege of working with the Collingwood Community Policing Centre (CCPC) in the development of two new public disorder studies for the Collingwood and Mount Pleasant neighbourhoods (both located within the Metro Vancouver Region). These surveys were similar to the ones used in Grandview-Woodlands but were modified through a similar consultative process to reflect local issues. Initially, when I set out to conduct these studies, I went in thinking that I was doing the community a service in providing the residents of these areas with a voice to exemplify their concerns. Further, my initial intentions were filled with the desire to help local police centres to improve their service delivery and response rates. I learned in the process that the surveys have a broader goal of providing survey evidence of local concerns, information that can be used by police and government to develop approaches that address local needs. By bringing key stakeholders together, the results generated a sense of collaboration between organizations that were once thought to be separate from one another. In a sense, for the last two years I have been observing a broader role of ICURS' community survey project, an undertaking that I believe is beneficial, costeffective, and supportive of local community stakeholder needs.

Thus far, ICURS has been involved in six community surveys, listed next page:

- Grandview Woodlands Community Policing Centre Survey 1997 (also known as the Commercial Drive Community Policing Centre Survey)
- Grandview Woodlands Community Policing Centre Survey 2007
- Mount Pleasant Community Policing Centre Survey 2009
- Collingwood-Renfrew Community Policing Centre Survey 2009
- Yaletown-Granville Community Policing Centre Survey 2009
- Yaletown-Granville Community Policing Centre Survey 2010

1.1.1 Specific Scope

While I provide some information from the first four surveys, I focus primarily on the latest Community surveys, conducted by the Granville Community Policing Centre (GCPC) located in the heart of Yaletown, one of Metro Vancouver's thriving communities in the downtown core. As part of a partnership and through the advice and communication with two South Coast British Columbia Transit Authority Police (SCBCTAP) coordinators, Yaletown was selected on the basis that in August 2009, a new major transit station would be situated in the area. The decision was founded on the advice that in February 2010 the Yaletown area would be one of the Downtown Vancouver LiveCity Olympic 2010 locations. The evaluation of the Granville Community Policing Centre Survey becomes an example and provides insight on how major changes (or events) taking place within an area impacts on perception of crime and disorder. It should be noted that the thesis places more emphasis on the influence of disorder, as theory (Innes, 2004) suggests that disorder is a precursor to the following conditions – knowledge of criminal activity, the 'feeling' that illegitimate activities are taking place, and reduced feelings of safety.

Disorder has its own conceptual explanation. It is utilized differently in the legal and public policy arenas. It is consistently linked (Doran & Lee, 2005; Wilson & Kelling, 1982) to quality of life, liveability, nuisance crimes, social decay, public order crimes, and so forth. Disorder is visually imagined to include messy, disorganised, unmanaged areas, and simultaneously also as a physical sign of potential criminal activity. In reality, there is no 'true' indicator that criminal activity has taken place, and in the mind of the person in a community, disorder may signal that something sinister is occurring. For example, if one sees a condom on the ground, the decision making model might point in multiple directions, depending the individuals' moral compass. A condom on the ground could mean: a) prostitution, b) consensual sex in public, c) distribution of 'free condoms', and d) other (perhaps teenagers playing with condoms out of curiosity).

Disorder as an overall concept could be seen as a phenomenon that bothers people, but it does not necessarily affect the neighbourhood structure in a drastic way (Bursik & Grasmick, 1993; Skogan, 1990). Instead, it affects neighbourhood life through subtle, slowly evolving fixtures of the communities that may have been neglected, misused or damaged. Increase of disorder (whether drastic or subtle) in a community generates a new subculture, which has not been properly classified. Many assumptions in past research have conceptualized disorder to include those belonging to the low-income population, drug users/addicts, prostitutes, homelessness and other marginalized groups. While there are several underlying reasons why disorder may exist, suggestions

include economic hardship, and social housing costs in comparison to current income earnings. While the subculture is not the focus of the study, it presents new and valid questions that require examination in future research. The evaluation of the community surveys has the goal of assessing whether the results could be applicable and/or appropriate for public policy and future research regarding the concept of disorder.

Identifying the relationship between community survey(s) to public policy is particularly important. In general, policies enforced in communities delineates the boundary between what is considered acceptable and/or unacceptable for service providers (i.e., police). When an incorrect policy is developed on false assumption(s), it is possible that panic and fear will arise. Panic and fear from such policies may act as a catalyst for the detriment of everyday life than the actual occurrence of any illegitimate activity. Consequently, having some sort of evidence-based dataset is useful to track the effectiveness of policies and can be helpful when moral panics arise. Policies generally strive to keep the peace and orderliness of community structure. An example would be a high presence of litter, that may encourage policy makers to fight for increased street cleaning, a policy that would benefit the community – but it would require fiscal support from municipalities, where there must be a balance between community needs and budget constraints.

In recent years, Metro Vancouver has seen an increased reliance on policing services, highlighting the fact whether perception, or not, of crime/disorder is in fact a real problem. Various organizations, community groups

and even police departments are aware of this phenomenon, and as a result this thesis briefly reviews other communities surveyed. Common perceptions, history and activities are assessed in relation to the Canadian trend towards civility in public and reassurance policing.

The trend toward civility is also reflected in the RCMP E-Division's 2009 development of the Community Safety Officer (CSO) program, where auxiliary police officers are assigned to improve community relations in response to increased need for service/delivery of policing. The information found in the community surveys may assist new policing programs in the evaluation of 'community concerns', which may relate to the costs to run such programs expected by the community.

1.1.2 Community Concerns: Purpose and Design of Community Surveys

In 2008, a handbook was developed by Mosca and Spicer as part of an independent consultation project funded by the Civil Forfeiture Office (Ministry of Public Safety and Solicitor General, Criminal Justice Reform Secretariat). This handbook emphasized the purpose of conducting community surveys; Mosca and Spicer (2008) define it as a "methodological approach used to identify the perception of crime and safety held by residents, business owners and visitors who frequent a specific neighbourhood" (5). Such a product can help to reveal community perceptions of a neighbourhood that otherwise would not have been identified through mass-surveys not conducted on a block-by-block scale or that had been captured by official measures.

The information derived from community surveys can help local governments and politicians narrow the scope of issues surrounding high activity neighbourhoods. Further, the information can be used to test discrepancies between perception and reality, for instance fear of crime can be "generated by 'public disorder', [which] may have had an effect on [participant] belief that all crime had increased" (5). The test of perception versus reality also provides a yardstick measure of a community's tolerance level toward particular community activities (such as outside café seating or panhandlers that are either aggressive/passive).

The framework required to carry out the survey, according to Mosca and Spicer (2008) comprise of "multiple stages: holding focus groups, designing the questions, conducting the survey, collating the data, writing the report, drafting the recommendations, meeting with groups to discuss the survey results and implementing the recommendations" (6). It is primarily the community-policing centre (CPC) that takes point on all stages of the community survey, as it is their community, and they know their community better than those who are not directly involved in the community. CPCs that hold the following criteria:

- is well organized (i.e. an administrator/RCMP officer that demonstrates leadership);
- high retention of volunteers;
- access to a crime analyst (such as ICURS, or anyone with statistical analysis training); and
- acquainted with a public ministry or public service organization for backup,

are well suited to take on a community survey project (Mosca & Spicer, 6).

Program development/initiation is another valuable asset attributed to the community surveys. The results from the survey can be the *platform* for which programs can be justified, especially when there is mutual understanding of the "perceived community strengths and challenges, as well as diverse opinions in the community will make service providers and policy makers more responsive to community needs and values" (Mosca & Spicer, 2008, 10).

1.1.3 A Quick Review at the Results of the Surveys (for all neighbourhoods currently analyzed)

Inherent in the community survey methodology used there are a large number of generic questions and hot spot mapping (samples found in Appendix A¹) but the surveys are modified to reflect the local neighbourhood. Not all surveys asked the same questions and the fact that the majority of 'common questions' had similar responses says a lot. The surveys include a short list of 30 activities, coded by a 5-point likert scale. An overview of how the likert scale is defined is provided in Appendix A, where 1= Completely Unacceptable (you think the appropriate agency should stop it, ranges to 3= Tolerable (you don't like it, but it does not bother you enough to do something about it), and ends at 5= Completely Acceptable (you perceive the activity as a good thing). Each participant has an opportunity to mark one rank for each question.

Each neighbourhood survey included activities unique to that neighbourhood and common activities found in all the neighbourhoods. The common activities are:

¹ Appendix A: Community Survey Overview

- Outside café seating
- Litter (except Yaletown in 2009)
- Passive panhandlers (except Collingwood-Renfrew)
- Unleashed dogs in public spaces (except Mount Pleasant)

Graffiti on public property was viewed most neighbourhoods, except for the 2009 Mount Pleasant and Yaletown 2009 surveys.

Interestingly, the surveys that involved a pre and post-test analysis (two time periods – i.e. 1997 /2007 Commercial Drive and 2009/2010 Yaletown-Granville surveys) experienced very close similarities for activities most commonly experienced. For the 1997 and 2007 Commercial Drive community surveys, 9 similarities were found out of the top 10 most highly viewed activities, where respondents were asked if they had seen a particular activity take place in the area within the last six months (litter had one of the highest visibly rated presence within the community). The ten-year gap makes the survey intriguing as it demonstrates that in spite of the passage of time, little has changed with regard to viewing activities. In contrast, the 2009 and 2010 Yaletown-Granville surveys, done only in a mere six-month gap experienced eight similarities.

To clarify the concept of 'high viewing activity', when comparing outside café seating (high acceptability level) to litter, which has a high unacceptability level (Table 1), we can see which phenomenon is more 'visible' in the community.

Table 1: Visibility and Acceptability Ranks

.

Outside Café Seating received a very	In contrast, litter received a high	
high 'complete' acceptability level:	'complete unacceptability level'	
• 72% (1997 Commercial Drive)	66% (1997 Commercial Drive)	
• 70% (2007 Commercial Drive	• 70% (2007 Commercial Drive)	
 52% (2009 Collingwood) 	• 64% (2009 Collingwood)	
• 64% (2009 Mount Pleasant)	• 61% (2009 Mount Pleasant)	
• 66% (Yaletown 2009)	 63% (Yaletown 2010) ***not 	
• 67% (Yaletown 2010)	highly viewed in Yaletown 2009.	

To reiterate, the results certainly suggest that in spite of a high 'viewing' level, the acceptability rating determines the positivity (or negativity) of a given activity's presence within the community. From a policy standpoint, a possible interpretation might be that Collingwood should consider increased availability of outside café seating. Whereas Commercial Drive might require an expansion of litter pick up services, or locals are not satisfied with availability of disposal services. Whatever the interpretation may be, the results indicate what activities are more preferred than others are, and what activities are more persisting (meaning, they continue in the area, even when implemented action attempts to amend the situation).

2: THEORIES IN CRIMINOLOGY

2.1 A brief overview of Environmental Criminology

Environmental criminology, a term made developed by Drs. Patricia and Paul Brantingham over a coffee one morning in the 1970s is particularly important when it comes to understanding the framework and concept of conducting local community surveys. Since its introduction (Brantingham & Brantingham, 1975, 1978, 1980), awareness of Environmental criminology continues to grow. According to Brantingham (2004), "environmental criminology pushes researchers to explore how and why certain crime patterns emerge" (21); it essentially applies the social, physical and quantitative realities to assess these patterns. Environmental criminology typically focuses on the urban setting, where the application of routine activities, rational choice and criminality of place theories are utilized. In Brantingham and Brantingham (1995):

The urban settings that create crime and fear are human constructions, the by-product of the environments we build to support the requirements of everyday life: homes and residential neighbourhoods, shops and offices; factories and warehouses; government buildings; parks and recreational sites...the ways we assemble these large building blocks of routine activity into the urban backcloth can have enormous impact on our fear levels and on the quantities, types and timing of the crimes we suffer. (1)

Key sites or symbolic landmarks can mark fear levels and perception of crime. Parks are considered more fearful at night-time, especially when an area is not well lit. Unkempt alleyways are perceived to be unsafe, even when nothing actually happens (Brantingham & Brantingham, 1993). The presence of vandalism, graffiti and litter suggests that there is social disorder or a lack of community attachment to the property (Brantingham & Brantingham, 1995). Concentrations of break and enters, robberies, theft, or misdemeanours in specific locales can deter visitation, foster negative media attention, and the subsequent run-down nature of the community. Industrial businesses, shops, and other means of securing revenue may be lost; and the urban backcloth has less to depend on. For instance, the loss of business may result in the loss of the need to provide entertainment, and consequently result in the reduced need for transportation to the area, thereby reducing human presence within the community. Thus, environmental criminology looks at the makeup of the physical and social environment, which is comprised of "nodes, paths, edges and an environmental backcloth" (Brantingham & Brantingham, 1995, 3).

2.1.1 Answering the 'So What' Question: Environmental Criminology and Perception of Crime

Perceptions of crime and disorder are not to be taken at face value, nor should they be disregarded. Perceptions can be seen as the schema that we develop through personal interactions and experiences with our environment. The interactions and experiences we encounter are theoretically seen as indicators of our own decision making pattern towards our spatial surroundings. One such example would be how we decide which roads to take, which alleyways to avoid, and so on. Criminological theories, such as Cohen and Felson's (1979) routine activities, Wilson and Kelling's (1982) broken windows and Brantingham and Brantingham's (1993) crime pattern theory provide insight as to how we can use the community datasets to our advantage, especially with regard to applying environmental criminology principles to seek perception of crime patterns. Further, the provision of dataset pattern evaluation and findings of the community surveys could be seen as a potentially efficient tool for service based providers to manage time and resource allocation strategies.

Consequently, it is important to look at the underlying theoretical grounds in which the concept of disorder (and thus crime) evolved. One example would be ecological criminology, which applies social disorganization theory (explained in the following section) to explain how complex environments creates opportunities for both legitimate and illegitimate (criminal) subcultures to arise. By reviewing both ecological criminology (Certoma, 2006) and the social disorganization theory (Wilcox, Quisenberry, Cabrera & Jones, 2004), it provides grounded reasons as to why it is important to differentiate between a stable and complex environment, and how changes influence disorder trends in any community.

2.2 Disorder as Ecological in Nature

Ecological criminology, according to Certoma (2006), is the attainment of stable condition(s) within a given environment, where:

Once the system has reached a stable condition, modifications caused by external conditions can set in; every kind of stimulus gives origin to mechanisms of stabilization and adaptation and, helping the system in the evolution toward an ever-increasing complexity, it creates differentiation, that is to say the specialization of the internal functions. (917) Certoma (2006) makes note of the 'ecological boomerang', where any environmental modifications can "nullify the goal it was programmed for" (918). Consequently, the ecological boomerang concept suggests that environments are complex, and that changes to it are inevitable – either due to housing demand, transit, or the state of the economy.

Shaw and McKay's (1929, 1942, 1969) original concept of the social disorganization theory (roots of ecological criminology) makes the claim on economic instability in environments where there is no 'posited' relationship between economic status and crime. However, Bursik (1988) suggests that "areas characterized by economic deprivation tended to have high rates of population turnover" (520). With high turnover rates in any communities, it makes it difficult to develop strong community bonds and infrastructure to support the individuals residing in it. The probability for an illegitimate subculture (one that operates against societal convention) is likely. Thus, the lack of residential stability provides the opportunity for certain illegitimate activities to occur, where its management is directed those with shared values (which could be legitimate or illegitimate) within the area.

Further, Bursik (1988) summarises the social disorganization theory, using the concepts assumed by Kornhauser (1978), Thomas and Znaniecki (1920) where, in addition to the lack of common values toward community issues:

Population turnover and heterogeneity are assumed to increase the likelihood of disorganisation for the following reasons:

 Institutions pertaining to internal control are difficult to establish when many residents are 'uninterested in communities they hope to leave at the first opportunity' (Kornhauser, 1978, 78)

- The development of primary relationships that result in informal structures of social control is less likely when local networks are in a continual state of flux (Berry and Kasarda, 1977)
- Heterogeneity impedes communication and thus obstructs the quest to solve common problems and reach common goals. (Kornhauser, 1978)

The lack of community attachment is a common and problematic situation found in pockets of the Metro Vancouver Region. Meanwhile, there are criticisms towards the social disorganisation theory, where one of the arguments made by Short (1985) states that we cannot apply the theory itself to the property of population generalisation as it fails to recognise individual-level behaviour. The focus on community-based dynamics, while valuable, does not provide insight into illegitimate behaviour because the dynamics itself are the environment in which illegitimacy breeds. Therefore, it is conceptualised that illegitimacy grows from an individual's disordered state and spreads to others with similar states. I personally argue on this point because the structures in which an individual resides in has an impact on their needs and wants, and when such needs and wants are not being met, individuals may search elsewhere for it, or pursue illegitimate avenues to attain it. An example is drug use, where the need for drugs attracts users to an area where drugs are readily available. Illegitimate measures may be utilized if a drug user does not have access to drugs, and the individual may pursue the 'black market' to continue their drug habits.

2.3 Social Disorganization Theory: Physical Land Use and Crime

Wilcox, Quisenberry, Cabrera and Jones (2004) apply the social disorganisation theory to compare residential and commercial based crimes. As previously posited by Taylor et al., (1995), Sampson and Raudenbush (1999), the researchers base their study on the notion that "non residential land increases physical deterioration" (186). Three qualities were assessed in Wilcox et al., (2004): the physical, causal and mediating mechanisms in which activities arose. The causal mechanisms refer to the type of land use (and therefore, what type of physical facility is present) for a given area. For instance, parks attract different types of crimes as opposed to a shopping mall. The consideration of crime and land use is equally important as it places different expectations for policing, acceptable activities, and what types of visitors it receives. A better explanation for social disorganization in relation to land use is the routine activities theory.

2.3.1 Land Use and Routine Activities Theory (RAT)

Cohen and Felson's (1979) Routine Activities Theory posits itself on the circumstances in which motivated offenders carry out predatory criminal activities. The RAT does not attempt to explain an offenders' rationality, but instead it evaluates the environmental and situational factors in which offenders and their victims operate within. According to Cohen and Felson (1979), three categories of situational factors need to converge simultaneously, which includes the presence of a motivated offender, the presence of a suitable target, and the

absence of capable guardians. Shifts in individual (or group) activity may generate new channels for motivated offenders to pursue illegitimate activities. CPTED supports this position as Felson's (1997) paper states clearly that:

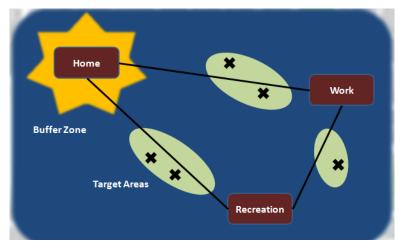
Some locations are more likely to expose people to risk than others. For example, going to a movie or a bar that caters to an older clientele is likely to entail less risk than going to a hockey game or a bar catering to young people. (212)

Andresen and Jenion (2004) contend that crime "is neither randomly nor uniformly distributed in time and space" (1), and as a result the analysis of identifying spatial-temporal patterns is useful in understanding how such activities take place over specific periods of time, and in specific land use contexts. The spatial-temporal pattern identified by each community survey is a method that could be utilized to examine community members' perception of crime and/or disorder. Overall, the RAT is based on the premise that crime will occur when the opportunity is present. The examination of disorder on a street level basis is important to look at in the sense that it may in fact, be a build up to illegitimate opportunities. Such opportunities may generate 'predictable' patterns, in which specific activity spaces are more likely than others to be exposed to disorderly feats.

2.3.2 Crime Pattern Theory (CPT)

Brantingham and Brantingham's (1984, 1993) crime pattern theory proposes that the individual activities generate predictable patterns leading to crime, which stipulates that: The specific criminal event, the site, the situation, the activity background, the probable crime templates, the triggering events, and the general factors influencing the readiness or willingness of individuals to commit crimes. (284-285)

In comparison to the RAT, the CPT concentrates on the concept of activity spaces comprised of nodes, paths and edges. In this study, the node is the Yaletown district, an area now made more accessible through the implementation of the Canada Line. Paths are the routes that individuals take to reach the node, and this could be delegated to the Canada Line, nearby bus routes and pedestrian-accessible streets. It is assumed that over an extended period, individuals who travel frequently on the same nodes and paths will become familiar with their spatial surroundings. The third component, edges, refers to locales where even well accustomed visitors to the area are not familiar. Edges are viewed as the areas where a high percentage of illegitimate activities take place. Figure 1 demonstrates the CPT.







As identified in the RAT, the cohabitation of both the victim and offender within an environment supports the notion that the activity space may overlap with a victim's activity space. In the case of the community surveys, we look at the Crime Pattern theory as the theoretical justification for its mapping component, discussed later. The community surveys include a detailed likert scale analysis ²of various activities taking place in a community, and can be justified using the broken windows theory as an example.

2.3.3 Broken Windows Theory

2.3.3.1 Background Information

In the early 1980s, Wilson and Kelling promoted the concept of the Broken Windows (BWT), which is concerned with physical and social disorder. Wilson and Kelling's (1982) argument postulates:

If the first broken window in a building is not repaired, then people who like breaking windows will assume that no one cares about the building and more windows will be broken. Soon the building will have no more windows. (Centre on Juvenile and Criminal Justice, 1999, 1)

The presence of any disorderly behaviour surrounding that built

environment, if left unregulated will eventually result in the backcloth of which

crime occurs. Lack of care, related to RAT concepts of guardianship, handlers

and managers, demonstrates little or no attachment the community members

have towards their built environment.

² The likert scale is a coding scheme from 1 to 5 (1= completely unacceptable and 5= completely acceptable). Please see Appendix A for coding scheme of likert scale used by all community surveys.

2.3.3.2 Broken Windows Theory (BWT) and the Classical School

The Classical School ³concepts of celerity, certainty and severity can be seen in Broken Windows Theory. Celerity is defined as the response to 'treating' disorder which enables the community to maintain its level of civility; certainty is making a firm point to avoid such disorderly activities, or "whenever an undesirable act is committed" (Williams & McShane, 2004, 19) and is a form of strengthening control over disorderly conduct. Severity, on the other hand should not indicate the degree of pain inflicted on individuals, but instead is viewed as the level of difficulty and harm that might come to a potential offender if they were to pursue an undesirable activity.

Wilson and Kelling (1982) examine the impact of a foot patrol and its impact on crime, community attitudes and community satisfaction. Community attitudes and satisfaction in this sense is operationalized in terms of knowledge of the role of the police and how safe they feel within their neighbourhood. BWT also addressed what 'frightens' people in general, and was more firmly attuned towards the other source of fear aside from potential, random violent victimisation by a stranger. The other source of fear in which Wilson and Kelling (1982) investigate is towards "disreputable or obstreperous or unpredictable people: panhandlers, drunks, addicts, rowdy teenagers, prostitutes, loiterers, the mentally disturbed." (1)

³ Classical School: 18th Century style of thought based on the premise of 'free will' in making decisions, where punishment was to be proportionate to the nature of the crime committed (thus, punishment as a deterrent) (Williams & McShane, 2004).

2.3.4 Attachment to the Built Environment

With respect to physical disorder, BWT suggests that attachment to one's property has an impact on community life. For example, Wilson and Kelling (1982) take on the example of theft, where knowledge that high value merchandise (such as electronics) are under more security than a low value item (a book) may lead to different strategies utilized by thieves to obtain the desired object (Value, Inertia, Visibility, Accessibility (VIVA⁴)). On a more public level, the act of vandalism is found within communal areas, visible to anyone that walks by. Depending on the 'cost' or 'harm' inflicted on the community, it also determines the level of stigmatization of an offender. Lack of community attachment by those harmed also impacts the action(s) taken to rectify a given situation.

Further, stability of a neighbourhood also has an influence on the physical level of disorder. This can be called social disorder, where a loss of guardianship, management and handle (Felson, 1979) on the community due to weakened community controls can 'encourage' the presence of activities that generate fear, such as homelessness, panhandling and prostitution. As a result, the breakdown of community controls can transform the neighbourhood into a transient community, where common forms of physical disorder (i.e., litter and graffiti) build up. In a Boston public housing study, "the greatest fear was expressed by persons living in the buildings were disorderliness and incivility, not crime, were the greatest" (Wilson & Kelling, 1982, 4), suggesting that weakened controls may also lead to reduced public satisfaction towards police capacity. With reduced

⁴ VIVA is a concept that grew from the Routine Activities Theory.

community and police capacity to manage disorder, unchecked disorderly activities can, in a sense, prepare the area for more serious disorder.

2.3.4.1 Role of Police in the Community

Before examining the topic of what constitutes street crime, the role of the police in providing informal controls is discussed heavily in literature. Despite state organised policing, the police have been seen as a substitute for informal social control (Wilson & Kelling, 1982). In BWT, a presupposition towards police picking up a panhandler who has not caused any 'harm' seems unfair; on the other hand, doing nothing towards "a score of drunks or a hundred vagrants may destroy an entire community" (Wilson & Kelling, 1982, 7). Therefore, it may be more effective in the end to focus on an initial, growing foreseeable problem rather allowing an already established problem to intensify to an unmanageable level.

Taking into consideration the theoretical and socio-economic factors relating to fear of crime, it is fitting to engage into the concept of broken windows policing. In broken windows policing, problem oriented policing (POP) is gaining more and more acceptance into mainstream policing management techniques. POP is attuned towards focusing on the presence of disorder within a neighbourhood, where the main goal is towards reduction of violent crimes. According to Hinkle and Weisburd (2008), "issuing citations and arrests for disorderly behaviour" (503) is an action that was previously ignored in standard policing practices. The current initiatives implemented by police indicate a

demonstrable relation between disorder and fear of crime. Hinkle and Weisburd (2008) provide a flow chart of the BWT from the policing perspective (Figure 2):

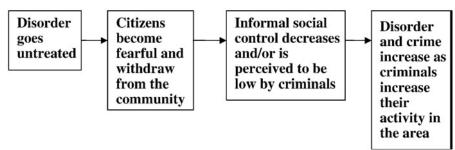


Figure 2: Broken Windows Theory from the Policing Perspective

Understandably, the police can only do so much. Wilson and Kelling (1982) state that citizens, while integral to alleviating fear in the community, the police "are clearly the key to order maintenance" (36). As a result, we are now in the position where CPCs are of greater importance than ever.

2.3.5 Transitioning from Theory to Disorder (and Fear of Crime)

The BWT approach sees urban decay of a community related to social and physical disorder. Neighbourhood socio-economic characteristics such as "poverty, instability in the housing market" (Doran & Lee, 2005, 2) can be matched with the concepts of crime and fear of crime. In recent years, a spatiotemporal approach has been applied to demonstrate the variables associated with "disorder, crime and fear" (Doran & Lee, 2005, 1). The built environment is dynamic; it is constantly experiencing new changes in which its individuals have no control over. As a result, there is evidence that links fear of crime to perceptions of "relatively high neighbourhood crime levels" (Borooah & Carcach,

Hinkle & Weisburd (2008). The irony of broken windows policing: A micro-place study of the relationship between disorder, focused police crackdowns and fear of crime.

1997; Doran & Lee, 2005, 1) in which weakened neighbourhood cohesion and the presence of disorder contribute to the phenomenon of fear.

Doran and Lee (2005) make the suggestion that disorder is related to the stability of a community and that evaluating community responses would provide some indication as to whether if the perception of crime is in fact, related to the level of disorder. Figure 3 provides how we can relate BWT to fear of crime and disorder, an extension from Figure 2.

RAT fits in with the box titled 'signal of breakdown of informal social control'. In the RAT crime triangle, we can evaluate the quality of the control surrounding the suitable target, motivated offender and a suitable place to commit an offense. Any breakdown of social control requires an understanding of what constitutes physical and social disorder, identified in Figure 2⁵. Thus, the next section provides a brief typological review of disorder.

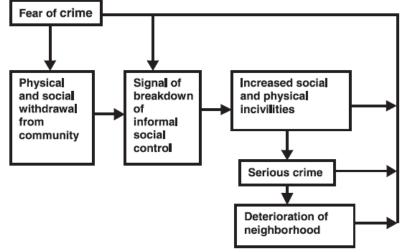


Figure 3: Broken Windows Theory to Fear of Crime and Disorder

Source: Doran & Lee, (2005). Investigating the Spatiotemporal Links between Disorder, Crime, and the Fear of Crime.

⁵ Figure 2: page 23

2.4 Typology of Disorder

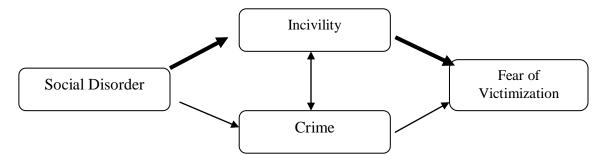
In general, disorder has been viewed to have two different categories – the physical and the social. The appearance of community, such as "trash, graffiti, vandalism, abandoned buildings, and broken streetlights" (Karakus et al., 2010, 175) is classified as physical disorder, where community decline is evidenced through physical fixtures. In contrast, social disorder is directed toward 'inappropriate' public activities such as drunkenness, prostitution and visible drug use. Lack of management of disorderly activities, according to Lewis and Salem (1986):

Leads law-abiding residents to think that nobody in the neighbourhood cares about what is going on in their environment, and this makes them withdraw from public life as they assume that the neighbourhood is disorganized and not safe. (in Karakus et al., 2010, 175)

Alternatively, there should be consideration that what 'appears' to be disorder may, in actuality, but a part of everyday life. For example, a long time resident of a community may be accustomed to seeing graffiti and may have come to accept it as a fixture of a neighbourhood. The rules of each neighbourhood vary from community to community and therefore, what is seen to be acceptable in one area may not be considered acceptable in another.

When considering the history and concept of disorder, Skogan (1990) notes that Sociologist Albert Hunter initially coined the word incivilities, but changed it to disorders to identify the connection between incivility and criminal activity. Hunter (1978) outlines his argument in the following approach (Figure 4):

Figure 4: Hunter's (1978) 'Incivility' Argument



Adapted from Hunter (1978, Symbols of Incivility: Social Disorder and Fear of Crime in Urban Neighbourhoods)

Hunter appears to give more weight to the relationship between Social Disorder to Incivility, and Incivility to Fear of Victimization. At the same time, Hunter argues that there is a correlation between incivilities and crime. Discussion about disorder goes as far back as the mid-1960s, where researchers such as Albert Reiss and Albert Biderman recognised the impact of visible signs of incivility had on the spectrum of criminal activity. For Albert Reiss, such activities were considered 'soft' crimes (Skogan, 1990, 3). Skogan (1990) demonstrates the more 'current' ideology of disorder, in his book Disorder and Decline, he notes that disorder has the capacity to influence the level of serious crime, as well as any 'community control' available to local residents to maintain certain standards, or conditions of living. Further, there is the belief that the presence of an 'unacceptable' (disorderly) activity is a threat to the common, shared value for stable community life.

2.4.1 Identifying Disorder in Literature

The definition of disorder and its relationship to fear of crime has been discussed for over 30 years; with early evidence found in Wilson (1975) that

suggests, "citizen fear of crime was partially determined by incivilities" (Armstrong, & Katz, 2010, p. 281). By 1982, the definition of disorder was expanded in Wilson and Kelling (1982) where disorder, social control and crime are seen as having an interconnected relationship. As a result, when no one cares about the community, it leads members of that community to reduce their presence within the community and therefore leading to the breakdown of community controls. Disorder, in Wilson and Kelling's opinion refers to 'untended' behaviour where:

Families move out, unattached adults move in. Teenagers gather in front of the corner store. The merchant asks them to move; they refuse. Fights occur. Litter accumulates. People start drinking in front of the grocery; in time, an inebriate slumps to the sidewalk and is allowed to sleep it off. Pedestrians are approached by panhandlers. (1982, 3)

The likelihood for reduced involvement within the disordered community is possible. Interests will naturally shift towards more 'cared for' communities; the area will simply become an ecological edge, and become a neglected part of the city. The lack of regulation within the community will act as a breeding ground for less desired or illegitimate activities. Drug use, prostitution, and litter are likely to accumulate. Once a certain level of disorder has been achieved, fear of crime becomes prevalent. The psychological removal (or correction) of this fear is difficult to remedy, in particular if the community members feel that the police cannot be relied upon. Such attitudes are reminiscent of urban decay.

By 1990, literature examining disorder included three major categories of processes. Skogan (1990) looked at informal social control, community morale,

and instability in the housing market as generating factors. The inclusion of economic concerns brought about the shift in thought that disorder is an integrated component of crime rather than as a separate entity contributing to criminal activity. Taylor (1999, in Armstrong & Katz, 2010) "argues that theories specifying a link between incivilities and crime propose that incivilities represent a construct separate from other related features of the individual, street block and neighbourhood" (282). According to Armstrong and Katz (2010), there is value in evaluating crime and incivilities through surveying, where the strength of the relationship between such constructs (Campbell & Fiske, 1959, in Armstrong & Katz, 2010, 283) can be analysed through method variance.

Other studies have challenged the assessment of disorder as well. Sampson and Raudenbush (1999) observed that if perceptions of incivilities are present, race and socio-economic status indicators are likely to have a greater influence on perceptions of the same incivilities, as opposed to other factors such as "territorial signage and defensible space" (Armstrong and Katz, 2010, 283). Therefore, this indicates that the term disorder has experience a temporal shift ⁶in definition, an important concept to acknowledge in the field of public policy.

2.4.1.1 Disorder as a Signal Crime

The BWT's ability to tentatively identify any connection between perceptions of crime to the level of disorder is valuable. However, Innes (2004) argues that there has been no definitive proof for BWT's interpretation of disorder

⁶ Temporal shift – over time, the term "disorder" has experienced different definitions. Thus, when looking at policy, we need to consider the context in which the term was placed within.

and perception of crime. Continuing Innes' (2004) opinion, current literature lacks "a coherent explanation of the public understanding of crime and disorder, and how such understandings are imbricated in the wider symbolic construction of social space" (336). Innes postulates a signal crimes perspective as a more comprehensive theory than BWT, where the central proposition is:

Some crime and disorder incidents *matter* more than others to people in terms of shaping their risk perceptions. This is because some crimes and some disorders (but not other ostensibly similar incidents) are especially 'visible' to people and are interpreted by them as 'warning signals' about the risky people, places and events that they either do, or might, encounter in their lives. (336, emphasis added by author)

Public attitudes towards disorder, the location of where the assessment was made, and the data retrieved may only be considered symbolic as it may suggest that attitudes are reflective of individual insecurities. According to Innes (2004), "the amount of fear shifts in frequency and intensity as people traverse and navigate different social situations" (337); this approach is similar to the Crime Pattern Theory, and its blend of environmental and psychological behaviours. In using the signal crimes perspective, Innes (2004) begins with Goffman's (1972)

explanation on the construction of perceptions of social control and risk:

When an individual finds persons in his presence acting improperly or appearing out of place, he can read this as evidence that although the peculiarity itself may not be a threat to him, still, those who are peculiar in one regard may well be peculiar in other ways, too, some of which may be threatening. For the individual, then, impropriety on the part of others may function as an alarming sign. Thus, the minor civilities of everyday life can function as an early warning system; conventional courtesies are seen as mere convention, but non-performance can cause alarm. (Goffman, 1972, 241) The use of Goffman's (1972) study demonstrates that presence of disorder (or incivilities, as known at the time) can disrupt social order. Therefore, we look at how the presence of disorder can 'signal' any disruption within a community that may require attention. Signals, according to Innes (2004) have the components of an expression, content and effect. These three components have a parallel guiding principle with RAT, in the sense that all three need to converge to generate a signal.

2.4.1.2 Media and Signals

Signal crimes are typically viewed from the media coverage perspective (Innes, 2004). The interpretation derived from media sources "functions as a warning signal to people about the distribution of risk throughout social space" (Innes, 2004, 15); where the suggestion is made that risk still exists, and acts as a reminder of the presence of danger. The paper takes into consideration people who have had experiences (or close encounters) with crime. Innes (2004) also establishes a "symbiotic relationship... between police investigating the case and journalists reporting it" (Innes, 1999, in Innes, 2004, p. 15). Police have limited resources, and will sometimes reach out to the public for more information so that they can detect, solve, or prevent crime. Utilizing media sources as a strategy is not uncommon (Innes, 2003, 2004), and in return journalists are more than willing to report 'serious' cases or any 'investigative' processes.

Interestingly, not all criminal events are reported (31% in Canada's 2009 GSS) but for the ones that are reported it acts as a "warning signal" suggesting

that more social control within the community is needed. The moral panics of public problems translated to private problems, where Innes (2004) argues that:

[Signal crimes] captures a changed dynamic in terms of how crime and disorder is rendered meaningful in contemporary social life. As Garland (2001) provocatively suggests, contemporary social life is routinely animated by the presence of a number of 'normalised' adaptive strategies that have emerged as part of a cultural response to the 'normal social fact' of high crime rates. (Innes, 2004, 18)

Evidently, social control as opposed to physical control is a much more pervasive topic in literature, and is reflected in the media where stories of crime are reported on a daily basis. From the media perspective, signal crimes are also symbolically reflective toward heavily reported crimes, anxieties and particular sets of problems present in the community.

The theories presented in Chapter 2 provide insight as to how our built environment influences the way we think about our surroundings, our behaviour within the area, and what perceptions we take away from our experiences. For policing purposes, there is a need to maintain informal social control, for the stability of a community. The community surveys discussed in this thesis is a tool to assess the breakdown of informal social control, while allowing members of the public to express their concerns. Perception is not a concrete phenomenon, it is based on our experiences and those experiences become memories. By trying to identify when a disruption, or change is taking place within a community, it provides a tactical advantage for policing strategies – in particular with regard to resource allocation of its police officers, workload, and program development.

3: DISORDER AND FEAR OF CRIME FROM A POLICY STANDPOINT

3.1 Public Policy and Crime Prevention

Public policy is typically set up within a framework as part of effective primary and secondary levels of strategic planning, whether it is crime prevention, community infrastructure, and civic strengthening. In essence, public policy is defined as a "course of action or inaction chosen by public authorities to address a given problem or interrelated set of problems" (Pal, 2006, 2). In this paper, the focus is on how public policy could utilize the community surveys developed by Mosca and Spicer (1997) to ascertain community concerns, needs, wants, and issues. The information gathered is important, and the cost is minimal, in contrast to what would have been spent for a private company to quantify the data.

Policies are often developed and implemented within specific political contexts. One such example would be looking at the municipal level government framework, where the City of Vancouver is comprised of a council that represents each district within the city. The council itself will naturally gear itself to share a unified vision, but this is not always possible, due to conflicting interests. An example includes local residents, visitors and business owners who may not share a council's vision. In Vancouver, communities are divided into about 10 sub-communities. Communities have a natural structure, but most often policies

and government approaches are based on an official designation of a community and its boundaries. Vancouver Police Community Policing Centres (CPCs) have their own sub-community divisions. Each sub-community has its own set of local concerns, which may not match with other communities.

Politically, communities may not receive the attention they see as warranted, where specific issues are either a) heavily focused upon or b) neglected due to lack of political attention or awareness. It should also be noted that it was the City of Vancouver's wish to be involved in the surveys. Through the information gathered by each community survey, service providers were able to identify what local communities 'need' or 'want'. Alternatively, general services already provided might not be seen as necessary. For instance, the Grandview-Woodlands CPC survey identified things like wish for more trash bins, but the City did not know the community wanted this, as the number of bins met the city standard. Consequently, local needs/ wishes are frequently a city concern in Canada. Often, criminal events such as car theft or B&E's (break and enters) are the centre of attention, whereas minor, seemingly non-criminal events such as litter go by unenforced, and may only be seen as an issue by those spending the most time within a given location. The assessment of what constitutes an issue or a 'problem' in a specific community varies on an organizational level. City policies and services may not reflect the needs of those operating at the local level and thus the surveys are intended to bridge the communication gap by providing quantifiable insight toward community support of/ or dislike of city services without the political standards of protocol.

3.2 Introduction to Vancouver's Municipal Governance

In Metro Vancouver, there are currently 22 municipalities, one electoral area (Electoral Area A) and one treaty First nation (Tsawwassen First Nation)⁷. The City of Vancouver is a municipality within Metro Vancouver and is comprised of a council with a mayor⁸ and 10 appointed councillors. Council meetings are held three times a month at Vancouver City hall, meetings are open to the public (and are available online due to Shaw Cable, a local television company) but delegations are not heard. Currently there are three standing committees that deal with the following: city services and budget, transportation and traffic, and planning and environment. Members of council stand on these committees, which serve various objectives. Of interest is the planning and environment standing committee:

The objectives of the Committee are to deal with neighbourhood planning and protection; environmental issues; community issues; and cultural and ethnocultural issues. Its current topics include local area planning programs, zoning issues, housing initiatives, social policy development, children's policy, Vancouver Arts initiatives, continuing public health care initiatives, heritage matters, noise complaints and environmental issues. (metrovancouver.org, 2011)

Each councillor is involved in a variety of organizations, other appointments (may be directors) for other Metro Vancouver Committees, and have outside public office positions. Councillors come from various neighbourhoods located within the City of Vancouver, such as Kerrisdale, Collingwood, Commercial Drive, and Chinatown. The diversity of councillors on

⁷ metrovancouver.org (2011)

⁸ 2011: Gregor Robertson

board enables community representation. However, the likelihood for councillors to advocate for each of their home communities is unlikely, due to heavy workloads. With several appointments, committees and other commitments, it leaves local communities without a voice at the municipal level. The lack of opportunity for communities to reach municipal level information sharing is a drawback especially when drafting new policies that may not match the agenda of the local needs or the opportunity to identify local concerns. The surveys intend to fill this gap.

The process of action by council and reaction by local people or local groups is a long-standing issue because they do not feel that they are being heard. There is a regular process that is followed: the city will have a policy/ program under consideration. First, the city will hold public meetings, where the policy or program in its proposed form may not produce much of a response in the public meetings, and the policy or program is passed at council and implemented. It is often only after a policy is implemented that people become aware of the policy. A case in point is the introduction of Bike Lanes in 2010, by Mayor Gregor Robertson. In this example, bike lanes had little meaning in the abstract. Specific lanes had an impact. It should be noted that some proposed changes are seen as major from the beginning and public input is present and clear. Some things are noticed. A public meeting before something is passed is required by law, but usually unnoticed in the abstract.

Alternatively, one could argue that the involvement of local communities is present at the municipal level as several councillors have backgrounds that look

at local initiatives. One such example would one of the Vancouver councillors, who has prior work experience in the creation of the Downtown Eastside's Supervised Injection Site, expansion of transit availability, and was a former director of communications for the office of the premier (Glen Clark). The broad involvement of its councillors across a variety of issues provides for in-depth insight, but it may not be reflective of the community's current state, in particular if the councillor is not actively involved in current projects.

Working as part of the City of Vancouver is the Vancouver Police Department (VPD). The VPD is associated with 10 community-policing centres, eight of which are non-profit organizations created by an autonomous board of directors, and two operated by the VPD. According to the VPD, "community policing is a police philosophy that involves problem solving with the assistance of the community" (Vancouver Police Department, 2011). In addition, the VPD manages and operates a business liaison program where an assigned officer liaises with retail merchants and business organizations, exchanges information on crime related matters. In relation to the VPD, the local business improvement association (BIA) which looks at sustainable communities, and has 14 community districts to manage in the City of Vancouver alone.

3.2.1 An Example of Facilitating Governance: CivicInfo BC

Governance of municipal government is also scrutinized by CivicInfo BC, which looks at the facilitation of information for all local governments throughout BC. CivicInfo BC is an "award winning, co-operative information service for those who work, or have an interest in British Columbia's local government sector"

(CivicInfo BC, 2011). CivicInfo is a "not-for-profit organization, developed through a partnership between BC's local government and related municipal sector agencies" (CivicInfo BC, 2011). The agencies that make up this partnership are CivicInfo BC, the Union of BC Municipalities, the Local Government Management Association of BC, the BC Recreation and Parks Association, and the Local Government Department of British Columbia's Ministry of Community Development. CivicInfo BC developed local government surveys conducted on an annual basis. The surveys do not cover specific public concerns, such as disorder. Further, they cover a broad range of topics, but at a significant cost. Costs are important to understand as for the City of Vancouver, an expenditure breakdown is provided for services (Figure 5).

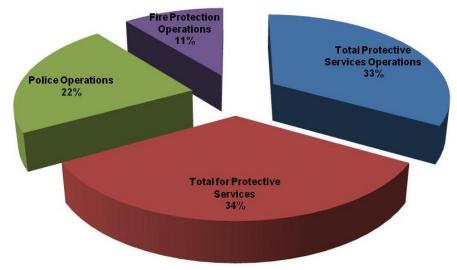


Figure 5: City of Vancouver Expenditure Breakdown

Adapted from CivicInfo BC Dataset (2011)

In 2006, the City of Vancouver spent \$1,012,070,000 in total operating expenditures for a land area of 114km². The majority of funds went toward protective services (services and operations combined). Interestingly, police

operations received a significant amount of attention (22%). The amount spent on protective and police operations ⁹indicate that the money allocated may be justified as a result of policy management.

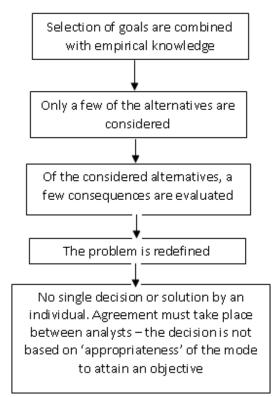
3.3 Theories of Public Policy

In Canadian affairs (in particular, the City of Vancouver), the incrementalist model best defines public policy. Its bureaucratic style suggests the position of avoiding any radical changes that "might involve an all-or-nothing policy solution" (Inwood, 1999, 212). The approach seeks to accommodate as many agendas from various groups and organizations. Figure 6¹⁰ is a sample of what the incrementalist model might look like, without any other confluencing factors.

A critique of the incrementalist model is that it is based on conflict of interest, favouring those with status quo. Despite its shortcoming, the incrementalist model is currently perceived as the approach to best understand "the decision-making process undertaken by policymakers" (Inwood, 1999, p. 213), which may help explain the Canadian governments' bureaucratic approach to political decisions. Objectives are achieved (or attained) based on agreements between analysts, suggesting that there need to be a common set of value(s) or goal(s) that complement stakeholder requirements.

⁹ Protective Services refer to fire, bylaw and other protective services not related to the VPD. ¹⁰ Figure 6 is on page 40.

Figure 6: Incrementalist Model



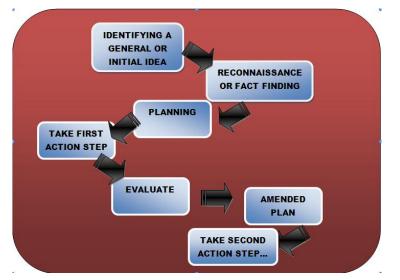
Adapted from Anderson, Public Policy Making, 3rd Ed (NY: Holt, Rinehart and Winston, 1985, 9-10)

However, there is increasing popularity in applying action research as a springboard from the incrementalist model.

3.3.1 Action Research and Public Policy

To reiterate, public policy involves several stages where policymakers undergo several analyses to determine which action (or inaction) should be taken to address specific issues. It is appropriate at this point to incorporate action research with policy development. At first glance, action research might refer to the examination of group dynamics and beliefs in which people examine their realities. However, action research is defined as: Action research aims to contribute both to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework (Rapaport, 1970, p. 499; in Fals-Borda, 1983, p. 278)

Kurt Lewin, credited with coining the word "action-research" (Smith, 2001, p. 1) suggested that "cycles of analysis, fact finding, conceptualization, planning, implementation, and evaluation" (Lewin, 1948 in Brown & Tandon, 1983, and Fals-Borda, 1983) could be used to resolve problems and spark new avenues in knowledge construction. Smith (2001) outlines Kurt Lewin's action research cycle into six simple steps in Figure 7.





Adapted from Smith, M.K. (2001) 'Kurt Lewin, groups, experiential learning and action research', the *Encyclopaedia of Informal Education*.

Action research is grounded in theory and practice. The goal is to address problems in an immediate and a mutually acceptable ethical framework (Fals-Borda, 1983, p. 278; Avison et al., 1999, p. 94). Researchers, such as academics who have a focused interest in specific topics are encouraged to collaborate with practitioners of action research. Researchers have a responsibility to disseminate their findings and results to others who can initiate activities with the purpose of either eliminating or strengthening characteristics of a situation. Practitioners are individuals or groups who have a specific interest/stake in what the research has to offer them. According to Avison et al. (1999), the collaboration between researchers and practitioners is defined as an "iterative process" (p. 94) where both parties engage in information sharing activities, such as dialogue and intervention. Sharing information is essential for data to be utilized in a practical and effective approach if change is to occur. The iterative process indicates that action research should be seen as a cyclical process where information building takes place.

The modification of long standing theories from different disciplines makes action research a unique process. Research aims to 'test out' theories in order to gain feedback from practitioners. In the process, researchers are encouraged to explicitly explain their approach and application (Avison et al., 1999, p. 96); by doing so, researchers can better interpret how the approach and application can be assigned to a real-life situation. Documentation is required by researchers, and can come in the form of notes, diaries and flow charts. With documentation, future studies can refer to the approach and application, and if necessary, to either refine or refute the said process model. It was not until the late 1990s that action research gained ground as a popular research method.

3.3.2 Evidence Based Research

Black's (2001) paper "Evidence Based Policy: Proceed with Care" examines research and policymaking for healthcare through two windows: the interactive model and the straightforward model. Interactive models are geared toward in-depth collaboration between involved organizations as opposed to the straightforward model, which "assumes research evidence can and should influence health policy" (Black, 2001, p. 275). Both healthcare and crime prevention strategies are currently the responsibilities of the public sector. Therefore evidence-based research on healthcare may provide insight into crime prevention practices.

Research has consistently found it difficult to gain momentum within public service policymaking. One is that "policymakers have other goals other than clinical effectiveness" (Black, 2001, p. 276); an example includes electoral demands. In order to obtain public support, policymakers for a running party might develop policies that meet public demands by putting more money into the criminal justice system. Stereotypes are another obstacle in the policymaking process, where experience is highly valued over factual knowledge. In the healthcare system, surgery is a field where experience and practice is valued; this concept may be applicable towards policing strategies, where experienced officers might dismiss research evidence because it contradicts with their own personal experiences. Overall, according to Rycroft-Malone (2008), "evidence tends to be contextually bound and individually interpreted and particularized within [a] context." (p.404)

Evidence needs to be utilized appropriately, which suggests that researchers should have a dual focus on understanding the policymaking process. If researchers understand the policymaking process, research may be more valuable in the eyes of policymakers. However, researchers should be aware that evidence may be "ignored because policymakers have to take the full complexity of any situation into account" (Black, 2001, p. 277). Therefore, a communicative relationship should be developed where both researchers and those with an influence in the policy community can get together to convert the acquired knowledge into proper practice. An example of active implementation of research is found in Sheldon et al.'s (2004) evaluation which noted that "healthcare organizations that had a culture of consensus, financial stability and strong governance functions" (in Rycroft-Malone, 2008, p. 406) were more likely to experience successful consideration of research results. Evidence based research, as a result, should do its best to adhere to the policy and management agenda to ascertain the best results from the results.

3.3.3 Incorporating Fear of Crime and Public Policy

Changes in crime rates and crime trends have an impact on the fear levels of the general public, where "higher fear levels within the general public indicate that greater resources are needed" (Weinrath, et al., 2007, 618). Policymakers have a fine balance to play with – the actual versus perceived levels of fear, and as well as how many resources are available for allocation. It has been suggested in the past that the solution was to be 'tough on crime'. Despite pressing need to alleviate fear of crime, there is evidence that demonstrates

otherwise, where fear has "remained relatively constant" (Forde, 1993; Roberts, 2001; Taylor, 1999; Warr, 1995; in Weinrath, 2007, 622).

Kenneth Ferraro's (1995) symbolic interactionism model can be applied to explain fear of crime, where "people redefine risk in relation to local events or experiences" (Weinrath et al., 2007, 619). This can be related to Brunswik's (1939, 1952) lens model, where experiences influence our current situation, and how our current situations shape our future experiences. Further, past cues such as graffiti, litter and deteriorating neighbourhoods has an effect on our current cues, in which we may categorise as part of our fearful complex. Routine Activities Theory is most helpful in this instance as it demonstrates the significance of personal and environmental cues to help us as individuals, to ascertain what are 'signs' of disorder, order, or neutrality. Biologically, fear towards crime can be described as "an emotional response of dread or anxiety to crime or symbols that a person associates with crime" (Ferraro, 1995, 4). However, despite biological drives, there must also be a consideration as to how such internal drives are triggered by external cues.

According to Forde (1993), Haynie (1998), Roberts (2001), and Warr (1995), there was a consensus that asking "is there any area right around here that is within a mile where you would be afraid to walk alone at night?" (Weinrath, et al., 2007, 621) would be able to derive a general measurement for fear of crime. Given the evidence that rapid changes and weakened social bonds contribute to fear of crime, all communities are subject to change as it is part of life. However, it is warned that the RAT provides a template in which we can

adjust our current working environment to new changes. By ensuring that there are appropriate managers, handlers and guardians available, then change can occur with minimal impact on the level of fear in that community. Suffice to say, gender, age, race, income and marital statuses are also possible indicators towards fear of crime. The issue is that it does not take into consideration the environmental and socio-economic factors surrounding the phenomenon of fear. Overall, there is a clear lack of consideration as to what a 'safe' neighbourhood means to the North American society (Weinrath, 2007).

3.3.4 Economic and Social Costs of Fear of Crime

Fear of crime is a vague concept, as there is actually no single 'conceptual' model. However, in terms of measurement, fear of crime has been "partly dependent upon the nature of the measurement instrument rather than a true reflection of 'social reality'" (Farrall et al., 1997 in Dolan & Peasgood, 2007, 122). As a result, surveys are important and needed to measure fear of crime, or a perceived fear of crime. It does not set out to generalise or pinpoint specific indicators of crime, but instead, it aims to generate an atmospheric sense as to whether if the area being examined is perceived as safe or unsafe. In a sense, the surveys are trying to distinguish between risk, fear, anxiety, satisfaction, and dissatisfaction as surveys do "pick up a whole host of [emotions]..." (Dolan & Peasgood, 2007, 122) associated with fear of crime.

It is important to look at the costs of crime, as anticipation for victimisation among the general population is common. In crime costing, such anticipation and preventive action is difficult to assess and it is not included in the Table 2

developed by Brand and Price (2000), Dolan and Peasgood (2007), which

evaluate tangible and intangible costs related to fear of crime.

Tangible Costs	Intangible Costs
Direct cost for treatment of health losses Indirect cost due to productivity losses Direct costs to the Criminal Justice System Direct cost of security measures Direct cost of insurance administration Direct Cost from changes in behaviour	Non-health loss: changes in behaviour Non-health loss: changed view of society Health-related loss: physical Health-related loss: Psychological

Table 2: Socioeconomic Costs

Tangible costs are important to evaluate as they can be driven by motivation to avoid victimisation. Expenses include treatment, criminal justice system processes, security, and insurance. Productivity losses and behaviour are a bit more complex, where productivity losses refer to a reduction in energy or dedication to an individual's working environment. Productivity losses are related to behaviour, which refers to 'preventive' actions where such activities may include leaving work early and taking more 'pricey' transportation (i.e. taxis) to circumvent victimisation.

Behaviour also has an impact on intangible costs, which are based on non-health and health related costs. The non-health loss change in behaviour category may be linked to property values and the level of physical disorder within a community. For instance, the consensus is that if there is disorder in one's neighbourhood, the likelihood (or probability) of that individual to be more conscientious of locking the door is increased. Consequently, non-health losses are considered indicative of how fear of crime can have an impact on an individual's quality of life. With minimal information and discussion on the concept

of 'quality of life', it is appropriate at this point to evaluate the health-related losses to ascertain estimates towards the non-health related losses. Quality of life is a subjective area that should be awarded more attention.

For health losses and intangible costs, such an evaluation could be conducted by health-service providers. Providers may include treatment centres, mental illness services, and other forms of care (such as the Downtown Eastside safe injection site, Insite, operated by Vancouver Coastal Health Authority). Dammert & Malone, 2003 note that a survey conducted in Chile provided evidence that fear of crime was best "predicted by social, political and economic insecurities, with crime being perceived as a 'scapegoat for all types of insecurities'" (in Dolan and Peasgood, 2007, 80). The health-loss state can be measured and evaluated in terms of length of time that individual felt a specific 'fearful' state. Overall, the examination of the:

Costs of the fear of crime would give a more accurate picture of the true costs of crime and would also facilitate cost-benefit analyses of interventions aimed at reducing crime and/or the fear of crime. (Dolan & Peasgood, 2007, 121)

3.3.5 Transportation and Disorder – How Fear is Geographical

Loukaitou-Sidiris, Liggett and Iseki (2002) address and profile the issue of transit crime, especially with regard to light-rail systems. From the Loukaitou-Sidiris et al., (2002) paper, 4 incentives towards the need for a more in-depth examination of transportation crime is provided. The ability to create opportunities to commit offenses around transit stations is feasible as there are limited destination points that transport mass number of people each day. In addition, the mixture between public and semi-private spaces can make the transit space an attractive location to commit offenses. In profiling transit crimes, Loukaitou-Sidiris et al., (2002) recognised five patterns related to transit crime:

a) Transit stations are often delegated to large, heavily populated cities;
b) Incidents are typically nuisance crimes;
c) Crime levels are correlated to neighbourhood crime;
d) Crime occurs at stations rather than on the transportation instrument itself (i.e. a bus or train), and
e) Crime varies temporally and spatially.
(Loukaitou-Sidiris et al., 2002, 136)

The evidence from the Commercial Drive (1997, 2007), Mount Pleasant (2009) and Collingwood-Renfrew (2009) studies demonstrate a strong correlation of transit stations as a 'breeding' ground for disorder. Transportation crime can be focussed upon in either the compositional or the ecological approach. In this thesis, the two approaches to evaluate public perceptions of street level disorder (such as the physical presence of litter) regard to transportation crime will be combined. The compositional approach focuses primarily on the socioeconomic characteristics of the community, the offenders within the community and the community's residents. Characteristics included poverty, unemployment and inequality (Loukaitou-Sidiris et al., 2002). In contrast, the ecological approach looks at the social context in which disorder takes place, for instance – was there sufficient guardianship present? The integration of the compositional and ecological approaches "accounts for physical and social variables to investigate [a given] phenomenon" (Loukaitou-Sidiris et al., 2002, 137)

4: THE USE OF COMMUNITY SURVEYS

4.1.1 Purpose and Design of Surveys

In 2008, Mosca and Spicer developed a handbook as part of an independent consultation project funded by the Civil Forfeiture Office (Ministry of Public Safety and Solicitor General and Criminal Justice Reform Secretariat¹¹. In this handbook, Mosca and Spicer (2008) classify the community surveys as a "methodological approach used to identify the perception of crime and safety held by residents, business owners and visitors who frequent a specific neighbourhood" (5). The surveys help reveal community perceptions of a neighbourhood that otherwise would not have been identified through mass-surveys not conducted on a block-by-block scale, nor captured by official measures.

The information derived from the community surveys can help local governments and politicians narrow down the scope of issues surrounding wellvisited neighbourhoods. Further, the information can be used to test discrepancies between perception and reality, for instance, fear of crime can be "generated by 'public disorder', [which] may have had an effect on [participant] belief that all crime had increased" (5). The test of perception versus reality also provides a yardstick of a community's tolerance level toward particular

¹¹http://www.criminaljusticereform.gov.bc.ca/en/reports/index/html

community activities (such as outside café seating or panhandlers that are either aggressive/passive).

The framework required to carry out the survey, comprises of "multiple stages: holding focus groups, designing the questions, conducting the survey, collating the data, writing the report, drafting the recommendations, meeting with groups to discuss the survey results and implementing the recommendations" (6). It is primarily the community policing centre (CPC) that takes point on all stages of the community survey, as it is their community, and they know their community better than those who aren't directly involved in the community. A CPC that holds the following criteria: a) is well organized (meaning, they have an administrator/RCMP officer that demonstrates leadership), b) high retention of volunteers, c) access to a crime analyst, and d) acquainted with a public ministry or public service organization for backup; is well suited to take on a project such as this.

Program development/initiation is another valuable asset attributed to the community surveys. The results from the survey can be the platform for which programs can be justified on, especially when there is an understanding of the "perceived community strengths and challenges, as well as diverse opinions in the community will make service providers and policy makers more responsive to community needs and values" (Mosca & Spicer, 2008, 10).

4.2 Population Demographics and the Communities Surveyed

The City of Vancouver utilized Canada's 2006 Census data for civic planning purposes. In their report ¹², we can see that the following communities experienced changes (Figure 9):

- Yaletown-Granville: 41.8% increase in population
- Mount Pleasant: 14.1% increase
- Collingwood Renfrew: Ranging from 3.2 to 32.2% increase
- Commercial Drive 0.5 to 8.9% increase

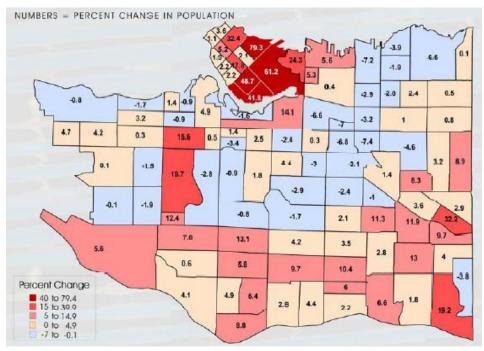


Figure 8: City of Vancouver 2006 Census Population Shifts

Interestingly, in spite of the differences in population (particularly between Yaletown-Granville to the other communities), there is little difference in public opinion, and the mapping analysis shows that all communities tend to have one or two 'major' hot spots. The value of the community surveys is exemplified once again. No matter what population size, aerial square footage, or locale a

¹² http://vancouver.ca/commsvcs/planning/census/2006/popdwellcounts.pdf

community is in, the community surveys are a valuable tool for police, community planners, and other public services to gauge resource allocation. The community surveys not only act as a tool for organizational purposes, but it also engages members of the community in voicing any concerns that might not have otherwise been identified through police reports.

4.3 Landmarks in Perception of Crime Mapping Exercises

With the focus of the thesis on action research, evidence based policy and the importance of identifying local community concerns, the community surveys impact how interpretation is facilitated in public perception surveys. During the Yaletown Granville 2009 and 2010 survey analyses, there was a slight modification of the mapping exercise with the inclusion of landmark locations in the Yaletown Granville 2010 survey (See Figures 9 and 10 on page 58). The inclusion of landmark locations in this survey was intended to make the area more familiar to respondents. Modification, in this sense warrants a special note for expansion in the field of academic input with stakeholder concerns (in this case, a desire to make the mapping exercise more familiar). In Section 4.3.2 (page 60), an undergraduate study was undertaken to test whether if various mapping method(s) (in this case, landmark usage) lead to different interpretation(s) of how an area is perceived. It suggests that care should be taken when conducting future surveys.

4.3.1 Landmarks and Crime (Taylor, 1995)

Before discussing landmarks, Taylor (1995) discusses the impact of key sites, or symbolic locations on crime and fear of crime. A key site discussed were local public parks, where Skogan's (1990) concept states:

Parks are places that no one controls; people you do not know come into the neighbourhood to use them; youths drink and use drugs there; it is difficult to find legitimate reasons or the means to push the undesirables out; you cannot protect or control your own kids there. In disorderly neighbourhoods, parks are places you keep your kids out of. (in Taylor, 1995, 267)

The concept of disorder might be extended toward the loss of social order (or any order, generally speaking), and may develop a 'landmark reputation' for being unsafe, a location attracting public trouble, even when nothing particularly serious occurs in the area. Landmarks are 'fixtures' in people's minds, they can be architectural, landscape, or natural designs that have experienced a long presence within the community. All communities have primary, secondary and tertiary landmarks, depending on the amount of time a specified individual spends within the community. For instance, a resident of the community is likely to be more familiar with the study area, and will provide one type of insight; in contrast, a bi-weekly visitor will be familiar with the area, but to a different degree. Suffice to say, both perspectives are valid and each bring their own concerns to the community.

Primary landmarks are well-known locales. For instance, in Metro Vancouver, Stanley Park is a location that nearly 100% of the British Columbian population is familiar. Other primary landmarks include BC Place Stadium and

Rogers Arena, where National sports leagues compete and have a capacity of 25,000 fans. Secondary landmarks are more specific to the area itself, but still widely known. One such secondary landmark might be Pacific Centre Mall or

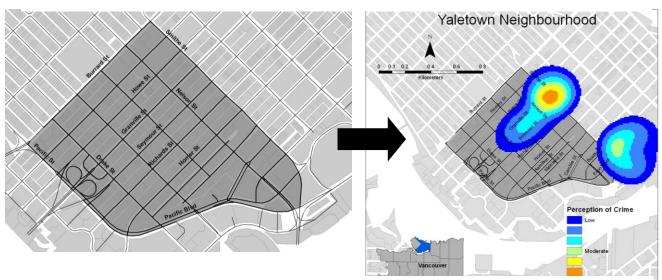
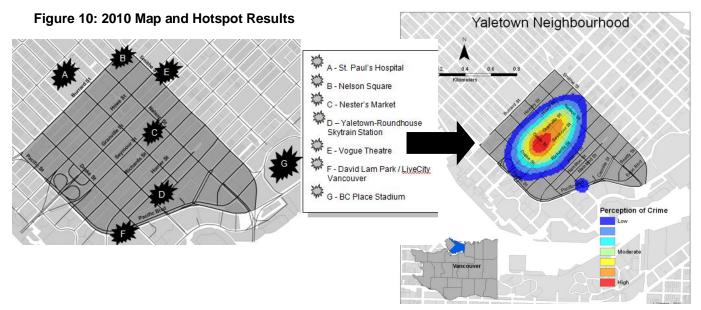


Figure 9: 2009 Map and Hotspot Results

J.Ginther (2009) Institute for Canadian Urban Research Studies



J.Ginther (2009) Institute for Canadian Urban Research Studies

Waterfront Skytrain Station. These landmarks are well known to local Vancouverites. Tertiary landmarks are much more specific, and those who live, work, or visit the area frequently are familiar with them. Examples include Caprice, a local nightclub; Nester's Market, the community's high-end grocery store; and the Yaletown Roundhouse Station, a local community centre. Research on landmarks with regard to perception of crime, or crime in general is limited in scope. The community surveys implemented in the Yaletown-Granville community provides insight as to how landmarks can (or do not) have an impact on hot spot mapping. A case in point would be the following maps utilized for the 2009 and 2010 Yaletown Granville Community Surveys (Fig 9 and 10).

Could the exclusion (or inclusion) of landmark locations on the mapping aspect of the survey have impacts on public perception of crime? Changing the mapping aspect to make it 'easier' for participants to assess their location can be seen as both a positive or negative thing. A contribution with regard to the inclusion of landmark locations is that it brings a sense of familiarity to the participant, especially if they are visitors to the area. On the negative side, providing landmarks could be seen as a scientific error – it may skew perceptions by directing respondents to not include small areas, say an intersection or a lane way that bothers them. Media focus also has an impact on how landmarks are portrayed, and may sometimes accurately reflect the concerns and fears of the local public. Alternatively, fears can be "fuelled by anxious national media discussion" (Taylor, 1995, 270). Attention to a location can affect the political

agenda of the community, in particular when painting an image either to garner political attention, or to attract new visitors.

4.3.2 Study on Landmark use (Undergraduate Study)

In February 2011, I enlisted the assistance of two Criminology courses, with the permission of its instructor, Criminology 457 (Crime and Criminal Intelligence Analysis) at the SFU Surrey Campus and Criminology 352 (Environmental Criminology: Theory and Practice) at the SFU Burnaby Campus. All students in attendance were criminology students and all 34 students filled out the survey, which was randomly organized with maps that had landmarks or no landmarks. Criminology 352 is a prerequisite course for Criminology 457; both courses focus on the relationship between crime, fear and the environment, criminality of place, and decision-making processes. The difference is that Criminology 457 applies the theory of Environmental Criminology to the Administrative Criminal Justice System, in particular the handling and quality of data analyses. Further, demographics such as age range, University seniority, and gender was collected. A total 17 surveys for each type of mapping analysis (landmark versus no landmarks) was received. Two primary areas were selected for analysis, one being a map of the greater Metro Vancouver region, which extends from the City of Vancouver to Chilliwack. The other map provided was of Simon Fraser University's Burnaby Campus, the most prominent of the three Simon Fraser University Campuses (which has locations in Downtown Vancouver's Harbour Centre and in Surrey).

4.3.3 Landmarks versus No Landmarks: Which is more 'informational'? ¹³Instead of looking at which map is more 'politically correct' than the other, I prefer to use the word 'informational', in the sense that it provides more intelligence or indication of how perception of crime is developed. When comparing Map A (Metro Vancouver w/landmarks) to Map B (Metro Vancouver w/out landmarks), Map A appears to have a visual clustering of perceptions surrounding the 'municipality' names. In contrast, Map B is more specific, with **Figure 11: Map A (Metro Vancouver with Landmarks)**

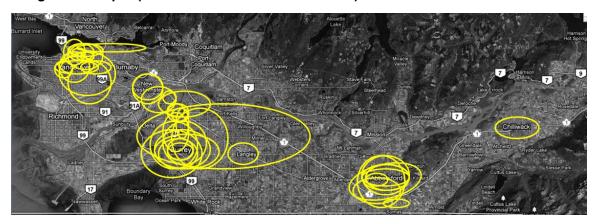


Figure 12: Map B (Metro Vancouver without Landmarks)



the focus on areas that are believed to be unsafe. Interestingly, the maps that provided landmarks, and thus more information provided more clustered areas

¹³ The circles were generated using paint by an ICURS member.

as opposed to maps without landmarks. Thus, this begs the question of whether if more intelligence (i.e. landmarks) is helpful in 'assisting' or 'biasing' the participant in where they construe areas deemed to be unsafe. Such information is important to consider when developing surveys and relying on hot spot analysis. In spite of the fact that Map B did not appear to have as much 'circling' than Map A, it suggests that intelligence gathering need to consider how much information should be provided to attain perceptions. Information provision in intelligence gathering requires special attention, especially when determining geographical allocation of policing resources.

Further, when it came to the more 'microscopic' (and possibly more familiar) area of the Simon Fraser University Burnaby Campus, there was more detailing on the map without landmarks (Map D). This provides more 'information' than Map C (SFU w/landmarks).

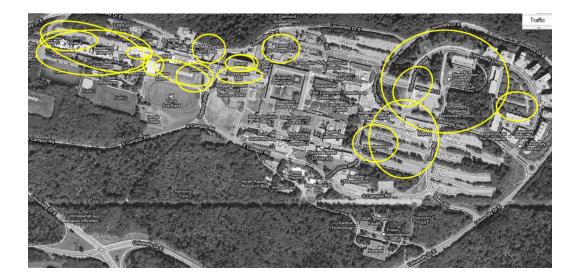


Figure 13: Map C (Simon Fraser University Burnaby Campus with Landmarks)

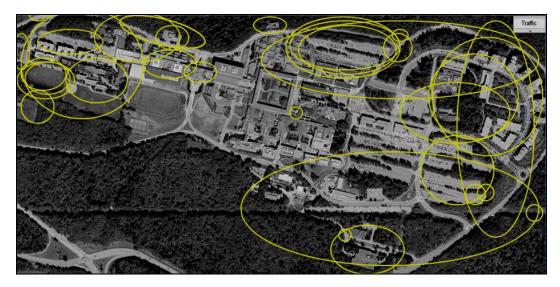


Figure 14: Map D (Simon Fraser University Burnaby Campus without Landmarks)

The results here are not conclusive, but it is an indication for three criterions to be in place in order to receive additional informational hot spot mapping analysis:

- No landmarks
- Participant(s) must be at least familiar with area
- Preferably on a microscopic (or block-by-block) area.

Familiarity of the area is important, as those who are more aware of his/her spatial spaces, the more information can be provided. Those who did not provide any information on the maps indicated that they do not know the SFU Burnaby Campus enough to provide an opinion of what areas they consider unsafe.

Thus, the more microscopic an area is, the more attention is paid toward detail. The information from a microscopic map can be used toward developing an algorithm for macroscopic (wide-scale) hot spot analysis. Brantingham et al., (2009) argues for "a crime analysis that begins with a small spatial unit, in this case individual parcels of land, and build(s) larger units that reflect natural

neighbourhoods" (87). The use of small spatial units makes a fundamental difference in understanding crime patterns, and as well as the "spatial relationship between objects" (Frank et al, 2010, 1). Further, Brantingham et al. (2009) also uses Schmid's (1960) argument that:

Standard spatial aggregations such as census tracts or politically defined neighbourhood or city borders often fail to reflect the underlying socio-spatial distributions of people, land uses, or criminal events. (88)

4.4 Focus Piece: Findings from the Yaletown Granville Study

In 2009, when the Yaletown Granville survey was to be conducted, the GCPC wanted to focus heavily on social housing and the homeless population, as it was viewed to be an increasing problem for them. The CPC wanted to identify any hot spots in the area that required additional attention. The survey itself produced twofold responses, one from a mapping analysis and the other from a likert scale analysis. In 2009, with approximately 300 surveys completed, the mapping analysis showed concentration around the Granville

Question	2009 Yaletown
Outside Café Seating	97%
Skateboarding on the Streets	96%
Sleeping on the streets	96%
Variety of Businesses	96%
Current Levels of Vehicle Traffic	93%
Passive Panhandlers	91%
Graffiti on Public Property	88%
Film locations in the neighbourhood	88%
Smoking Pot in Public	87%
Unleashed dogs in parks (other than designated dog parks)	86%

Table 3: 2009 Survey- Top 10 Yaletown Most Visible Activities

strip, which comprises of sex shops, grunge shops, high end boutique shops, music stores, restaurants and nightclubs. The strip is popular among young people as it is walking distance to the downtown core of Vancouver.

For visibility, Table 4 shows the top 10 activities most commonly seen in the area (for the 2009 Yaletown Survey), and includes possible bothersome **Table 4: 2010 Survey - Top 10 Yaletown Most Visible Activities**

Question	2010 Yaletown
Outside Café Seating	98%
Current levels of vehicle traffic	96%
Skateboarding on city streets	92%
Litter	92%
Smoking Pot in Public	92%
People sleeping on the streets	90%
Passive Panhandlers	90%
Availability of Parking in the area	90%
Variety of businesses in the area	86%
Unleashed dogs in parks (other than designated dog leashed parks)	85%

activities such as people sleeping on the streets and passive panhandlers.

Interestingly, nearly 90% of respondents identified graffiti on public property (the seventh most visible activity). Rating wise, Graffiti on public property had an 81% unacceptability rating, whereas the score for people sleeping on the streets had a 66% unacceptability rating. This suggests that public opinions may not actually demonstrate the 'actual' reality (or viewing) of certain phenomenon. Should there be a greater focus on public opinion, or should there be more emphasis on what activities are most visible AND bothersome? There is some shaky ground to play upon, for passive panhandlers had a 91% visibility rating, and its highest public opinion was delegated to a tolerance level (nearly 49%). One of the most fascinating items in this survey is the *idea* that certain activities are not accepted (i.e. needles, condoms), and it is not visible within the community. The surveys

seem to indicate that the most bothersome 'public perception/opinions' are kept under control and it also shows that public opinion matters. Statistically speaking, the survey reiterates what past research has found with regard to homelessness, that exposure to homeless people generated increased negative perceptions towards homelessness. Despite exposure, females had more positive perceptions of homeless people than did males.

Interestingly, in the 2010 Yaletown Survey (Table 4), the top 10 most viewed activities changed slightly, with new categories of litter and smoking pot in public. Several logical explanations may explain this. It could have been the presence of crowds, lack of garbage disposal units, lack of garbage pickup service, the smell of marijuana in the air, the mass congregation of people, or could it have been simply the event itself generating an atmosphere of wanting to celebrate (i.e. Vancouver 2010 Olympics). People celebrate differently, and not everyone agrees on how celebrations should be conducted – whether it is private or public. Perhaps those that celebrate smoking pot in the private sphere decided to bring it into the public sphere. Such results suggest that mass activities expose us to different lifestyles.

On the other hand, the survey has its drawbacks. In 2010, after the survey had been conducted, the GCPC appeared to have a diminished level of interest in the survey – primarily due to exhaustion after working overtime for the Vancouver 2010 February Olympics. Despite being exhausted, they managed to fill out 273 surveys to complete the 6-month picture of any changes for the Yaletown-Granville Community. There were a few changes to the survey, which

includes the addition of landmark locations for respondents to identify the area.

Interestingly, the mapping analysis produced very different results –

demonstrating the impact of adding landmark locations as a guide.

4.4.1.1 Commentary on Surveys (for all neighbourhoods)

The most commonly viewed activities in ALL four neighbourhoods, using the secondary data provided are:

- Outside café seating
- Litter (except Yaletown in 2009)
- Passive panhandlers (except Collingwood-Renfrew)
- Unleashed dogs in public spaces (except Mount Pleasant)

Graffiti on public property was viewed most neighbourhoods, except Mount Pleasant and Yaletown 2009 survey. Interestingly, the surveys that involved a pre and post-test analysis experienced very close similarities as to what activities were most commonly viewed. For the 1997 and 2007 Commercial Drive community surveys, nine similarities were found out of the top 10 most viewed activities. The ten-year gap makes the survey intriguing as it demonstrates that in spite of the availability of time, little has changed with regard to viewing activities. In contrast, the 2009 and 2010 Yaletown-Granville surveys, done only in a mere 6-month gap, experienced 8 similarities. The presence of activity does not appear to change much over time.

As an example, when looking at the four most viewed activities in all communities:

Table 5: Four most viewed activities in all communities

Outside Café Seating received a very high 'complete' acceptability level:

- 72% (1997 Commercial Drive),
- 70% (2007 Commercial Drive),
- 52% (Collingwood),
- 64% (Mount Pleasant),
- 66% (Yaletown 2009) and
- 67% (Yaletown 2010)

In contrast, litter received a high 'complete unacceptability level'

- 66% (1997 Commercial Drive),
- 70% (2007 Commercial Drive)
- 64% (Collingwood)
- 61% (Mount Pleasant),
- 63% (Yaletown 2010). **not highly viewed in Yaletown 2009

The results certainly suggest that in spite of a high 'viewing' level, the

acceptability rating determines the positivity (or negativity) of a given activity's presence within the community.

4.4.2 Unacceptable Activities and Neighbourhood Concerns: Assessing Yaletown in Detail

In the survey, we asked participants what they thought were the most

completely unacceptable to the most completely acceptable activities in their

communities. Interestingly, when we took the top 10 most completely

unacceptable questions, seven striking patterns were found. Despite the fact that

not all questions on the surveys were the same, these perceptions were found to

be commonly completely unacceptable! They are (in no particular order):

- Needles on the ground
- Condoms on the ground
- Sex trade workers working in residential areas or near schools
- Aggressive panhandlers
- Litter
- Graffiti on private property
- Graffiti on public property

Each factor is indicative of disorderly conduct taking place within the community,

even if it is not highly 'visible' as evidenced in the previous section. Tables 7 and

8 demonstrate the Top 5 Most Unacceptable Activities in Yaletown (2009 and

2010) and their viewing rates:

Table 6: Top 5 Most Unacceptable Activities in Yaletown 2009

	Viewing	
	Yes	<u>No</u>
Do you think needles on the ground are	64%	36%
Do you think condoms on the ground are	67%	33%
Do you think sex trade workers working in residential areas or near schools are	35%	65%
Do you think aggressive panhandlers are	82%	18%
Do you think litter is	50%	50%

Table 7: Top 5 Most Unacceptable Activities in Yaletown 2010

	Viewing	
	Yes	No
Do you think needles on the ground are	57%	43%
Do you think sex trade workers working in residential areas or near schools are	23%	77%
Do you think aggressive panhandlers are	72%	28%
Do you think condoms on the ground are	63%	37%
Do you think litter is	92%	8%

The purpose of looking at the top most unacceptable activities and its visibility percentage is to assess whether if the activity itself is in fact, a real problem in the environmental stance, as opposed to being psychological opposed to the activity. When looking at percentages over 50%, in 2009, three activities were highly visible, with one (litter) split in a 50:50 ratio. In contrast, 2010 had four activities highly visible, in particular with the dramatic rise of litter (92%). The decrease in visibility of needles and aggressive panhandlers indicates that a shift in community activity occurred (the Vancouver 2010 Olympics), or that certain

actions were implemented to decrease the presence of those activities. Whatever the action was, it certainly had an impact on those two activities.

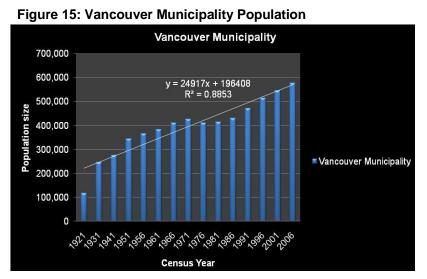
Alternatively, the action(s) during the six-month period did not have a positive impact on litter and condoms on the ground. Could it be that people attributed needles as waste? The one variable that appears to have a consistently low visibility rating are sex trade workers working in residential areas or near schools (35% and 23% respectively). The fact that it received a high 'unacceptability' rating and a low visibility rating suggests that this concept is value-based, and may not even be occurring. What is perceived as unacceptable does not necessarily reflect its actual presence.

4.5 CASPR – Utilizing Vancouver Data

CASPR, or known as Crime Analysis for the Pacific Region, is a collation of public information prepared by ICURS. According to ICURS (2010), "there are several features of CASPR (that) is influenced by the iQuanta system used in the UK" where "longitudinal, time series datasets are used and compared to changes in charges, cleared charges and charges cleared otherwise" (Ghaseminejad, 2009). As a result, CASPR enables its user to compare and contrast between 180 jurisdictions (or municipalities) in the Province of British Columbia.

All community surveys were conducted in the Vancouver municipality and thus, for the purpose of this thesis, the municipality of Vancouver is contrasted with the statistics found for the Province of British Columbia. First, I looked at BC

Census Information¹⁴, to identify any incremental changes to Vancouver's population density. The change has resulted in an increase of nearly 25,000 new residents per census year, with an r^2 value of .885.



Adapted from: http://www12.statcan.ca/census-recensement/2006/

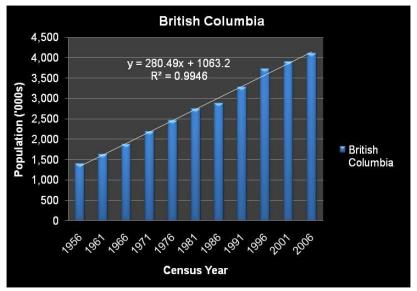


Figure 16: British Columbia Population

Adapted from: http://www12.statcan.ca/census-recensement/2006/dp-pd/fsfi/index.cfm?LANG=ENG&VIEW=C&PRCODE=59&TOPIC_ID=3&format=jpg

¹⁴ http://ww.bcstats.gov.bc.ca/data/pop/pop/mun/mun1921_2006

In contrast, British Columbia (shown above) has an incremental increase of nearly 280,490 in its population per year. The ratio between Vancouver and BC is (24917/280490) = .08. That means that Vancouver's population increase is nearly equivalent to British Columbia's census increase, despite an r² difference of .11.

5: DISORDER AND A COMPLEX POLICY

Homelessness is an increasing problem in the Metro Vancouver region, and is a common problem in other Canadian census metropolitan areas such as Toronto and Montreal (CMHC, 2010). There is the question that lack of housing can lead to serious situations, where homeless individuals may engage in illegitimate activities to obtain necessities. Those eligible for affordable housing are those who pay over 20% of their income towards housing costs. We focus primarily on the Metro Vancouver area. In this example, we assess the benefit with regard to the quality of housing. Quality of life can be measured quantifiably, but in this case, I am also interested in evaluating what constitutes affordable housing and what expectations are placed upon such facilities, and how the community survey dataset can provide 'supporting' data to identify these 'expectations'.

5.1.1 The Economic Perspective – Extending the Homelessness Example

There are several arguments and criticisms for taking on an economic perspective, with regard to homelessness. First, I base my study on economic, quantitative analysis for the basic reason that is funding. Funding is one of the driving forces in the process to alleviate homelessness, and is driven by several ministries, such as the Ministry of BC Housing and Social Development, and the Ministry of Lands, Parks and Housing. Other organisations in collaboration with the abovementioned ministries, such 123 housing, Covenant House, and other

non-profit organisations require a steady flow of funding in order to maintain programs geared towards homelessness.

Accordingly, the focus of this example will be geared towards the development of public policy, which typically "overlooks the violence of the informal economy because we assume that 'those people' deserve what they get" (Stanko, 1995, 221). Those belonging to the low-income and homeless population deserve to enjoy the same legal rights as outlined in S.7¹⁵ of the Canadian Charter of Rights and Freedoms. Public policy development is typically geared towards the concept of ensuring a benchmark level of housing provision met in each fiscal year. One way to evaluate the benefits of affordable housing is to develop a cost-assessment program. By developing a program directed towards the standard of liveability in affordable housing, organizations can then work with stakeholders to reduce the prevalence of continued homelessness and those at risk. The assessment of liveability standards and maintenance is important to evaluate as it contributes to the sustainability of any successful program where the initiative is to provide basic human needs. The community surveys provide insight as to what local residents, visitors and those employed in the area think about affordable housing in their community.

5.1.2 Definition of Homelessness

The lack of unification in the definition of homelessness is problematic, especially with regard to public policy decisions. First, I reviewed a Parliamentary

¹⁵ S.7 everyone has the right to live, liberty and security of the person and the right not to be deprived thereof except in accordance with the principles of fundamental justice. (Canadian Charter of Rights and Freedoms)

Research Branch Report prepared by Lyne Casavant (1999), where the definition of homelessness is argued. In the document, three primary types of homelessness are outlined: the chronically homeless, the cyclically homeless and the temporarily homeless. The chronically homeless are defined as individuals "who live on the periphery of society and who often face problems of drug or alcohol abuse or mental illness" (Casavant, Political and Social Affairs Division, 1999); in contrast, the cyclically homeless refer to individuals who may have experienced sudden life changes resulting in the loss of dwelling. Examples include situations such as incarceration or those who are victims of abuse (i.e. domestic abuse). Lastly, those within the temporarily homeless group are individuals who may lack access to housing for a short period as a "result of a disaster (fire, flood, war), and those whose economic and personal situation is altered" (Casavant, 1999).

The focus of this section will be towards the chronically homeless population as it meets baseline consensus with other agencies, such as the Social Planning and Research Council of British Columbia (SPARC BC). In a Metro Vancouver Homeless Count report (SPARC BC, 2008):

A person was considered homeless if they did not have a place of their own where they could expect to stay for more than 30 days and if they did not pay rent. This includes people staying in emergency shelters, safe houses, and transition houses, as well as those sleeping outside or in other public spaces unfit for human habitation.

As a result, two other sub-definitions arise with the concept of homelessness: absolute and at-risk homelessness. According to the

Homelessness Technical Report prepared for the Stakeholder Committee on Homelessness Collaboration (Park et al., 2009), absolute homelessness indicates any individual living without any "physical shelter" (6) such as parks, alleyways and on the street. Further, absolute homelessness also applied to those who temporarily resided in emergency shelters, such as Vancouver's Homeless Emergency Action Team (HEAT) shelters where individuals are considered to have no fixed address. In contrast, at-risk homeless are individuals who "live in spaces or situations that do not meet basic health and safety standards... and are not affordable" (Park et al., 2009, 6). Subsequently, we specifically focus on any chronically homeless individual who falls under the 'atrisk' category. One of the justifications for focusing on the at-risk chronically homeless (ARCH) population is to clearly define what *housing standards* are considered compulsory in current public policy.

5.1.3 Homelessness as a Humanitarian Effort

It is important to look at homelessness as not just as a burden to society, but as well as a basic humanitarian principle where all individuals should be granted access to the basic necessities of life. The criterion is best featured in the *Universal Declaration of Human Rights*, which states that:

Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, *housing* and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control (in Eberle, Kraus and Serge, 2009, Mustel Research Group) (emphasis added by author)

Several factors contribute to the plight of homelessness and include variables such as poverty, lack of affordable housing, increased building costs, substance/alcohol abuse, mental illness, unemployment, incarceration and domestic violence (Canadian Council on Social Development, 1989).

5.1.4 Other considerations in the definition of homelessness

Despite widely held definitions of homelessness, there are several interpretations attached. A case in point would be the definition of homelessness adopted by the 1987 Homeless Committee on the City of Montreal. The baseline definition of homelessness was to include those with no fixed address, lack of access to safe housing, and services. One of the questions brought up in the Parliamentary Branch Report was what constitutes housing. For example, can "an unused building or even a trailer be considered to be housing?" (Casavant, 1999) A time element perspective could be added on to the concept of homelessness, where organisations may not consider an individual homeless after they have been deprived of satisfactory housing for a period. For the sake of argument, I am taking on the perspective that any individual who falls under the ARCH (at-risk chronically homeless) category, and has been living in housing that does not meet basic health standards for more than one day is considered homeless. The types of accommodation that will be focused on are low-rise buildings, which are most commonly used towards affordable housing developments.

5.1.5 Housing and Income

We focus primarily on the concept of housing as it is considered an opportunity to provide those at-risk of becoming homeless with the "necessary skills to move towards living independently" (BC Housing Press Release, January 2010). Before engaging into public policy development, the concept of housing is clarified.

5.1.5.1 The Many Definitions of Housing

BC Housing, SPARC BC and the City of Vancouver list different terms for specific types of housing. Such terms include, but are not limited to

- Supportive housing
- Low Income Housing
- Social Housing
- Subsidized Housing
- Affordable Housing

With housing as the common terminology used, the Ministry of Lands, Parks and

Housing [RSBC 1996] Chapter 307 S. 1 states that housing:

Means anything that is, in the opinion of the minister, a) Suitable for human habitation or accommodation, or b) Capable of being made suitable for human habitation or accommodation, and includes land, improvements and space that is, directly or indirectly, related to housing.

In addition, we should define what a household constitutes. According to

Statistics Canada (2006), a household:

Refers to a person or group of persons (other than foreign residents) who occupy the same dwelling and do not have a usual place of residence elsewhere in Canada. It may consist of a family group (census family)

with or without other persons, of two or more families sharing a dwelling, of a group of unrelated persons or of one person living alone.

Households are divided into three categories, private households, collective households, and households outside Canada. For the purpose of the paper, we focus on private households, which include renter households. Household types are another definition that should be clearly defined, in where private households are divided into family and non-family households. We focus primarily on non-family households as we assume that individuals belonging to the ARCH group will likely live alone in a private dwelling or in "a group of two or more people who share a private dwelling, but who do not constitute a census family" (Statistics Canada, 2006). In British Columbia, affordable housing is classified under the umbrella of 'supportive housing', which is identified as any property that is funded by "the provincial government or a regional health board, and which combine on-site support services" (BC Housing and Construction Standards, Factsheet *Classification of Property in B.C.*, 1)

5.1.6 Classification of housing

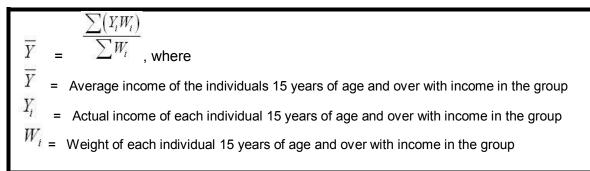
The classification of affordable housing was developed in 2008 by BC Housing, and any property that is eligible to be used for affordable housing purposes is defined under two umbrellas: the Ministry of Lands, Parks and Housing; and the BC Assessment Act. Appendix B provides a chart of the two definitions of affordable housing in slightly different contexts.

From an economic and environmental criminology perspective, when it comes to the development, maintenance and agreements towards affordable housing, getting *the biggest bang for the government's buck* is likely to have the best impact as opposed to focusing solely on social injustice. As a result, I focus primarily on the definition provided by the Ministry of Lands, Parks and Housing as it is a baseline definition that should include standards of living when making such agreements. Further, in this paper there is more emphasis towards identifying pathways to strengthening partnerships directed towards housing standards.

5.1.7 Income

The majority of the population residing in affordable housing are those that spend more than 50% of their annual income on necessities, such as housing, food, and clothing. In the Statistics Canada definition, low income is known as low income cut-offs (introduced in 1968) where it was "arbitrarily estimated that families spending 70% or more of their income (20 percentage points more than the average) on these basic necessities would be in 'straitened' circumstances" (Statistics Canada, 2006). In 2008, Statistics Canada released their calculation for average income as follows (Figure 17):

Figure 17: Statistics Canada Calculation of Average Income



Statistics Canada, 2008

The calculation for average income is based on individuals who reported their income prior to the 2006 census, and is calculated for all types of households (private versus public). A weighted calculation is provided to ensure a form of linearity across all census groups.

5.1.8 Vancouver's Median Household Income

To assess the economic environment in Vancouver, the Census Metropolitan Areas was compared with Vancouver's Median Household Income to assess temporal shifts in income earnings for the general population (Appendix C, Chart 1). Toronto, Calgary, Edmonton and Vancouver are the top four consistently highest census metropolitan areas receiving a higher than average (Canada) median income household for the census years 2001 and 2006. By evaluating the median household income, we come to the next question of how much it actually costs to live in Vancouver. Again, we are looking at single individuals falling under the ARCH category, and are assumed not having any other dependants. According to Goldberg (2006), SPARC BC estimates monthly costs of living in comparison with the BC Employment and Income Assistance Rates. A single adult living on income assistance is estimated to make \$510.00, but in actuality, their estimated cost of living is \$1,233.13 (19).

Once again, these values are not definitive and are subject to change. It should

be noted that these values are also fairly conservative estimates as the values

incurred are also dependent on the strength of the labour market.

I also look at affordable housing and the costs required. One of the most

recent (and largest) affordable housing projects in Metro Vancouver to date

would be the Vancouver Organizing Committee for the 2010 Olympic and

Paralympic Winter Games (VANOC) has:

- Contributed \$30 million dollars to the southeast False Creek neighbourhood redevelopment, which will, post-Games provide 250 affordable housing units
- Contributed an additional \$30 million dollars to the Whistler Resort Municipality to provide 1,000 beds for non-market housing
- 156 permanent affordable housing units will be reconfigured from 320 temporary modular housing units used to house athletes, and will be relocated to six communities across British Columbia:
 - Chetwynd
 - Chilliwack
 - Enderby
 - o Saanich
 - o Sechelt
 - o Surrey
- Contribution of \$250,000 to the expansion of Covenant House, a Vancouver Emergency shelter, which will provide 32 new transitional housing beds for youths between the ages of 16-22.

(Vancouver 2010 Support for Government Housing Initiatives, 2010, http://www.bchousing.org/news/news_releases/archive/2008/10/21/5590_0810211624-798?pageNumber=&cmbYear=2008)

Appendix D, Chart 1 provides the Canadian average monthly shelter

costs, which could be described as the baseline costs for cost of living. Again,

renters will be focused as the ARCH population is also assumed to belong to the

renter population. Renters paid \$538 per month in 1991, and in 2006, this

amount increased to \$725. As a result, much of housing affordability is

confluenced by the strength of the labour market. However, there is evidence in Appendix D, Chart 1 that shelter costs have increased incrementally in correlation with income earnings. All households in 2000-2005 experienced an 18.7% increase in income earnings, nearly equivalent to the increase in shelter costs (18.5%) in 2001-2006. While costs for renters did not reach such proportions, it is indicative of an increasingly strained financial environment. Recall the early definition that any household paying more than 30% or more before taxes is considered to be in the bracket of those with affordability problems (Statistics Canada, 2006;The Daily, November 2006). Interestingly, the Canada Mortgage and Housing Corporation (CMHC) notes that British Columbia, along with the Yukon and Nunavut experienced faster rates of renter income than shelter costs. Further, Appendix D, Chart 2 demonstrates the average sheltercost-to-income-ratios (STIRs) in Canada between 2001 and 2006.

As demonstrated in Appendix B, Chart 2, over 50% of households belong to the under \$10,000 bracket, and this number is consistent between owners and renters. Despite this, the average Canadian shelter cost is valued at \$369 per month (CMHC, 2009, 6), a high number. Both British Columbia and Ontario experienced the highest STIRs in all of Canada, at 23.1% and 23.0% respectively (CMHC, 2009, 6), which means that British Columbians and Ontarians spend the greatest on shelter costs, spending as much as \$1,000 a month on housing. A comparison chart is provided by CMHC, which depicts average shelter costs in the top 10 census metropolitan areas (Appendix E, Chart 1)

It is also a good idea to compare populations for each of these major CMAs. I look at the top 5 CMAs (Toronto, Oshawa, Barrie, Vancouver and Calgary respectively), selecting census subdivision data from Statistics Canada (Appendix F, Chart 1), and as well as their corresponding income for the population 15 years and over (Appendix F, Chart 2). It is clear that Toronto, Calgary and Vancouver have a significant percentage of the population within the \$1,000-\$5,000 range. While this is not indicative of the at-risk homeless population, it is indicative of the general labour market and the percentage of individuals in the workforce.

With regard to housing, I also looked at the percentage of Vancouver's housing population, particularly the period of housing construction. Below demonstrates the distribution of housing in Vancouver, where over 50% of Vancouver's housing was built prior to 1980 (Appendix G, Chart 1). The other 5 CMAs are experiencing similar trends in comparison to Vancouver by year of construction (Appendix G, Chart 2).

5.1.9 Sustainable Development – Affordable Housing as a Solution

It is also important to evaluate the impact of sustainability in public policy development and decisions. Two types of sustainability can be argued at this point, where the economic, social and environmental aspects are considered. According to Arman et al (2009), "weak sustainability suggest[s] that because different forms of capital can be substituted, sustainability exists so long as the benefits exceed the net costs (in Figge and Hahn, 2004, p. 3034). Alternatively, the concept of 'strong sustainability' is defined by Brand (2009 in Arman et al.,

2009) as a complementary relationship between natural and man-made capital. According to Disney (2007 in Arman et al.,), the:

Failure to improve housing affordability will have broad repercussions for Australia, affecting long -term economic development and competitiveness, urban development, fertility rates, family cohesion, retirement security and intergenerational equity. (p.3035)

Vancouver has engaged in several housing initiatives, where specific housing projects are leased out for 60 years. Programs include the Provincial Homelessness Initiative (PHI)¹⁶, the 1999 National Homelessness Initiative (\$62 million), the Vancouver Agreement (\$10 million) and the Greater Vancouver Regional Steering Committee on Homelessness (RSCH). The CPCs utilizing the community surveys see the reduction of homelessness as a priority, and by ascertaining public responses to homelessness, a greater understanding of whether housing initiatives are integrating well within communities can be achieved.

5.1.10 Affordable housing in Australia – an example

According to the World Commission on the Environmental Development (1987), any development should "meet the needs of the present generation without inhibiting the ability of future generations to meet their needs" (in Arman et al., 2009, p. 3035). Basic human needs such as water, food, clothing, and shelter has also been contested by the argument that human wants should be granted the same priority. Human wants such as education and recreation are important, but for the purpose of this paper, only basic human needs will be

¹⁶http://www.bchousing.org/programs/homelessness

evaluated for simplicity. In Australia, Arman et al., (2009) discusses the symbolic need for housing, where in some regions of Australia, housing has become viewed as a "non-essential luxury item" (3036) where, according to Johnson (2006), "the average household size has dropped, [and] houses have increased in area by 30% (3036). When taking into considerations the standards that should be enforced in recognition of the Universal Declaration of Human Rights, the challenge remains towards the "provision of housing that is both affordable and appropriate in terms of size and location" (Arman et al., 2009, 3036). The argument that housing should be viewed as a basic human need is supported by the fact that housing standards will continuously change. Community or societal expectations have strong influence on the expectations of what constitutes a 'liveable standard', it should be kept in mind that most affordable housing is typically basic and is not excessively large. Thus, the need for knowledge of community expectations further supports the need for community surveys to gauge local level concerns.

5.1.11 Economic Challenges to Housing

It is often said that housing is an unjustifiable cost, or a strain on society as it does not provide much for a return investment. The cost of building, the energy required towards the liveability of the facility and other expenditures attached to affordable housing can be seen as unjustifiable costs. However, one must consider the physical and mental health benefits that result from the provision of affordable housing. Such benefits are difficult to measure and therefore it is recommended that a typology of definitions should be drawn up to

identify the parameters of what constitutes a benefit concerning physical and mental health, a potential challenge for the Ministry of Health. It is important to acknowledge that one of the intention(s) of this paper is to examine the standards of provision of affordable housing in alleviating the pervasiveness of homelessness; while demonstrating the effectiveness of the surveys in influencing public policy development.

5.1.12 Systems Thinking and Systems Dynamics

A technique that may assist in engaging homelessness issues is Systems Thinking and Systems Dynamics. Through systems thinking we can evaluate the behaviour and objectives of each institution, and this was evaluated through Park et al's., (2009) homelessness technical report, where the inputs and outputs were weighed accordingly to an element's level of activity. For instance, the value of the input would be measured by the success of the impact experienced by the output. In summary,

In systems dynamics, an input is a cause; an output is an effect due to the input. When the current value of an element's output depends only on the current value of its input. The element is said [to be] static. On the other hand, when the current value of an element's output depends on past inputs, the element is said [to be] dynamic....systems thinking views the system as a whole. (Park et al., 2009, p. 11, Gharajedaghi, 2006)

By conceiving the housing system as an interdependent system, it enables us to examine how institutional relationships either support or undermine one another in various situations. One way to view housing as part of the systems thinking process is adapted from the Homelessness Technical report, which used crime and economic downfall to demonstrate the pressure for police action (Appendix H).

5.1.12.1 Current Evidence of Systems Dynamics in Action

In the community surveys conducted by the Institute for Canadian Urban Research Studies in collaboration with the Yaletown-Granville Community Policing Office in the Yaletown-Granville district, a local Metro Vancouver community located in the downtown core for the years 2009/2010, three key findings were identified. First, it should be noted that over 520 surveys were collected for the 2009/2010 surveys were residents, visitors or employees working within the Yaletown area. For both surveys, 75% of respondents said that the provision of affordable housing is tolerable to completely acceptable, where 68% (in 2009) and 72% (in 2010) of these respondents said they had seen such housing in their community. A similar reaction was found for homeless shelters.

The evidence also shows that people are not tolerable towards people sleeping on the streets, where an average of 93% of respondents said they had seen such activity taking place within their community. In addition, on average 43% of the respondents said they had run into problems with homeless people, which is a cause for concern for future studies. When it came to the implementation of developing public housing, 58% of respondents on average chose not to provide an opinion. Therefore, this could demonstrate that the public may be supportive of affordable housing, but may not really have an interest in any public consultation, which is an area that may require more examination.

With such diverse public responses, it is an example of action-research, and as

well as indirect collaboration with the public to identify the level of support (or lack

of) towards affordable housing.

5.1.12.2 Stakeholders

Homelessness designated for any policy that focuses specifically on atrisk chronically homeless population, a starting point requires the consideration of three primary categories of stakeholders (Table 3).

Table 8:Stakeholder Categories

Government	Academics	Interest Groups
 Ministry of BC Housing and Social Development Ministry of Lands, Parks and Housing Ministry of Public Safety and Solicitor General 	 Multidisciplinary – not just delegated to Criminology 	 Social Planning and Research Council of British Columbia (SPARC BC) Canada Mortgage and Housing Corporation (CMHC) Greater Vancouver Regional Steering Committee on Homelessness (RSCH) The public!

As identified in systems thinking (Appendix H), by evaluating the behaviour and objectives of each institution, a clearer division of responsibilities, roles and resources could be allocated more efficiently and effectively towards housing standards. Essentially, systems thinking allow stakeholders a way to determine whether if specific activities support or undermine policy actions.

6: FUTURE DIRECTIONS AND CONCLUSION

Since 1997, Metro Vancouver has utilized the community surveys six times. The similarities in results across all surveys make it a valuable tool in the sense that it provides confirmation that fear and disorder exist within those communities. The thesis explored the value of Community Policing Centre (CPC) led surveys in implementing action oriented, evidence-based research as supplementary support to local police enforcements, and eventually in public policy. CPCs are an untapped source of support; its staff and volunteers are truly passionate about their work in the community, and can reach to residents, visitors and those working in the area on a much more personal level than regular police officers could.

The surveys were prepared with an environmental criminology background, as the goal was to assess how the public 'feel' about certain activities (either legitimate or illegitimate) taking place within their community. The thesis also recognizes how the community surveys could help CPCs (and other policing offices) identify signal(s) indicating social control breakdown, which is important considering that the built environment is dynamic, bringing new challenges each day.

Further, homelessness was used as an example of how the community surveys could provide insight into what the public really think about homelessness, the language attached to it, and whether if homelessness is a

visible activity. For instance, the surveys were able to identify that respondents may prefer the use of 'social' housing as opposed to 'homeless shelters'. The use of 'social' housing suggests many interpretations, one of which could be that social housing sounds more integrated within a community. Language used in policy development (for homelessness) could further expand on this finding.

Of special focus was the Yaletown Granville 2009 and 2010 community surveys, where in a six month gap, changes were evident in its mapping exercise. The Yaletown Granville surveys demonstrated the impact of how changes in the mapping analysis (in this case, the addition of landmarks) influence its interpretation. An undergraduate study was undertaken to test landmark influence, and three tentative conclusions were reached in the context of community surveys:

- No landmarks
- Participant(s) must be at least familiar with area
- Preferably on a microscopic (or block-by-block) area.

More research is needed in the area of landmark and public perception, in particular with regard to issues surrounding social disorder (homelessness, prostitution, and drug use).

Additional questions that come up from the thesis include the need to explore what constitutes community safety/crime prevention in the context of public policy and policing. The limited amount of research on the definition and conceptualization of community expectations makes it difficult to determine the appropriate policing strategies for different neighbourhoods with different concerns. Essentially, the community surveys have only begun to scratch the

surface of the value of public perceptions.

To summarize, key thesis points include:

- Evaluating the value of public perception of crime through local community surveys
- Evaluation of the design of the surveys, what works, what doesn't, and what might work
- The value of community policing offices and conducting community surveys stakeholder collaboration, expansion of RCMP/VPD roles, and development of public policy.

7: WORKS CITED

Aksan, N., & Demirbuken, S. (2009). Symbolic interaction theory. WORLD CONFERENCE ON EDUCATIONAL SCIENCES - NEW TRENDS AND ISSUES IN EDUCATIONAL SCIENCES, 1(1), 902-904.

Andresen, M. (2006). A spatial analysis of crime in Vancouver, British Columbia: A synthesis of social disorganization and routine activity theory. *CANADIAN GEOGRAPHER-GEOGRAPHE CANADIEN*, *50*(4), 487-502.

Andresen, M. A. &. J., G.W. (2004). The unspecified temporal criminal event: What is unknown is known with a oristic analysis and multinomial logistic regression. *Western Society of Criminology*, 5(3), 1-11.

Archbold, C., & Ebrary, I. (2004). Police accountability, risk management, and legal advising. New York: LFB Scholarly Pub. Retrieved from http://proxy.lib.sfu.ca/login?url=http://site.ebrary.com/lib/sfu/Doc?id=1008002 6

Arman, M., Zuo, J., Wilson, L., Zillante, G., & Pullen, S. (2009). Challenges of responding to sustainability with implications for affordable housing. *Ecological Economics*, 68 (12), 3034-3041.

- Armstrong, T., & Katz, C. (2010). Further evidence on the discriminant validity of perceptual incivilities measures. *Justice Quarterly*, 27(2), 280-304.
- Avison, D., Lau, F., Myers, M., & Nielsen, P. A. (1999). Action research. COMMUNICATIONS OF THE ACM, 42(1), 94-97.
- BC Housing press release, January 2010. http://www.bchousing.org/news/news_releases/2010/01/21/5590_1001211557-848
- BC Justice System Performance Measures. (2009). Justice system key indicator report
- BC Stats. (2009). British Columbia regional socio-economic indicators methodology. *Ministry of Labour and Citizens Services*, , 29.
- Berry, B.J.L & Kasarda, J.D. (1977). *Contemporary urban ecology*. New York: MacMillan.
- Black, N. (2001). Evidence based policy: Proceed with care. *British Medical Journal*, 323(7307), 275-278.
- BLOCK, R. (1970). SUPPORT FOR CIVIL LIBERTIES AND SUPPORT FOR POLICE. *13*(5-6), 781-&.
- BOROOAH, V. K., & CARCACH, C. A. (1997). CRIME AND FEAR: Evidence from Australia. *British Journal of Criminology*, *37*(4), 635-657.
- Brand, S. & Price, R. (2000). *The economic and social costs of crime. London, home office*. Unpublished manuscript.
- Brantingham, P., Brantingham, P., Vajihollahi, M., Wuschke, K. (2008). A topological technique for crime analysis at multiple scales of aggregation. In D. Weisburd, W.

Bernasco & G. Bruinsma (Eds.), *Putting crime in its place: Units of analysis in spatial crime research* (). New York: Springer-Verlag.

- Brantingham, P.J., Brantingham, P.L. (1978). A theoretical model of crime site selection. In Krohn, M., Akers, R. (Ed.), *Crime, law and sanctions* (pp. 105-118). Beverly Hills, CA: Sage Publications.
- Brantingham, P.J., Brantingham, P.L. (1984). *Patterns in crime*. New York, NY: Macmillan.
- Brantingham, P. J., & Brantingham, P. L. (1980). Crime, occupation and economic specialization: A consideration of intermetropolitan patterns. In D. E. Georges-Abeyi, & K. D. Harries (Eds.), (pp. 93-108). New York: Columbia University Press.
- Brantingham, P. J., Brantingham, P. L., & Wong, P. (1991). How public transit feeds private crime. *Security Journal*, *2*, 91-95.
- Brantingham, P.L., Brantingham, P.J. (1981). Notes on the geometry of crime. In Brantingham, P.J., Brantingham, P.L. (Ed.), *Environmental criminology* (). Beverly Hills, CA: Sage Publications.
- Brantingham, P.L., Brantingham, P.J. (1993). Nodes, paths and edges: Considerations on the complexity of crime and the physical environment. *Journal of Environmental Criminology*, 13, 3-28. Retrieved from National Criminal Justice Reference Service Abstracts database.
- Brantingham, P. a. P. (1975). Residential burglary and urban form. *Urban Studies*, *12*, 273-284. Retrieved from Sage Journals database.
- Brantingham, P. a. P. (2003). Anticipating the displacement of crime using the principles of environmental criminology. *Crime Prevention Studies*, *16*, 119-148.
- Brantingham, P. J., & Brantingham, P. L. (1998). Environmental criminology: From theory to urban planning practice. *Studies on Crime and Crime Prevention*, 7(1), 31. Retrieved from National Criminal Justice Reference Service Abstracts database.
- BRANTINGHAM, P. (1993). NODES, PATHS AND EDGES CONSIDERATIONS ON THE COMPLEXITY OF CRIME AND THE PHYSICAL-ENVIRONMENT. *Journal of Environmental Psychology*, *13*(1), 3-28.
- Brantingham, P., & Brantingham, P. (1995). Criminality of place: Crime generators and crime attractors. *European Journal on Criminal Policy and Research*, 3(3), 1-26.
 Retrieved from National Criminal Justice Reference Service Abstracts database.
- Brantingham, P. L., & Brantingham, P. J. (1997). Mapping crime for analytic purposes: Location quotients, counts and rates (from crime mapping and crime prevention, P 263-288, 1997, david weisburd and tom McEwen, eds. - see NCJ-170277). United States: Retrieved from National Criminal Justice Reference Service Abstracts database.
- Brantingham, P. L. (1996). *Manual on crime and safety in the urban environment*. Burnaby, B.C.: P.L. Brantingham.
- Brantingham, P. L., & Brantingham, P. J. (1999). Theoretical model of crime hot spot generation. *Studies on Crime and Crime Prevention*, 8(1), 7. Retrieved from National Criminal Justice Reference Service Abstracts database.
- Brantingham, P. L., & Brantingham, P. J. (2004). Computer simulation as a tool for environmental criminologists. *Security Journal*, *17*(1), 21. Retrieved from http://www.perpetuitypress.com

- Brantingham, P. L., Brantingham, P. J., & Taylor, W. (2005). Situational crime prevention as a key component in embedded crime prevention. *Canadian Journal of Criminology and Criminal Justice*, 47(2), 271. Retrieved from http://www.ccjaacjp.ca/en/cjc.html
- Brantingham, P. L., Burns, P., Maxim, N., Canada. Dept. of Justice, & Legal Services Society of British Columbia. (1981). *The burnaby, british columbia experimental public defender project : An evaluation*. Ottawa, Ont.; Vancouver, B.C.: Evaluation and Statistics Section, Dept. of Justice Canada; Legal Services Society of British Columbia.
- Brantingham, P. J., & Brantingham, P. L. (1981). *Environmental criminology*. Beverly Hills Calif.: Sage Publications.
- Brown, B., & Benedict, W. (2002). Perceptions of the police past findings, methodological issues, conceptual issues and policy implications.25(3), 543-580.
- Brown, L. & Tandon, R. (1983). Ideology and political economy in inquiry action research and participatory research. *JOURNAL OF APPLIED BEHAVIORAL SCIENCE*, *19*(3), 277-294.
- Brunswik, E. (1952). The conceptual framework of psychology. *International* encyclopaedia of unified science (). Chicago: The University of Chicago Press.
- BURSIK, R. J. (1988). SOCIAL DISORGANIZATION AND THEORIES OF CRIME AND DELINQUENCY - PROBLEMS AND PROSPECTS. *Criminology*, 26(4), 519-551.
- Bursik, R., & Grasmick, H.G. (1993). Neighbourhoods and crime: The dimensions of effective community control. Lexington Books (New York, Toronto).
- Campbell, D., & Fiske, D. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, (56), 81-105.
- Canada Mortgage and Housing Corporation (2009). 2006 Census Housing Series: Issue 5- Growth in Household Incomes and Shelter Costs, 1991-2006. Socio-economic series 09-016.
- Casavant, L. (1999). Parliamentary Research Branch. Definition of Homelessness: Political and Social Affairs Division. In Homelessness, prepared by Begin, P., Casavant, L., Miller-Chenier, N., & Depuis, J. Political and Social Affairs Division Economics Division.
- Center on Juvenile and Criminal Justice. (October 2009). Shattering "broken windows": An analysis of san Francisco's alternative crime policies., 1-12.
- Certoma, C. (2006). Ecology, environmentalism and system theory. *KYBERNETES*, 35(5-6), 915-921.
- City of Vancouver (2007). 2006 Census Population. Community Services Group. http://vancouver.ca/commsvcs/planning/census/2006/popdwellcounts.pdf
- City of Vancouver. (2011). www.metrovancouver.org, 2011
- CivicInfo BC. (2011). http://www.civicinfo.bc.ca/
- Cohen, L.E. & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review*, (44), 588-608.
- Collier, P. M. (2006). In search of purpose and priorities: Police performance indicators in england and wales. *Public Money & Management*, 26(3), 165-172.
- Collier, P. M., Edwards, J. S. & Shaw, D. (2004). Communicating knowledge about police
 - performance.http://www.emeraldinsight.com/Insight/ViewContentServlet?cont

entType=Article&Filename=Published/EmeraldFullTextArticle/Articles/07905 30505.html

- Collier, P. (2001). Police performance measurement and human rights. *PUBLIC MONEY* & *MANAGEMENT*, 21(3), 35-39.
- Corcoran, J., Wilson, I., & Ware, J. (2003). Predicting the geo-temporal variations of crime and disorder. *International Journal of Forecasting*, 19(4), 623-634.
- Dammert, L. & Malone, M. (2003).*Fear of crime or fear of life? public insecurities in chile.*. London, UK: Bulletin of Latin America Research.
- Dolan, P., & Peasgood, T. (2007). Estimating the economic and social costs of the fear of crime.47(1), 121-132.
- Doran, B. J., & Lee, B. G. (2005). Investigating the spatiotemporal links between disorder, crime, and the fear of crime. *The Professional Geographer*, *57*(1), 1-12. Retrieved from http://www.blackwell-synergy.com/doi/abs/10.1111/j.0033-0124.2005.00454.x
- Fals-Borda, O. (1987). THE APPLICATION OF PARTICIPATORY ACTION-RESEARCH IN LATIN AMERICA. *International Sociology*, 2(4), 329.
- Felson, M. (2010). In Felson M. (Ed.), *Crime and everyday life*. California: Sage, Thousand Oaks.
- Felson, M., & Poulsen, E. (2003). Simple indicators of crime by time of day. *International Journal of Forecasting*, 19(4), 595-601.
- FELSON, M. (1987). ROUTINE ACTIVITIES AND CRIME-PREVENTION IN THE DEVELOPING METROPOLIS. *Criminology*, 25(4), 911-931.
- Felson, M., & Poulsen, E. (2003). Simple indicators of crime by time of day. *International Journal of Forecasting*, 19(4), 595-601.
- Ferraro, K. F. (1995). *Fear of crime : Interpreting victimization risk*. Albany, NY: State University of New York Press.
- Forde, D.R. (1994). Selected findings from the 1994 Winnipeg Area Study. Winnipeg, MB: University of Manitoba Department of Sociology.
- Frank, R., Park, A.J., Brantingham, P., Clare, J., Wuschke, K. and Vajihollahi, M. (2010). Identifying high risk crime areas using topology. *IEEE Intelligence and Security Informatics*, Vancouver, British Columbia.
- General Social Survey (2004) Statistics Canada. http://www.statcan.gc.ca/dli-ild/datadonnees/ftp/gss-esg/gssc-esgc1804-eng.htm
- General Social Survey (2009). Statistics Canada . http://www.statcan.gc.ca/dliild/data-donnees/ftp/gss-esg/gssc-esgc2009-eng.htm
- Ghaseminejad, A. (2009). Crime Analysis System for the Pacific Region Handbook. ICURS. www.sfu.ca/icurs/
- Gharajedaghi, J. (2006). Systems Thinkming: Managing Chaos and Complexity: A Platform for Designing Business Architecture. Elsevier, Amsterdam; Boston, Mass., 2nd edition.
- Ginther, J. (2009) Institute for Canadian Urban Research Studies
- Goffman, E. (1972). *Relations in public: Microstudies of the public order*. New York: Harper Colophon.

Griffiths, C. T., Palmer, A., Weeks, L., Polydore, B., LaLonde, M., Chin, V., et al. (2006).

Civilianization in the vancouver police department., 7.

- GRIFFITHS, C. (1982). POLICE SCHOOL PROGRAMS THE REALITIES OF THE REMEDY. CANADIAN JOURNAL OF CRIMINOLOGY-REVUE CANADIENNE DE CRIMINOLOGIE, 24(3), 329-340.
- Guterres, M., & Sall, A. (2009). 2009 Collingwood-Renfrew Community Survey. Retrieved October 1, 2009, from http://www.sfu.ca/icurs
- Guterres, M., & Sall, A. (2009). 2009 Mount Pleasant Community Survey. Retrieved October 1, 2009, from http://www.sfu.ca/icurs
- Haynie, D.L. (1998). The gender gap in fear of crime, 1973-1994: A methodological approach. Criminal Justice Review 23: 122-136.
- Hinkle, J., & Weisburd, D. (2008). The irony of broken windows policing: A micro-place study of the relationship between disorder, focused police crackdowns and fear of crime.*36*(6), 503-512.
- Home Office. (2008). Efficiency and productivity strategy for the police service: 2008-11 - the strategy. *Association of Police Authorities;*,
- Home Office. (2008). From the neighbourhood to the national: Policing our communities together.
- Home Office. (2008). Improving performance: A practical guide to police performance management case studies.
- Home Office. (2010). Working for the public: Productivity framework. Association of Police Authorities (ACPO);,
- Home Office. (Unknown). The new performance landscape for crime and policing: A description of the crime and policing performance management landscape following the 2008 policing green paper. *Association of Police Authorities (ACPO); National Policing Improvement Agency, HMIC,*
- Howlett, M. (2002). Do networks matter? linking policy network structure to policy outcomes: Evidence from four canadian policy sectors 1990-2000. CANADIAN JOURNAL OF POLITICAL SCIENCE-REVUE CANADIENNE DE SCIENCE POLITIQUE, 35(2), 235-267.
- Howlett, M. (2006). Understanding the historical turn in the policy sciences: A critique of stochastic, narrative, path dependency and process-sequencing models of policy-making over time. *Policy Sciences*, *39*(1), 1-18.
- Howlett, M. (2009). Policy analytical capacity and evidence-based policy-making: Lessons from canada. *CANADIAN PUBLIC ADMINISTRATION-ADMINISTRATION PUBLIQUE DU CANADA*, 52(2), 153-175.
- Hunter, A. (1978). Symbols of incivility: Social disorder and fear of crime in urban neighbourhoods. Unpublished manuscript.
- Innes, M. (2005). Why 'soft' policing is hard: On the curious development of reassurance policing, how it became neighbourhood policing and what this signifies about the politics of police reform. *15*(3), 156-169.
- Innes, M. (2006). Introduction reassurance and the "new" community policing. *Policing and Society*, *16*(2), 95-98.
- Innes, M., & Fielding, N. (2002). From community to communicative policing: 'signal crimes' and the problem of public reassurance.7(2)

Innes, M. (2004). Signal crimes and signal disorders: Notes on deviance as communicative action. *BRITISH JOURNAL OF SOCIOLOGY*, 55(3), 335-355.

- Inwood, G. J. (1999). *Understanding canadian public administration : An introduction to theory and practice*. Scarborough, Ont.: Prentice Hall Allyn and Bacon Canada.
- Kane, R. (2003). Social control in the metropolis: A community-level examination of the minority group-threat hypothesis. *Justice Quarterly*, 20(2), 265-295.
- Karakus, O., McGarrell, E., & Basibuyuk, O. (2010). Fear of crime among citizens of turkey. *JOURNAL OF CRIMINAL JUSTICE*, *38*(2), 174-184.
- Kearney, A. (2008). Public perception as support for scenic quality regulation in a nationally treasured landscape. *Landscape and Urban Planning*, 87(2), 117-128.
- Kinney, J.B., Brantingham, P.L., Wuschke, K., Kirk, M.G., and Brantingham, P.J. (2008). Crime attractors, generators and detractors: Land use and urban crime opportunities. *Built Environment*, 34(1), 62-74.
- Kornhauser, R. R. (1978). *Social sources of delinquency*. Chicago: University of Chicago Press.
- Lab, S. P. (2007). *Crime prevention: Approaches, practices and evaluations* (6th ed.). Cincinnati, OH: Anderson Publishing.
- Lewis, D.A. & Salem, G. (1986). *Fear of crime: Incivility and the production of a social problem.* New Brunswick, NJ: Transaction Books.
- Liu, H., & Brown, D. (2003). Criminal incident prediction using a point-pattern-based density model. *International Journal of Forecasting*, 19(4), 603-622.
- Liu, H., & Brown, D. (2004). A new point process transition density model for spacetime event prediction. *IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS PART C-APPLICATIONS AND REVIEWS*, *34*(3), 310-324.
- Loukaitou-Sideris, A., & Fink, C. (2009). Addressing women's fear of victimization in transportation settings A survey of US transit agencies.44(4), 554-587.
- Loukaitou-Sideris, A., Liggett, R., Iseki, H., & Thurlow, W. (2001). Measuring the effects of built environment on bus stop crime. *ENVIRONMENT AND PLANNING B-PLANNING & DESIGN*, 28(2), 255-280.
- MacArthur, R., & Levins, R. (1964). Competition, habitat selection, and character displacement in a patchy environment. *Proceedings of the National Academy of Sciences of the United States of America*, 51(6), 1207-1210. Retrieved from http://www.jstor.org/stable/72141
- Malleson, N. (2010). Agent-based modelling of burglary. (PhD, School of Geography, University of Leeds).
- Ministry of Attorney General, & Ministry of Public Safety and Solicitor General. (2004). *Policy on the criminal justice system response to violence against women and children: Part 1 violence against women in relationships policy* No. PSSG 06-049). British Columbia:
- Ministry of Community Safety and Correctional Services. (2007). Ontario provincial police: Follow up to VFM section 3.12 2005 annual report
- Ministry of Public Safety and Solicitor General. (2009). 2009/2010-2011/12 service plan update. *Province of British Columbia*,
- Ministry of Public Safety and Solicitor General. (2009). *Balanced budget:* 2007/2008 2009/2010 service plan

Morris, D. W. (1987). Tests of density-dependent habitat selection in a patchy environment. *Ecological Monographs*, *57*(4), 270-281. Retrieved from http://www.jstor.org/stable/2937087

Mosca, E., Spicer, V. (2007). 2007 commercial drive community survey

Mosca, E., Spicer, V. (2008). ICURS community study community survey handbook. Retrieved from

http://www.criminaljusticereform.gov.bc.ca/en/reports/pdf/ICURSSurveyManu al.pdf

- Mosca, E., Spicer, V., Brantingham, P.L. (1997). *Commercial drive community survey* 1997Britannia Community Policing Office.
- Nee, S., & May, R. M. (1992). Dynamics of metapopulations: Habitat destruction and competitive coexistence. *The Journal of Animal Ecology*, *61*(1), 37-40. Retrieved from http://www.jstor.org/stable/5506
- Pal, L. A. (2006). *Beyond policy analysis : Public issue management in turbulent times* (3rd ed.). Scarborough, Ont: Thomson/Nelson.
- Park, A., Karanfil, O, Plaza-Martinez, G., Vahabzadeh, H, & Wang, Y. (2009). A systems dynamics model of the homeless population in the tri-cities<!--[if gte mso 10]>
- Paternoster, R., & Bushway, S. (2009). Desistance and the "feared self": Toward an identity theory of criminal desistance. *JOURNAL OF CRIMINAL LAW & CRIMINOLOGY*, *99*(4), 1103-1156.
- Pease, K. (1998). Repeat victimisation: Taking stock.
- Riley, K. J., Turner, S., MacDonald, J., Ridgeway, G., Schell, T., Wilson, J., et al. (2005). *Police–community relations in cincinnati*. Santa Monica: RAND Corporation.
- Roberts, J.V. (2001). Fear of crime and attitudes to criminal justice in Canada: A review of recent trends. Report of the Ministry of the Solicitor General of Canada. Ottawa: Ministry of the Solicitor General.
- Rossmo, D. K. (2000). Geographic profiling. Boca Raton, Fl.: CRC Press.
- Rycroft-Malone, J. (2008). Evidence-informed practice: From individual to context. *Journal of Nursing Management*, 16(4), 404-408.
- Sampson, R. J., & Raudenbush, S. W. (1999). Systematic social observation of public spaces: A new look at disorder in urban neighborhoods. AMERICAN JOURNAL OF SOCIOLOGY, 105(3), 603-651.
- Schmid,, C.F. (1960). Urban crime areas: Part I. American Sociological Review, 25, 527-542.
- Shaw, Clifford R. & McKay, Henry D. (1942). *Juvenile delinquency in urban areas*. Chicago: University of Chicago Press.
- Shaw, Clifford R. and McKay, Henry D. (1969). *Juvenile delinquency and urban areas*. Chicago: The University of Chicago Press.
- Shaw, Clifford R., Zorbaugh, Harvey, McKay, Henry D. & Cottrell, Leonard S (Ed.). (1929). *Delinquency areas*. Chicago: University of Chicago Press.
- Sheldon T.A., Cullum N., Dawson D. (2004). What's the evidence that NICE guidance has been implemented? results from a national evaluation using time series analysis, audit of patients notes, and interviews. *British Medical Journal*, 329(7473), 999.
- Sherman, L. W. (1998). Evidence based policing. Police Foundation,

Short, J. F. (1985). The level of explanation problem in criminology. In R. F. Meier (Ed.), *Theoretical methods in criminology* (). Beverly Hills, CA: Sage.

- Skogan, W. G. (1990). *Disorder and decline: Crime and the spiral of decay in American cities*. New York: The Free Press.
- Smith, M. K. (2001). Kurt Lewin, groups, experiential learning and action research. *Encyclopaedia of Informal Education*,

Stanko, E. (1995). Gendered Criminology Policies: Femininity, Masculinity, and Violence. In Crime and Public Policy: Putting Theory to Work. Boulder, Colorado: Westview Press inc., pp71-89. ISBN: 0-8133-2677-X

Statistics Canada (2006) Metro Vancouver Sustainable Region Initiative. 2006 Census Bulletin #4: Dwellings by Type and Tenure

- Statistics Canada (2006) Metro Vancouver Sustainable Region Initiative. 2006 Census Bulletin #5: Household and Family Structure in Metro Vancouver
- Statistics Canada (2006) Metro Vancouver Sustainable Region Initiative. 2006 Census Bulletin #12: Income and Shelter Costs Metro Vancouver

Statistics Canada (2006).Vancouver Municipality Population Counts http://www12.statcan.ca/census-recensement/2006/

Statistics Canada (2006) British Columbia Population Counts http://www12.statcan.ca/census-recensement/2006/dp-pd/fsfi/index.cfm?LANG=ENG&VIEW=C&PRCODE=59&TOPIC ID=3&format=jpg

- Social Planning, Research Council of BC (SPARC BC). (2008). Eberle Planning, Jim Woodward & Associates Inc. Research, Judy Graves, Kari Huhtala, Kevin Campbell, In Focus Consulting, and Michael Goldberge. Still on our Streets... Results of the 2008 Metro Vancouver Homeless Count. Commissioned by Greater Vancouver Regional Steering Committee on Homelessness.
- Taylor, R. (1999). The incivilities thesis: Theory, measurement and policy. In R. Langworthy (Ed.), *Measuring what matters: Proceedings from the policing research institute meetings* (pp. 65-88). Washington, DC: National Institute of Justice.

Taylor, R. (1995). *Responses to disorder in minneapolis-st. paul: Impact of neighborhood structure, crime, and physical deterioration*. Philadelphia: National Institute of Justice.

Thomas, W.I. & Znaniecki, F. (1920). *The polish peasant in europe and america* (6th ed.). Boston: Graham Press.

Torres, M. S., & Stefkovich, J. A. (2009). Demographics and police involvement implications for student civil liberties and just leadership. *EDUCATIONAL ADMINISTRATION QUARTERLY*, 45(3), 450-473.

Vancouver 2010 Support for Government Housing Initiatives, 2010, http://www.bchousing.org/news/news_releases/archive/2008/10/21/5590_08102116 24-798?pageNumber=&cmbYear=2008)

- Vancouver Police Department. ((n.d.)). *Vancouver police department strategic plan* 2008-2012. Vancouver: Vancouver Police Department.
- Vancouver Police Department. (2005). *Beyond the call* No. Volume 1 Number 1). Vancouver: Public Affairs and Marketing of the Vancouver Police Department.
- Vancouver Police Department. (2005). *Beyond the call: Annual report 2004* (Annual Report. Vancouver: Vancouver Police Department.

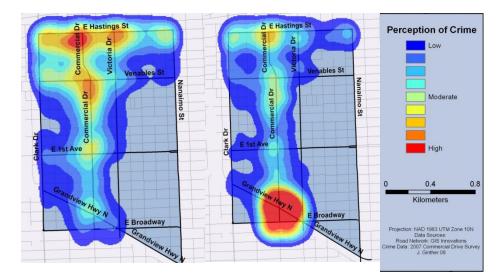
- Vancouver Police Department. (2006). *Beyond the call* No. Volume 2 Number 1). Vancouver: Public Affairs and Marketing Section of the Vancouver Police Department.
- Vancouver Police Department. (2006). *Beyond the call: Annual report 2005* (Annual Report. Vancouver: Vancouver Police Department.
- Vancouver Police Department. (2007). *Beyond the call*. Vancouver: Public Affairs and Marketing Section of the Vancouver Police Department.
- Vancouver Police Department. (2007). *Beyond the call: Annual report 2006*. Vancouver: Vancouver Police Department.
- Vancouver Police Department. (2008). *Beyond the call*. Vancouver: Public Affairs and Marketing Section of the Vancouver Police Department.
- Vancouver Police Department. (2008). *Beyond the call: Annual report 2007*. Vancouver: Vancouver Police Department.
- Vancouver Police Department. (2008). *Lost in transition summary* (Summary. Vancouver: Vancouver Police Department.
- Vancouver Police Department. (2009). *Beyond the call*. Vancouver: Public Affairs and Marketing Section of the Vancouver Police Department.
- Vancouver Police Department. (2009). *Beyond the call: Annual report 2008*. Vancouver: Vancouver Police Department.
- Vancouver Police Department. (2009). *Project lockstep: A united effort to save lives of the downtown eastside* (A Discussion Document. Vancouver: Vancouver Police Department.
- Vancouver Police Department. (2011). www.vpd.ca
- Wandersman, A. (2003). Community science: Bridging the gap between science and practice with community-centered models. *American Journal of Community Psychology*, 31(3), 227.
- Warr, M. (1995). The polls-poll trends: Public opinion on crime and punishment. Public Opinion Quarterly 59: 296-310.
- Weinrath, M., Clarke, K., & Forde, D. R. (2007). Trends in fear of crime in a western canadian city: 1984, 1994, and 2004 Retrieved from http://find.galegroup.com/itx/infomark.do?&contentSet=IAC-Documents&type=retrieve&tabID=T002&prodId=CPI&docId=A178453650&s ource=gale&srcprod=CPI&userGroupName=sfu z39&version=1.0
- Wilcox, P., Quisenberry, N., Cabrera, D., & Jones, S. (2004). Busy places and broken windows? toward defining the role of physical structure and process in community crime models. *SOCIOLOGICAL QUARTERLY*, *45*(2), 185-207.
- Wilcox, P., Quisenberry, N., & Jones, S. (2003). The built environment and community crime risk interpretation. *Journal of Research in Crime and Delinquency*, 40(3), 322-345.
- Williams, F. P., & McShane, M. D. (2004). *Criminological theory*. Upper Saddle River, N.J.: Pearson Education.
- Wilson, J.Q. & Kelling, G. (1982). Broken windows: The police and neighborhood safety. *Atlantic Monthly*, (249), 29-38.
- World Commission on the Environment and Development (1987). *Our Common Future*. Oxford University Press, New York.

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8: APPENDIX A – COMMUNITY SURVEY OVERVIEW

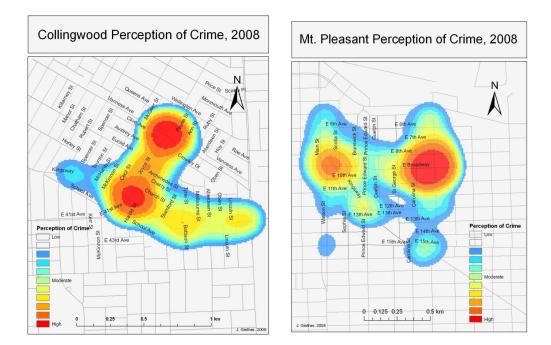
	The following questions apply to what you have seen in the "blank" area.	 1-Completely unacceptable (You think the appropriate agency should stop it.) 2- Unacceptable (You prefer not to see this and might do something about it.) 3- Tolerable (You don't like it, but it does not bother you enough to do something about it.) 4- Acceptable (You're not bothered by it.) 5- Completely acceptable (you perceive this as a good thing.) 				was s the a	activity seen in rea in ast six hs.		
	Please rank the following questions 1 being completely unacceptable and 5 being completely acceptable.	1	2	3	4	5	Yes	No	
	Do you think street vendors selling without rmit are:	a city	16.Do yo	ou think	smoking) pot in p	oublic i	s:	
2.[Do you think graffiti on private property is:		17.Do yo	ou think	current l	evels of	vehicl	e traffic i	s:
3.[Do you think graffiti on public property is:		18.Do yo	ou think	outside	café sea	iting is	:	
4.Do you think sex trade workers working on "Blank" Street are:			19.Do you think organized public art is:						
5.Do you think sex trade workers working in residential areas or near schools are:			20.Do you think litter is:						
6.Do you think sex trade workers working in in in industrial areas are:			21.Do yo commer			n and bo	bardec	l up	
7.Do you think street musicians soliciting donations are:			22.Do yo premises		run-dow	n and m	iessy r	esidentia	al
8.Do you think unleashed dogs in parks (other than designated dog leashed parks) are:			23.Do yo are:	ou think	organize	ed festiva	als at '	ʻblank" P	ark
9.Do you think unleashed dogs on residential streets are:			24.Do you think homeless shelters in the area are:					are:	
10.Do you think having social housing in the area is:			25.Do you think the availability of parking in the area is:						
11.Do you think passive panhandlers are:			26.Do you think film locations in the neighbourhood are:						
12.Do you think aggressive panhandlers are:			27.Do you think liquor stores open on Sundays are:						
13.Do you think skateboarding on city streets is:			28.Do you think the variety of businesses in the area is:						
14	14.Do you think people sleeping on the streets is:			29.Do you think condoms on the ground are:					
15.Do you think drinking alcohol in public is:			30.Do you think needles on the ground are:						

8.1.1 Sample Questions



8.1.2 Commercial Drive Community Survey, 1997 and 2007 Mapping Results

8.1.3 Collingwood and Mount Pleasant 2008 Mapping Results



9: APPENDIX B – DEFINITION OF HOUSING

Ministry of Lands, Parks and Housing

- Affordable housing agreement means an agreement made by the minister, the British Columbia Housing Management Commission or any other agent of the government with a person who has received or is to receive assistance from the government to acquire, develop or operate an affordable housing development;
- Affordable housing development means land and improvements, all or part of which provide or are intended to provide housing for sale or lease to or other use by low and moderate income individuals, and includes land and improvements designated as an affordable housing development;

BC Assessment Act

- "Eligible supportive housing property" is defined in section 19(1) of the Assessment Act to mean property that is used by or on behalf of a person who received funding from the provincial government or a regional health board (i.e., a health authority) for the provision of supportive housing. A "regional health board" is a "board" as defined in the Health Authorities Act
- For the purposes of the property class, supportive housing property is property which integrates on-site support services with long-term housing for persons:

→who were previously homeless or are at risk of homelessness;
 →affected by mental illness ; or

 \rightarrow who have or are recovering from drug or alcohol addiction.

- Supportive housing does not include short-stay emergency shelters, transition houses, licensed facilities or housing primarily intended for seniors.
- On-site support services are services that are made available to the residents of the supportive housing and include, but are not limited to:

 \rightarrow health and mental health services;

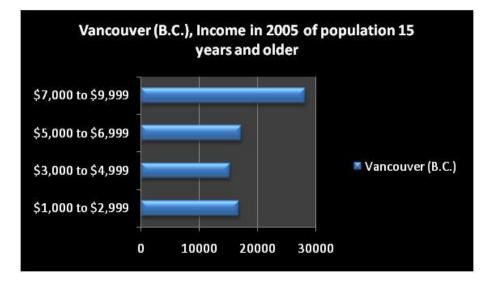
- →health and community support referrals;
- →addiction services;
- →employment and education services;
- \rightarrow job and life skills training;
- →assistance with meal preparation and housekeeping; or,
- \rightarrow Counselling and outreach services.

10: APPENDIX C – INCOME COMPARISONS

10.1.1 Chart 1

Geographic Area	Median Household Income (2001)	Median Household Income (2006)	Change in Me Household Incom 2006)	
			\$	%
Canada	46, 752	53,634	6,882	15%
Vancouver	49,940	55,231	5,291	11%
Toronto	59,502	64,128	4,626	8%
Montreal	42,123	47,979	5,856	14%
Calgary	58,861	68,579	9,718	17%
Edmonton	51,685	63,082	11,397	22%
Victoria	46,387	53,310	6,923	15%

10.1.2 Chart 2



11: APPENDIX D – INCOME, SHELTER COSTS, AND STIRS

11.1.1 Chart 1-Average Household Incomes and Shelter Costs, Canada, 1991-2006

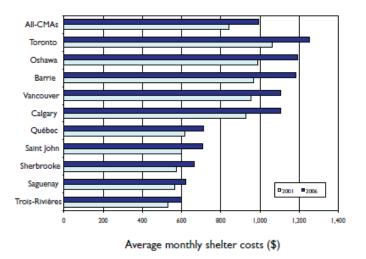
		Average household income (\$)			Changes (%)				
	1990	1995	2000	2005	1990-1995	1995-2000	2000-2005		
All households	47,944	50,958	60,976	72,391	6.3	19.7	18.7		
Owners	56,676	60,633	71,946	85,857	7.0	18.7	19.3		
Renters	32,929	33,177	38,797	41,943	0.8	16.9	8.1		
		Average monthly shelter costs (\$)				Changes (%)			
	1991	1996	2001	2006	1991-1996	1996-2001	2001-2006		
All households	619	688	764	905	11.1	11.0	18.5		
Owners	665	738	820	983	11.0	11.1	19.9		
Renters	538	593	649	725	10.2	9.4	11.7		
		Consumer Price	Index (2002 = 100	0)	Changes (%)				
	1991	1996	2001	2006	1991-1996	1996-2001	2001-2006		
All-items index	82.8	88.9	97.8	109.1	7.4	10.0	11.6		

11.1.2 Chart 2: Average STIRS by Income Group, Canada, 2001 and 2006

	All hous	All households		Owners		Renters	
Household income groups	2001 (%)	2006 (%)	2001 (%)	2006 (%)	2001 (%)	2006 (%)	
All households	21.3	21.8	17.9	18.7	28.2	28.9	
Less than \$10,000	57.5	56.6	51.9	53.8	59.4	57.5	
\$10,000 - \$19,999	38.4	41.9	32.5	36.6	42.3	44.8	
\$20,000 - \$29,999	27.1	31.0	24.8	29.2	29.6	32.7	
\$30,000 - \$39,999	22.0	25.1	21.4	25.0	22.8	25.3	
\$40,000 - \$49,999	19.1	21.4	19.1	21.7	19.0	20.9	
\$50,000 - \$74,999	16.2	17.9	16.4	18.2	15.5	16.8	
\$75,000 - \$99,999	13.5	14.9	13.7	15.2	12.5	13.3	
\$100,000 and over	10.1	11.0	10.2	11.0	9.9	10.3	

12: APPENDIX E – DWELLINGS BY YEAR OF CONSTRUCTION

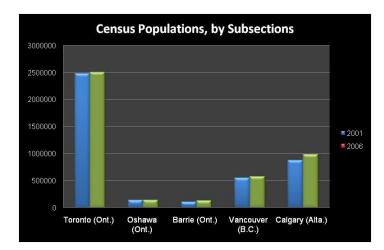
12.1.1 Chart 1 – Average Monthly Shelter Costs, 2006, Metro Vancouver



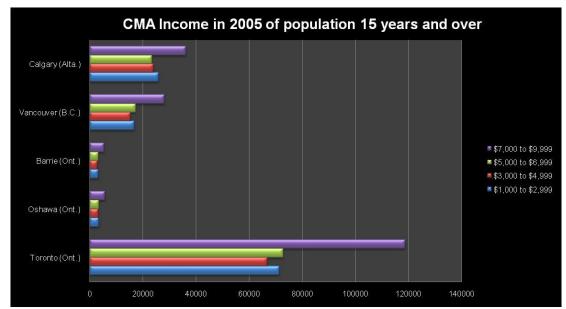
Census Metropolitan Areas ranked by shelter costs in 2006. Figure displays cities with the five highest and five lowest average monthly shelter costs in 2006. **Source:** CMHC (census-based housing indicators and data)

13: APPENDIX F – POPULATION CONSIDERATIONS

13.1.1 Chart 1



13.1.2 Chart 2





14: APPENDIX G – DWELLINGS BY YEAR OF CONSTRUCTION

14.1.1 Chart 1: Period of Construction, Occupied Private Dwellings, Vancouver, B.C.

Period of Construction, Occupied Private Dwellings	Vancouver (B.C.)	Percent
Before 1946	45935	18.1%
1946 to 1960	34375	13.6%
1961 to 1970	33220	13.1%
1971 to 1980	34875	13.8%
1981 to 1985	17755	7.0%
1986 to 1990	18295	7.2%
1991 to 1995	22720	9.0%
1996 to 2000	23650	9.3%
2001 to 2006	22560	8.9%

14.1.2 Chart 2: Period of Construction Occupied Private Dwellings, 5 CMAs

Period of Construction, Occupied Private Dwellings	Toronto (Ont.)	Oshawa (Ont.)	Barrie (Ont.)	Vancouver (B.C.)	Calgary (Alta.)
Before 1946	180790	6065	2155	45935	13620
1946 to 1960	203495	10380	3485	34375	40790
1961 to 1970	185315	9870	3580	33220	47925
1971 to 1980	161750	12140	6050	34875	89595
1981 to 1985	64305	3925	2590	17755	36990
1986 to 1990	51185	4310	5480	18295	24495
1991 to 1995	35710	2370	5050	22720	28505
1996 to 2000	36510	2465	7885	23650	42705
2001 to 2006	60390	3390	10235	22560	60115

15: APPENDIX H: SYSTEMS THINKING AND SYSTEMS DYNAMICS

