STREETSCAPE DESIGN: PERCEPTIONS OF GOOD DESIGN AND DETERMINANTS

OF SOCIAL INTERACTION

by

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A thesis
presented to the University of Waterloo
in fulfillment of the
thesis requirement for the degree of
Master of Arts
in
Planning

Waterloo, Ontario, Canada, 2010

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Authors Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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ABSTRACT

Historically, streets have provided both a means of livelihood and social support for its inhabitants. The emergence of the car dramatically shifted planning practices from the pedestrian, to the efficient movement of automobiles, resulting in the fragmentation and dispersion of communities. Current academic streetscape design guidelines focus on creating an aesthetically pleasing and functional street; however, these guidelines alone do not appear to foster strong community ties and social networks. A review of the place making literature identified that a number of factors can play a significant role in a user's ability to secure a strong sense of place, place attachment and sense of community. This exploratory research analyzed place making literature and employed qualitative methods with observations and interviews of users in three streetscapes located in Vancouver, British Columbia; W 41st Ave, Commercial Drive and Fraser St. The resulting feedback obtained from this multiple case study approach has provided the basis upon which a user driven streetscape design visualization was created. It was then compared to a visualization based upon current academic design guidelines. Through an examination of this research, it became apparent that the design of a streetscape does influence the social interaction of its users. It was also discovered that the academic driven urban design guidelines do not fully reflect the preferences and social needs of its users. This research has helped to close the knowledge gap between the design of the physical form of our streets and the user's preferences. Additionally, it has illustrated the essential role that place making principles should play in the design process. Current theories and concepts of streetscape design have since been expanded and now have the potential of creating more socially sustainable, vibrant streets.

AKNOWLEDGEMENTS

I would like to thank Professor John Lewis for advising and guiding me through this complex, often overwhelming experience. Your knowledge and expertise has been invaluable and I am grateful to have been able to work with you on such a fascinating topic.

Thank you to the participants and experts who were willing to provide me with feedback on what they think creates a socially vibrant street. Your feedback has furthered the discussion surrounding the influence built form has on the interactions that occur within our cities and communities. I will take your feedback with me into my professional practice and will always strive to create streets and communities that exhibit a sense of place and promote social interaction.

To my family and friends, thank you for your endless hours of support. Whether it was to listen about my latest research efforts or to provide me with a much needed break from my studies; I feel lucky to have such wonderful people in my life.

I would like to send out a special thank you to my parents for their unwavering support. I would have never pursued an academic endeavor such as this if it were not for you two. Mom, I cannot thank you enough for putting in those countless hours with me ensuring that my argument was consistent throughout. You were absolutely wonderful and I am so grateful for everything that you do.

Cory, thank you for moving out east with me while I attended graduate school. With you by my side I know it is possible to achieve anything. Your attitude towards life keeps me grounded and puts everything in perspective. Thank you for always being there.

I think it's important to reiterate the fact that:
"Small steps to enliven streets, parks, and other public spaces are the building blocks of a thriving city" [1]

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[1](PPS Project for Public Spaces, 2010, ¶ 1).

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER I- INTRODUCTION

1.1 Research Background

The social interactions that occur within urban landscapes have a large impact on the

overall success and quality of life in a community. Since the earliest human settlements, urban

landscapes have played a large role in fostering and creating intimate contact amongst inhabitants

(Alexander, 1965). Many people come to streets for their sociability, to see and be seen and to

communicate their vision to one another (Berman, 1982).   Not only are streets a setting for social

encounters but also "…political protest, sites of domination and resistance, places of pleasure and

anxiety" (Fyfe, 1998 p.1). However, besides social attachment, people feel attached to the

physical dimension of places (Hidalgo & Hernandez, 2001). As a result, not only are streets a

place for socializing but their design and physical characteristics can be both meaningful and

valuable to their inhabitants. Therefore, the design of a street has considerable influence on how

people interact and value a particular space.

1.2 Literature and Justification

An examination of the literature pertaining to the physical design of streets in relation to

the development of sense of place, which includes place attachment and sense of community, has

received little academic attention (Pendola & Gen, 2008). Although there is a great deal of

literature on the theories of sense of place, place attachment and sense of community, there is less

literature on how the physical form of our streets either enhance or diminish the establishment of

these place making concepts.   The majority of the place making literature is descriptive and there

are very few articles that critically analyze or suggest alternatives to ways in which we can create

streets and spaces that foster a sense of place, place attachment and sense of community.

Many scholars argue that successful streetscape design is as much of an art today as it

was in the 1960's (Porta & Renne, 2005). Current city planners, urban designers and architects

continue to struggle with creating vibrant socially active environments (Hay, 1998). This is in

1

large part due to a breakdown in the development of places and spaces that create a sense of place (Relph, 1976). An examination of academic guidelines (Bosselman, 1998; Jacobs, 1993; Lynch, 1960; Whyte, 1980) has exposed a weakness in their ability to create a sociable street. There is a strong consensus on how to make an aesthetically pleasing and functional street; however, factors that contribute to a socially vibrant street are either lacking or play a secondary role to the streets physical appearance.

This research will contribute to the literature by synthesizing the current place making theories and concepts to see if they are implemented in the current streetscape design principles and guidelines. In addition, the feedback obtained form streetscape users will provide insight into what elements, amenities and design features they believe contributes to and fosters a socially vibrant street. This feedback is needed to further emphasize or deemphasize the importance of particular aspects of the academic streetscape design guidelines and is necessary to improve the quality of streetscape design and bridge the gap between theory and practice.

1.3 Scope and Audience

This research will present a case study of Vancouver, B.C. and three of its' streetscapes; W41st Ave, Commercial Drive and Fraser Street. The research will provide a broad overview of the concepts of sense of place, place attachment and sense of community and the role these theories should play in streetscape design guidelines. This research will analyze how different streetscape forms, amenities and design features impact the sociability of the street. Through the creation of visualizations based upon the academic guidelines and the users' feedback, a more critical and analytical discussion surrounding streetscape design and its influence on streets sociability will occur. In addition, this research will contribute to and further existing streetscape design guidelines and theories. This research is intended for planners, architects, urban designers, developers, those working in local governments and anyone who has an impact on and interest in improving and enhancing our communities' public realms.

1.4 Research Questions/Objectives & Purpose of Research

The following questions will address the objective of my research:

1) What are current best practices/principles for urban streetscape design?

2) To what extent do best practices/principles for streetscape design reflect public preferences/expectations?

Addressing the aforementioned questions is vital to the ability of municipalities to design streets and communities that encourage and foster social interaction and cohesion. This research will also serve to close the knowledge gap in the field of urban design and the role built form plays in creating successful, socially sustainable communities. The feedback obtained from the users and professionals will add insight into, and complement the academic guidelines and together could lead to further studies that would improve their success.

The purpose of this research is to examine the academic streetscape design guidelines to see if they fully reflect the users' preferences and perceptions of what elements contribute to increased levels of sociability. Through a comparison of the place making literature, the academic guidelines and user's preferences/expectations of urban streets and with recommendations from the professionals, a better understanding of the criteria needed to achieve a sociable street will be established. Through this examination there is a greater potential to increase the social interaction and cohesion of inhabitants within a community.

1.5 Thesis Organization

Chapter Two focuses on streetscape design and standards. It is important to establish how streets were formed in historic times and follow their evolution to current patterns and designs to uncover what elements were successful. The second area of focus is on current theories and concepts of streetscapes which are examined to provide an understanding of what the academics say creates the most aesthetically appealing, functional and socially vibrant streets. The academics acknowledge the importance of place making however within their guidelines the characteristics that contribute to a sense of place have taken a secondary role. It is through an

examination of the place making literature; sense of place, place attachment and sense of community that their importance is revealed. The literature pertaining to sense of place and more specifically focused on the spirit of a place is essential to this study. It will aid in the quest to uncover what the main elements and characteristics of places are, that influence an individual's perception and attachment to a place. As well, it will make the argument that place making principles should play a greater role in streetscape design guidelines as they are identified by the users as being essential in creating socially vibrant environments. The information derived from this analysis will be a part of, and supplement, the user driven visualization. The academic guidelines and criteria provide the basis on which the users' preferences and perceptions of streetscape design are to be compared.

Chapter Three explores the methodological approach taken in order to achieve the research objective. A qualitative approach is employed in this research study. The research design of this study is exploratory and the goal is to evaluate the current success of streetscape design guidelines in fostering social interaction based upon the users' perception and preferences. A multiple case study approach was determined to be the best option for exploring and answering the research questions. This chapter provides a profile of Vancouver, British Columbia, and the three streets selected for this case study analysis; W 41st Ave, Commercial Drive and Fraser St. In addition, the data collection methods; direct observations and interviews are described in detail. This chapter also contains the observation and interview guides and procedures. The data analysis section which includes transcription, content analysis, as well as the quality checks, is explained in great detail to ensure the replicability of the research.

Chapter Four provides detailed descriptions of the data collected starting with the observations and then moves to the interviews. In each section the feedback is broken down based upon street location. Following each section is an analysis of the feedback obtained and how it relates to the streets activity and form, the sense of place principles/framework and the academic driven guidelines/framework. Phase two of the interviews is carried out with the

professionals and provides additional information on the challenges and barriers to implementing certain design elements and forms in professional practice. During the last phase of data collection the visualizations were taken back to the users and it is here that the users reaffirm their preference and perceptions of what elements they believe creates the most enjoyable, socially vibrant street.

Chapter Five presents the research questions and findings. Based upon the feedback obtained from the observations and interviews there is a discussion on the implications and recommendations for professional practice. Furthermore, the chapter concludes with a discussion on future work as well as provides the thesis conclusion.

CHAPTER II- LITERATURE REVIEW & ANALYSIS

2.1 Introduction

The three subjects that will be examined in the literature review are streetscape design, design & social interaction and the theoretical concepts of place. The review of literature on streetscape design is divided into two sections. The first section focuses on the evolution of streetscape design and the factors that have influenced street form. This review provides insight into how and why are streets take the form that we see today. Section two examines streetscape design following World War II and focuses on the impact and influence of the automobile. It was during this time that streetscape design shifted from being pedestrian oriented to automobile dominated, significantly altering the public realm and degrading potential social interaction. The design & social interaction section examines the current theories and concepts of streetscape design. It is these theories that have informed the academic driven visualization of this study and that are to be compared to what the user believes creates the most sociable street. Finally, the literature review examines the theoretical concepts of place, including sense of place, place attachment and sense of community. It is important to review these concepts as they have been identified as being essential in fostering and promoting social interaction.

2.2 Streetscape Design- History of Streetscape Design and City Planning

Since the 1500s streetscape design has evolved with the planning movements and city forms of their time. From the narrow winding roads of the organic city to the wide motorways of the modern era, streets continue to be a vital component in the physical design and social success of our communities. In the early years, prior to the modern period, organic city form, where roadways and buildings were built based on the topography of the region, was not a choice or a deliberate result of planning, but rather the way cities grew to be (Kostof, 1991). The topography, political climate and religious beliefs of the time were the underlying structures that subconsciously influenced the development and design of a city. It is important to examine the

6

shift in organic cities to planned cities as this became the point in time in which the debate on what is successful streetscape design arose.

In the fifteenth century, Italian architect Leon Battista Alberti was one of the first scholars to acknowledge the differences in street forms and the resulting influence form has on the function, physical climate and opportunities for social interaction within streetscapes (Kostof, 1991). During this time there was a conscious shift in city form, from the grid plan, to the planned city. In the late 1880s, philanthropist Ebenezer Howard responded to the deplorable living conditions of London with the creation of an entirely new city plan, The Garden City. The Garden City was the co-operative ideal however it was not economically feasible nor ideologically acceptable to the majority of those in power at the time. It did however influence the creation of the modern city where orderly development was at the forefront. Land use zoning, population densities and building heights became statutory regulations that would protect people from the poor practices that resulted in the slums of the 1880's. The form of today's modern city is a direct result of the implementation of statutory regulations as well as the impact of the automobile. City planners and engineers shifted their focus from pedestrian movement, to the efficient movement of vehicles (Hall, 1973).

2.2.1 Evolution of Streetscape Design

Hippodamus of Miletus is often regarded as the father of urban planning and the founder of the grid plan, however it was not until the 1500s that Italian architect Leon Battista Alberti gave considerable thought to the design of streets. Alberti argued that there were health benefits to keeping streets "narrow and turned", he observed that the widening of streets "made the city hotter", and therefore less healthy (Kostof, 1991). He also noted that "in narrow winding streets the air is more refreshing and some sun will reach all the houses, and the force of stormy blasts will be broken" (p.69). Alberti expressed his concerns with the way in which form can influence an individual's experience within the street. He felt that narrow winding streets offered the best protection from the elements and provided additional opportunities for individuals to interact

within what he termed a "healthy and pleasant" atmosphere (p. 70). The resulting form contributed to the sociability of the street. This street form can still be found today in many European cities where winding streets with homes and storefronts, are a common occurrence.

In the early 1600s newly established North American cities tended to follow an industrial based grid plan that favored military rather than social development. Religious, political and cultural influences took a secondary role in urban planning; military advancement and movement became the leading force behind the creation of a city's form. The geometric pattern of the grid provided the most effective means to divide land up into parcels for sale and also provided predictability for the flow of goods and services. The resulting preoccupation with the market place and the neglect of the human condition led to overcrowding, pollution and disease. The failure of the grid system to support positive social interaction and provide for a healthy environment, would eventually lead to the establishment of utopias, the ideal community and suburbs.

In the mid nineteenth century, in response to the failures brought about by the grid plan, there was a shift to the deliberate planning of organic, picturesque landscapes. Further motivation for planners to create a new city form came from the impoverished social conditions of the 1880s in London England. It is argued that the street was "…to be an integral part of the new 'orderly' city which was being created out of the 'disorder' of inner-city slum land housing and chaotic industrial development" (Mooney, 1998, p. 31). By 1885, living conditions had not improved. The best solution leaders resorted to at the time was slum clearance. This process of slum clearance rid the city of dilapidated buildings but in turn displaced 100,000 people. Overcrowding was still a major issue and no immediate solutions were in sight. By the late 1880s to 1890s, alternative housing was being built for the working class poor, however the new form of housing was not sufficient and many of the same problems that existed in the early 1880s persisted.

By the late 1890s Charles Booth proposed that an extensive system of railways leading to the outskirts of the city would allow for the development of housing for the poor on the city's periphery. The London County Council had similar beliefs that aligned with those of Booth and after much debate working class housing was built on green-field sites on the periphery of the city. With the development of the Tube, workers were able to live in the suburbs and commute to work (Hall, 2002).

Although the development of green-fields alleviated the social housing problems and filthy streets of the inner city, new issues in the countryside were soon to arise. As life in the countryside was established, the region soon became "…racked by agricultural depression and it offered neither sufficient work and wages, nor adequate social life" (Hall, 2002, p. 93). As a result of the perpetuating social issues found in both the city and countryside, it became evident to philanthropists that an alternative to current communities was necessary. Ebenezer Howard, a philanthropist of the time, felt there were many injustices within his society and became preoccupied with the origins and causes of the poverty that surrounded him. Howard believed that democracy and cooperation were essential factors in eliminating the social issues at hand.

The Garden City

In 1898, Howard developed his theory of The Garden City which was going to be "the peaceful path to real reform" (Fishman, 2003, p. 35). His notion of The Garden City was a new Town-County settlement which included combining the best attributes of both the town and the countryside. Howard appreciated the excitement and vibrancy of London and greatly valued the social opportunities the city had to offer. Housing within the city however, was expensive and the poor were forced to live in slums. On the other hand, the countryside was beautiful, but there never seemed to be economic stability, or a vibrant social fabric within the communities. Howard wanted all citizens to have access to the same public goods, services and opportunities that the community offered regardless of one's social status.

The design of The Garden City was essential to the success and sociability of the community. To achieve social reform and higher standards of living for all residents, Howard realized the need for a strong sense of community and increased opportunities for social interaction which he felt would be achieved through design. Within his plan the community was to be built at the centre of 6,000 acres of agricultural land. The Garden City would cover an area of 1,000 acres in a circular form (Howard, 1965). Six boulevards each 120 ft wide would "traverse the city from centre to circumference, dividing it into six equal parts or wards" (p. 51). At the centre of this community would be five acres of park space and gardens. Of particular importance was Howards' notion of a wide glass arcade called the Crystal Palace, which opened onto the park. It was this structure that Howard felt people would be attracted to in any weather conditions and bring them to the city centre. Under the shelter of the Crystal Palace, Howard pictured a market or sidewalk sale atmosphere. People would be able to walk with leisure and deliberate on what goods they wanted to purchase. It is evident that Howard realized the need for open space in which the community could gather and carry out their daily activities. Howard's notion of open green spaces and arcades or market places being essential in the creation of successful communities has carried on through the evolution of planning theories.

Not only was the city centre given great thought in its design, but the streets were also well planned. Fifth Avenue was to be lined with trees as were all the roads of the town. Tree planting and the beautification of roads were high on the priority list (Howard, 1965). Parker and Unwin, the main architects who worked with Howard on his plan aimed to reduce the amount of expensive roads needed to give access to all houses. Instead their focus was on providing each dwelling with a pleasant garden and view (Davey, 1995). The streets of Letchworth, the first Garden City, were bordered by grass, flowering trees and hedges. Footpaths led to the houses which were well set back from the streets edge. The combination of strong vistas, axis and order contributed to the overall success of the community's design. Additionally, Howard believed that the design of the buildings had a large impact on the well being of citizens. Parker and Unwin

spoke of town planning as an "…art which would provide the opportunity of a beautiful environment out of which a good human life would grow" (Unwin, 1930, cited in Taylor, 1998, p.10). The overall design of The Garden city was of a quaint countryside town with meandering roads lined with trees and a strong focus on the beauty of green space and nature. Howard, Parker and Unwin all believed that inhabitants would be happy in an aesthetically beautiful environment and to a certain degree they were correct.

Although the Garden City of Letchworth did not become a full realization of Howard's plan, it attempted to address key social issues of the time and shed light on the failures of larger cities. Howard's plan of the Garden City was the first attempt in planning where instead of merely employing slum clearance, the working-class cohort was the main focus. Howard wanted to integrate the working-class poor into the structure of his new urban form and hoped their inclusion and addition to the city would make the community more dynamic. Robert Fishman (2003) comments on Howard's goal of inclusion when he notes that the Garden City "…would be a community where everyone has his place and is content with it" (p. 49). By 1910, the new town of Letchworth was "clean, healthy, and a well-planned environment; it had shown its capacity to attract industry and residents" (Fishman, 2003, p. 52). The design of the Garden City placed emphasis on the need for an aesthetically pleasing environment that promoted social interaction. Its core concepts have since greatly influenced current streetscape design guidelines. The successes of the Garden City outweighed its failures and many of its principles were implemented in cities around the world. Across Britain, Europe and North America the Garden City movement flourished. This notion of a socially sustainable community in an aesthetically pleasing environment appealed to the broad masses.

2.2.2 Streetscape Design following World War II

Post-war planning continued to see the development of utopias not only in Britain but also in much of Europe and North America. The two schemes which had the greatest influence

on town planning in the 1950s and 1960s were Ebenezer Howard's proposals for Garden Cities and Le Corbusier's imaginary sketch of the Radiant City (Taylor, 1998).

Both the Garden City and Radiant City movements sprang from a growing sense of renewal; "there was an upsurge of energy and confidence in the capacity to build a better future without the need to rely on the past" (Taylor, 1998, p. 22). While the Garden City movement took on a more planned organic form, the Radiant City focused on a more ordered form in which blocks and zones of single land uses dominated. This division of the city would ensure that residential neighbourhoods were not disrupted by the noise of industries. Roadways and streets would connect the districts; planners and citizens felt that it was now time to make way for the new. The form of the modern city was one of a plain, functional geometric pattern with, "buildings standing at regular intervals in a sea of free-flowing space" (p. 24). The automobile would play an essential role in linking the dispersed form and allow for the development of the new modern city.

Hall (1973) argues that there were two basic objectives to post-war planning, "a desire to improve the quality of the physical environment of urban areas and a desire to improve accessibility within towns" (p. 64). With a rise in automobile use and increasing problems of traffic congestion, the focus soon shifted to the efficient movement of vehicles around cities. The modernist understanding of a street was that its function was no longer primarily designated for pedestrian usage such as walking to work, shops and socializing. The main focus in streetscape design became the movement of automobiles. Le Corbusier's contemporary city took this ideal of efficient transportation to the extreme; "the corridor street should be tolerated no longer because it is full of noise and dust, deprived of light and so poisons the houses that border it" (Le Corbusier, 1996, p. 371). Le Corbusier felt that the corridor street should be replaced by a new type of street that would be used exclusively by vehicles and free of pedestrians and building fronts. His vision gave birth to the modern day freeway. He declared that "a city made for speed is made for success" (p. 375). The creation of entire communities based upon Le Corbusier's

12

visions were not realistic, however a number of his ideas, mainly freeways and high rises were implemented in many cities across North America by urban planners such as Robert Moses This shift in planning resulted in a more dispersed, disconnected city form. The number of freeways, highways, streets and roadways greatly increased as did their widths. These expansive, wide road networks were created in an effort to allow for additional vehicles as well as to provide users with the shortest routes possible.

In the 1960s, in Greenwich Village New York, there was one individual opposed to Le Corbusier's and Robert Moses' way of thinking, Jane Jacobs. Jacobs was a passionate urbanist and a strong opponent to the modernist planning movement. She adamantly protested urban renewal projects that destroyed neighbourhoods to make way for expressways. Jacobs was determined to draw attention to the importance of streets and argued that "streets and their sidewalks are the main public places of a city, they are its most vital organs" (Jacobs, 1961, p. 29). Jacobs believed that streets played a central role in establishing a strong sense of community as well as opportunities for social interaction. Jacobs also felt that the promotion of safety was of particular importance. She stated that there must be three main qualities to produce a safe street; "there must be a clear demarcation between what is public space and what is private space, there must be eyes upon the street and the sidewalk must have users on it fairly continuously" (p. 36). Despite Jacobs appeal to city planners to focus on the social importance of creating streets that users would frequent and interact on, the main focus in many planning departments remained the efficient movement of vehicles. As late as the 1980s the movement of vehicular traffic continued to dominate the design of streets.

With an ever-increasing emphasis on designing streets largely for transportation efficiency, many cities began to see the deterioration of their downtown cores. Pedestrians no longer felt safe in car dominated environments. Not only was safety a concern but the physical environment was no longer pedestrian friendly. Signs in front of stores and businesses were large and oriented to drivers. Many buildings were designed with only the store front in mind. As

soon as a pedestrian left the main street they were confronted with a stark environment. Blank walls with no windows or architectural detailing were a common sight and unfortunately remain today in many cities. Sidewalks would disappear a block in and any sidewalks present were often too narrow for the comfortable movement of pedestrians. With so much focus directed towards efficient transportation, the physical environment of many streets within cities became unattractive to users. Downtown shopping districts became ghost towns and inhabitants preferred to shop in malls and destination stores. These venues provided them with opportunities for social interaction which was non existent in the city's streets.

With a drop in the number of inhabitants frequenting downtown shopping districts, regions soon became susceptible to increasing crime and violence. Without a strong community presence and surveillance of the streets, drug dealers, prostitutes and the homeless moved in. There was now a new focus on streetscape design within these downtown cores. City officials now focused on making the physical environment un-inhabitable for the homeless. Mike Davis (1995) draws attention to this approach on the streets of Los Angeles where they have 'bum proof' benches, with sprinkler systems and regular police patrols to "make the streets as unlivable as possible" (p. 362). Today's urban planners and architects have had to shift their focus towards street revitalization in an effort to stem the deterioration of the city.

2.3 Design and Social Interaction

Within today's society, there seems to be a disconnection between individuals. With the increasing size, density, and heterogeneity of urban life, the primary ties of urbanites to their neighbours are weakened. The strength of local collective sentiments and emotional attachments to one's place appear to be nonexistent (Hummon, 1992).

In 1965, Christopher Alexander examined the city as a mechanism for sustaining human contact. He argues that the city plays a large role in fostering and creating intimate contact amongst inhabitants. He notes that people come together in cities not only for trade, politics, and security, but also to experience human closeness. He also maintains that although people come to

14

cities for contacts, currently "people who live in cities are often contactless and alienated" (Alexander, 1965, p. 95). He believes that as an individual's world expands, the quality of human contact decreases and encounters with other inhabitants become superficial and trivial. He writes that "it is not surprising that in just those urban centers where the greatest expansion of human contacts has taken place; people have begun to feel their alienation and aloneness more sharply than in any pre-industrialised society" (p. 96). Since the publication of this article the lack of meaningful social interaction within our cities has remained virtually unchanged.

There continues to be a disconnect in the creation of spaces that exhibit a sense of place and foster social interaction. Southworth and Ben-Joseph (1995) argue that this disconnect within streetscapes is a result of the standards and procedures that have become embedded in planning and development. They state that "standards for streets virtually dictate a dispersed, disconnected community pattern providing automobile access at the expense of other modes" (p. 65). They believe that these rigid guidelines have resulted in "uniform, unresponsive environments" (p. 65). Tuan (1974) concurs with Southworth and Ben-Joseph as he too attributes the downfall of street activity with the emergence of the car. Tuan notes that within the city of Los Angeles, the "automobile has transformed the character of the city and a human's relationship to their urban environment" (p. 189). The lengths of streets have grown and the surrounding areas have become dominated with parking lots, gas stations, garages, motels, hotels, and fast food restaurants. These amenities are all in response to the needs of the automobile and travelers passing through. Tuan notes that "the pedestrian is given little consideration in an automobile city like Los Angeles.

A study conducted by Porta and Renne (2005) supports the issue of unresponsive streets. They have linked urban design to social urban sustainability through the examination of what they term urban fabric indicators. These indicators refer to accessibility, landuse diversity, public/private realm, natural surveillance, permeability/street connectivity, employment density, number of buildings, and number of lots, within a city. They determined that the physical

elements and layout of a city do have a great impact on social interaction. Within their case study, they determined that the city of Freemantle, Australia was far superior in fostering social interaction than that of the neighbouring community of Joondalup. They determined that the streets of Joondalup were "too large to work well in social terms; there was a 'withdrawal' of the city from the city's scene. The streets do not show the presence of buildings, lined trees, shops or the clues of any human activity" (p. 59).

This study was the only example found to date that examined the physical form of a street and its' resulting influence on social interaction. Furthermore, a key element missing from Porta and Renne's (2005) study was that inhabitants of both communities were not questioned or interviewed as to their perception of the success or failure, of their streets. Additional research into the influence that streetscape design has on social interaction from a user's perspective needs to be explored as it may be the missing link in a community's ability to achieve social cohesion.

2.3.1 Current Theories and Concepts of Streetscape Design

It is important to examine current theories and concepts of streetscape design in order to come to some conclusions regarding their influence on the success of streets. The following academics have each contributed to our current understanding of what physical qualities and elements are required for the creation of vibrant streets.

In the early 1970's William Whyte undertook the Street Life Project. His research involved hours of direct observations of the behaviours of individuals in our built environment. His main objective was to discover why some city spaces work for people and some do not (Whyte, 1980). Throughout his research Whyte was fascinated with the "behavior of ordinary people on city streets- their rituals in street encounters, for example, the regularity of chance meetings, the tendency of reciprocal gestures in street conferences and the rhythms of the three phase good-bye" (p. 8). Whyte went on to describe what he believed were the essential elements to a successful street. He acknowledged that sitting space, sun, trees, water and food are important elements but of greatest importance is one's relationship to the street. Whyte argues

16

that retail stores are essential in creating an active, inviting environment. The window displays and signage attract one's attention. He felt that the large office buildings that were becoming so common in North American downtowns had a negative impact on the sociability of streets. The retail store fronts were replaced with walls of glass "…through which you can behold bank officers sitting at desks" (p. 57). Whyte also argues that sightlines are important; "if people do not see a space, they will not use it" (p. 58). Whyte's research was the first of its kind in North America and drew attention to the impact built form has on the sociability of spaces.

One of the most influential pieces of work on streetscape design and the physical, designable characteristics of successful streets is *Great Streets* by Allan Jacobs. Jacobs (1993) examines what he believes are the best streets around the world and their form. Through this examination he has created a set of guidelines that he believes are essential in the creation of a successful street. Jacobs writes that

> " Beyond functional purposes of permitting people to get from one place to another and to gain access to property, streets- most assuredly the best streets- can and should help to do other things: bring people together, help build community, cause people to act and interact, to achieve together what they might not alone. As such, streets should encourage socialization and participation of people in the community". (p. 312).

To better achieve this sense of community Jacobs has eight physical characteristics that he believes are requirements in order to create successful streets. They include: places for people to walk with some leisure, physical comfort, definition and meandering form, qualities that engage the eyes, transparency, complementarity, maintenance and quality of construction and design. Furthermore, in additional to these eight principles Jacobs outlines thirteen qualities that contribute to the creation of a great street. These include: trees, beginnings and endings, many buildings rather than a few, special design features (details), places, accessibility, density, diversity, length, slope, parking, contrast and time. (See Appendix 1 for definitions).

Jacob's "requirements for a great street" appear to focus on the aesthetics of the street and its overall appearance as well as its function. It is what he terms the "qualities that contribute" that take more of a place making approach. It is these qualities and characteristics, such as

17

"Special Design features", particularly benches, "Places" and a "Diversity" of buildings that creates a lively, vibrant, active environment. These elements "in a sense, are community building" (Jacobs, 1993, p. 301). The thirteen "qualities that contribute" are deemed secondary to the eight requirements when in fact they should be given priority. The subsequent examination of the place making literature will shed light on why the majority of these "qualities that contribute" are so important for the creation of a sociable street.

Sucher (2003) has most recently published a set of guidelines that he believes contributes to a successful urban village. Within his recommendations he focuses on the importance of specific designable elements that contribute to a vibrant street. These include implementing traffic calming measures, the widening of sidewalks and narrowing of streets, and the planting of street trees to create a buffer between the roadway and the walkway. He also recommends that there be a high level of transparency (user can see into buildings and stores fronting the sidewalk) as well as increased seating. Definition along the streets edge is important to enhance the consecutiveness between buildings and along the street. As well Sucher states that the prohibition of parking lots in front of buildings would do much to enhance the definition of the street.

The following table summarizes the three academic's recommendations as to which elements are essential in creating a successful street.

Table 2.1. Academic Driven Design Guidelines**.**

	William Whyte (1980)	Allan Jacobs (1993)	David Sucher (2003)
Sitting Space	X	X	X
Physical Comfort-protection from the elements	X	X	X
Trees	X	X	X
Water and Food	X		
Sightlines	X	X	
Place for People to walk with some leisure		X	X
Definition & Meandering form		X	X
Qualities that engage the eyes		X	
Transparency	X	X	X
Complementarity		X	
Maintenance		X	
Quality of Construction & Design		X	
Implementing Traffic calming measures			X

Upon reviewing the elements that each academic felt were important factors in creating a successful street, it was determined that Allan Jacobs' eight guidelines, "requirements for a great street," represented and encompassed the key recommendations of the academics. The academics have identified several characteristics and have weighed varying levels of importance on each. Jacobs not only encompassed all of the other academics recommendations but also provided additional characteristics that should be examined. Therefore, these guidelines have been selected as the basis for the academic streetscape visualization.

The academic guidelines have not been without criticism. Worpole (2003 a) notes that over the past decade, political interest in the quality of streets, parks and other public spaces, often described as the public realm has grown enormously. Since the publication of these academic streetscape design guidelines governments and municipalities have commissioned

private planning firms, architects and landscape architects to create policies and guidelines to improve the degrading public realm. Worpole (2003 a) criticizes that every regeneration document, or urban design brief dealing with streetscape design now "pays attention—even if it is only lip-service to the requirement to provide high-quality public space" (¶ 5). However he feels that the resulting documents fall short of creating the vibrant, active environments that are so desired by the public. He writes that:

> "so where there is renewed interest in public space, particularly now amongst architects, landscape designers and academic urbanists, this interest is still perhaps too closely associated with replicating an ideal of Mediterranean café- society or Manhattan loft-style living in city centers- for adults with high disposable incomes- rather than addressing the civic and spatial problems facing the wider population" (2003 b, ¶.12).

Additionally, Worpole acknowledges that many of the guidelines, initiatives and programs that have been put into place for the regeneration of dilapidated streets regard the issue as primarily a physical matter. He notes that good design allied with public consultation can to a large degree solve the problem. However, he writes that "design alone doesn't guarantee success; that lesson has been learnt in many other places, where a mélange of prettification schemes, token works of public art, and a few new planters and street benches have often been vandalized within weeks, leaving the areas looking just as depressing and unloved as they did before" (¶. 8). Marc Auge (1995) has similar sentiments as Worpole when he acknowledges that new paving, clean lines, and public art alone will not bring about that sense of place so desired by governments and citizens.

Judith Ryser (2002) reviewed the "Good Place Guide- Urban design in Britain and Ireland" by John Billingham and Richard Cole. She notes that her "overall impression of the pictures in the book is one of a hard townscape for a hard society" (p.40). Even though this book is centered on British and Irish examples much of the same principles and guidelines that are thought to be desirable there, are held in the same esteem amongst architects and urban designers in North America. Another criticism Ryser has of one of the design principles is that "it is with pride that grassy banks have been replaced by York Stone; in a country where the sky is often

grey, the public realm could do with some colour spots, other than safely out of the way hanging baskets" (p.40). Additionally she acknowledges that no amount of paving is going to bring a place to life. She notes that "it is the people who use the public realm, walk through it, queue up in it, stay put in cafes or for art performances who make a place "good", design can at best act as a catalyst" (p.41). Evidently a number of academics believe that current guidelines, policies and initiatives to revitalize degraded streets and the public realm are falling short in their attempts. Additional feedback from the users and professionals will provide insight into what they believe is lacking in the creation of vibrant socially active streetscapes.

2.4 Theoretical Concepts of Place

2.4.1 Sense of Place:

It appears that the concept of place has taken a secondary role in the academic streetscape design guidelines. The subsequent examination of the place making literature and the concepts of sense of place, place attachment and sense of community will examine why they are essential in creating a sociable street. A common theme found throughout place making literature is that in order to create cohesion and ties between individuals within a community, an appreciation and connection to one's environment must first be established. The theory of sense of place which includes place attachment and sense of community identifies the link that the built form of a city has on influencing one's sense of belonging and attachment. The following discussion identifies the importance of establishing a sense of place and at the same time outlines the elements that are necessary to create it.

Although an agreed upon definition of sense of place has yet to be established, it is evident from research that the concept and contributing factors leading to a sense of place can play a large role in a community's ability to foster and maintain high levels of social interaction. Tuan (1974), Norberg-Shultz (1980) and Steele (1981) were the first scholars to provide theoretical concepts of sense of place. It is important to explore each scholar's contributions in order to establish the varying ways in which sense of place can be achieved.

21

Tuan (1974) writes of sense of place or what he terms topohilia as "the affective bond between people and place or setting" (p. 4). He believes that perceptions and attitudes affect one's experience within a place; therefore, sense of place is established and experienced differently by individuals. Tuan furthers this notion when he states that "a person is a biological organism, a social being, and a unique individual; perception, attitude, and value reflect all three levels of being" (p. 245). Additionally, Tuan argues that topophillia (sense of place) "takes many forms and varies greatly in emotional range and intensity" (p. 247). He describes sense of place as being "fleeting visual pleasure; the sensual delight of physical contact; the fondness for place because it is familiar, because it is home and incarnates the past, because it evokes pride of ownership or of creation" (p. 247). Tuan writes that the stronger a sense of place the more passionate an individual's response and ties to place will be.

Similarly, Steele (1981) acknowledges that sense of place is a construct created by the individual as a result of their emotional, sensual and physical experience within a place. Steele writes that sense of place is "the pattern of reactions that a setting stimulates for a person, a product of both features of the setting and aspects the person brings to it" (p. 12). He notes that each individual will experience an environment differently than others. For example, a person accustomed to cities may enjoy the hustle and bustle of city life; pedestrians walking about, traffic moving all around them, all the while being surrounded by buildings and high rises. On the other hand, a person more accustomed to a country lifestyle may find this noise, traffic and sheer number of individuals overwhelming. Both Tuan (1974) and Steele (1981) emphasize that sense of place is the result of a number of factors related to the experience one encounters within a place. One's mood, preconceived notions of a place, their cultural beliefs and values all influence how they develop sense of place. They do however acknowledge that certain places are experienced and perceived similarly by all individuals. Tuan (1974) states that "all human beings share common perceptions, a common world" (p. 5). Within this study the focus on sense of

place will lie in the common responses individuals have to places and the physical attributes that invoke similar feelings regardless of one's background.

Norberg-Shultz (1980) examined the influence the built environment has on one's ability to experience a space as having a sense of place. He argues that the identity and value of a place is tied to the historical, cultural, or geographical context of the area. He also emphasizes the importance individuals place on their connection with landscapes and cityscapes when he states that "man's most fundamental need is to experience his existence as meaningful" (p. 6). Through his examination of a number of cities around the world, Norberg-Schultz found that four main factors must be considered when determining which elements make a settlement possess a strong sense of place. In his analysis, the first factor is image. For example, does the place provide a sense of mystery or local character. The second factor is space, in reference to the physical elements that the space has to offer, such as rolling hills which may be perceived as a friendly countryside. The third factor is character, which refers to the style of the buildings and landscape. Lastly, the fourth factor is the genius loci, which refers to the spirit of the place. Norberg-Shultz argues that these four factors can be applied to cities, streets and natural environments to determine which elements are contributing to and or inhibiting the process of creating a strong sense of place.

It is Norberg-Shultz's notion of spirit of place that is of particular importance to this study. Throughout his analysis, it is apparent that sense of place can be established and perpetuated throughout the centuries. In reference to Norberg-Shultz's theory of genius loci, Hay (2002) writes that "to speak of a place as having a genius loci is to assume a certain constancy through time; to see places as tenacious unities that self-perpetuate while people and historical events come and go" (p. 157). This notion of places perpetuating their spirit of place over time can be seen in many settlements and natural landscapes around the world. For example, Norberg-Shultz argues that places such as Prague, Rome, Boston and Chicago have through the years retained a unique sprit of place. The mix of architectural styles with the scenic hills, river,

greenery, parks and islands of Prague make this city one of the most beautiful in the world. The local culture, history and identity are strongly portrayed in the built environment. Similarly, Rome captivates inhabitants and visitors alike with the beauty of its setting and unique take on Greek architecture. The use of vaults and arches combined with local building materials made these imposing structures memorable over the last twenty centuries. In more modern cities such as Chicago and Boston, Norberg-Shultz examined the backdrops of each city and made note that Chicago's setting allowed for large, modern, architectural features. On the other hand if such buildings were to be erected in Boston, the city would surely loose its spirit of place as Boston is associated with more traditional styles of architecture that have an eclectic twist. When referring to sense of place within this study, the reference is being made to the spirit of a place; the physical characteristics that invoke similar feelings within users and inhabitants alike.

Steele has examined the many facets of sense of place theory and has drawn on both Tuan and Norberg-Shultz's work. It is his writings on spirit of place that provide additional insight into the elements and physical characteristics that help contribute to the creation of such a phenomenon. Steele (1981) writes that "there are settings with such strong, distinct qualities that they are more likely than bland settings to stimulate a noticeable sense of place" (p. 53). The physical elements that he believes have the greatest impact on creating a sense of place include: a strong location, boundaries, geographic distinctiveness, scale and proportion, and rich identity and imagery. It is important to examine these elements in detail in order to explore the extent to which they can inform streetscape design guidelines and potentially increase social interaction.

When referring to a place as having a strong location, this is in reference to the setting's placement in geographic space: where it is and how it relates to its surroundings. Steele (1981) notes that "locational impact is particularly potent when the key feature of the setting is in strong contrast to its immediate surroundings" (p. 58). The second factor contributing to the creation of spirit of place are boundaries. There must be a clear delineation of a setting from its surroundings, a sense of enclosure of the physical features. This allows the user to identify with

the place in relation to the larger surrounding environment. The third element is geographic

distinctiveness which can also be referred to as a "special setting". He notes that "regions

develop a strong identity if their features stand out enough" (p. 59). This does not necessarily

mean that a special setting is comprised of a single feature or element but that the relationship

among several can create such a setting. For example he notes that the earth and sky in the Great

Plains of Kansas and Nebraska together creates a special setting. The fourth factor is scale and

proportion. In order for people to identify with a setting the scale and proportion of the built

environment must correspond to one another. Lastly, the fifth factor that contributes to creating a

Spirit of Place is the richness and imagery of the setting. This refers to the images that are

conjured up in the user's mind based on the variety of features within the setting. It is important

to take sense of place and in particular the elements that form the foundation of spirit of place into

consideration when designing streetscapes.

Relph (1976) argues that "to be human is to live in a world that is filled with significant

places: to be human is to have and to know your place" (p. 1). Additionally, Stock (1993)

emphasizes the impact urban landscapes have on individuals' connection with places when he

states, "the landscape … remains 'out there', a part of lived reality. It is both its own text and in

part, its own reading: it is able to refer back to itself, as does any text, while making a public

statement, visible to all" (p. 325). Stock's analogy of the urban landscape as a literary work,

describes how the reader can take away their own meanings and impressions. Both written work

and landscapes however will always have a statement within, which is apparent to all. Each

scholar has indicated that perceiving a sense of place is an innate human need. Without a sense of

place, inhabitants are lost and unsure of their surroundings, leaving individuals insecure. Sense of

place not only gives a person a physical point of reference but can also invoke a positive

emotional response; a sense of belonging and pleasure. These feelings of inclusion and

enjoyment of being in that environment can encourage individuals to reach out and participate in

the greater community. Research shows that unique memorable environments tend to draw

people back and prolong their stay within the space, resulting in increased social interaction (Hay, 1998).

Since Jacob's eight requirements for a great street have been selected as the basis for the academic visualization it is important to examine where his principles fall within the place making literature. Table 2.2 displays both Norberg-Shultz and Steele's principles for the creation of a strong sense of place and compares them with those of Allan Jacobs'. It is evident that Jacob's eight requirements for a great street focus largely on the physical attributes and elements that make an aesthetically pleasing street. Norberg-Shultz and Steel, academics who have specialized in the field of sense of place, note that additional factors play an important role and must be taken into consideration during the design process. Table 2.3 displays Jacobs' thirteen qualities that contribute to the creation of a great street, alongside the same sense of place criteria found in Table 2.2 (Norberg-Shultz & Steele). It is interesting to note that when these thirteen factors are aligned with the sense of place literature, attention is paid to the other elements that make up a strong sense of place rather than focused purely on the aesthetics and function of a street.

Table 2.2. Sense of Place & Allan Jacobs Eight Requirements for a Great Street.[2]

Allan Jacobs (1993) "Eight Requirements for a Great Street".	Sense of Place: Norberg Schultz (1980)				Sense of Place: Steele (1981)				
	Image	Space	Character	Genius Loci	Strong Location	Boundaries	Geographic Distinctiveness	Scale & Proportion	Rich Identity & Imagery
1) Place for people to walk with some leisure		X							
2) Physical Comfort		X							
3) Definition & Meandering form						X			
4) Qualities that engage the eyes		X							
5) Transparency		X							
6) Complementarity								X	
7) Maintenance		X							
8) Quality of construction & Design		X							

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[2] For complete definitions of each term refer to the Appendix 1.

Table 2.3. Sense of Place & Allan Jacobs Thirteen Qualities that Contribute.[3]

Allan Jacobs (1993) "Thirteen Qualities that Contribute to a Great Street".	Sense of Place: Norberg Schultz (1980)				Sense of Place: Steele (1981)				
	Image	Space	Character	Genius Loci	Strong Location	Boundaries	Geographic Distinctiveness	Scale & Proportion	Rich Identity & Imagery
1)Trees		X							
2) Beginnings & Endings						X			
3) Many Buildings rather than few	X	X	X						
4) Special Design Features (Details)	X	X						X	
5) Places		X	X				X		
6) Accessibility		X			X				
7) Density					X				
8) Diversity	X		X				X		X
9) Length						X			
10) Slope		X					X		
11) Parking		X							
12) Contrast	X		X				X		
13) Time	X		X	X					X

2.4.2 Place Attachment / Perception of Place:

Academics believe that place attachment is a component of sense of place. Place attachment refers to the bonds that people develop with places. Brown, Perkins, and Brown (2003) write that place attachment is "nourished by daily encounters with the environment and

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[3] For complete definitions of each term refer to the Appendix 1.

neighbours, seasonal celebrations, continued physical personalization and upkeep, and affective feelings toward and beliefs about the neighborhood" (p. 259). Similarly, Low and Altman (1992) note that place attachment is created and maintained through interactions with the environment; this includes environmental, biological, psychological and sociocultural relations. Within place attachment theory it is believed that in addition to demographic (residence length) and social (social ties in residence place) factors, physical features also influence place attachment. Mannarini et al. (2006) note that "each urban agglomeration carries its own attributed traits and images, anthropological and psychological characteristics which, though associated with the city are extended to its inhabitants" (p. 203). These characteristics apply to the microcosms of cities and in particular are ever present at the neighbourhood level. Based on these academics research it is clear that inhabitants do experience place attachment to their physical environment. As noted by Brown et al. (2003), bonding with the physical environment contributes to one's positive feelings and beliefs about their neighborhood. These positive feelings can extend to the social fabric of the street and lead to increased levels of social interaction.

Milligan (1998) theorizes place attachment as an interactionist process. The premise being that all interaction is spatially located and is the result of a particular interaction accompanied by significant meaning that place attachment is fostered. Milligan proposes that there are two interdependent components that effect one's place attachment to a specific geographic location: the interactional past and the interactional potential. The interactional past refers to the "past experiences of memories associated with the place" (p. 1). The interactional potential "is defined as the imagined or anticipated future experiences or expectations associated with the site" (p. 1). Clearly the form and design of the built environment whether it is a street, neighbourhood or public square, has a large impact on one's experienced and perceived interactional potential.

Not only does the design, layout and form of a street impact one's ability to develop place attachment but the upkeep and physical appearance of the street also plays a role. Research

indicates that inhabitants and users have less place attachment to environments that are perceived as physically disorderly or deteriorated (LaGrange, Ferraro, & Supancic, 1992; McGuire, 1997). Jacobs' eight requirements for a great street do play a role in fostering place attachment. It is however, when his thirteen qualities that contribute are taken into consideration, that a deeper, lasting sense of place and place attachment is fostered.

Another factor that inhibits place attachment is the fear of crime (Taylor, Gottfredson, & Bower, 1984; Sampson, 1989). Brown et al. (2003) write that the "fear of crime may keep residents away from neighborhood places and events, shrinking the boundaries of place attachment, perhaps eroding attachments to neighborhood more than to homes" (p. 261). Subsequently, there are design guidelines that have been written strictly from the standpoint of safety. The most commonly referred to material is Crime Prevention Through Environmental Design (CPTED). Although these guidelines have been in existence since the 1960's their use and consideration does not generally occur in the design process leaving security issues to be dealt with as an after thought. The CPTED guidelines do play a role in place attachment. If a user perceives an environment as unsafe, they are not going to become attached to the physical environment and as a result are less likely to interact on a social level. Therefore it is important to examine these guidelines as they too can inform the creation of a more holistic set of design criteria that fosters increased social interaction.

The Crime Prevention Through Environmental Design guidelines purport that four main themes must be considered when designing buildings and public spaces, these include; natural surveillance, territorial reinforcements, natural access control, and target hardening. Natural surveillance refers to design that maximizes the visibility of people, parking areas and building entrances. Visibility is increased through the placements of doors and windows that look out on to the streets and parking areas. Additionally, pedestrian-friendly sidewalks and streets will encourage people to frequent the area allowing for additional surveillance. Proper lighting is essential to ensuring that there are no dark places where criminal activities can be carried out.

Territorial reinforcement refers to design elements that clearly delineate boundaries between private and public spaces. Once these boundaries are identified the user can develop a sense of control and awareness over both the private and public spaces, the offender will perceive this control and be discouraged from criminal acts. Specific design elements that help to outline boundaries are landscaping, pavement designs, gateway treatments and fences. Natural access refers to designing in a manner that decreases criminal opportunity and creates a perception of risk to the offender. This is done by designing streets, sidewalks, building entrances and neighborhood gateways that the public or residents can see. For example, a stairwell leading to the underground parking of a residential complex should not be located in the rear of the building but in a location that is visible to passers by. This will increase the level of risk the offender will need to take in order to access the underground parking and may deter them from entering the space. The last factor to consider is target hardening. This refers to features that prohibit entry or access to areas, such features include window locks, window bars, dead bolts for doors, interior door hinges, and alarms systems. Designers must be careful when using target hardening tactics because those that are visible to the user can increase the perception of crime in an area and perpetuate that feeling of insecurity.

In order to design vibrant streets that people want to come back to it is extremely important to take place attachment theory into consideration. Furthermore, public consultation before and after the design of public spaces is essential to ensuring that the built form has taken the shape desired by the user. If the user is unable to perceive themselves as having positive, safe experiences within a space they are not likely to frequent the area and engage in social interaction. Additionally, if a space affords the user with a variety of experiences and positive encounters (physical, social and sensual) there is a greater likelihood that the user will develop or intensify their feelings of place attachment. Currently there is not a consensus on how to measure place attachment, however it has been agreed that it does have a role in effecting social interaction (Brown et al., 2003).

2.4.3 Sense of Community:

The third concept within the place making literature is the development of a sense of community. Sense of community "is a phrase commonly used by citizens, politicians, and social scientists, to characterize the relationship between the individual and social structure" (Chavis & Wadersman 1990, p. 56). The establishment of a sense of community is essential in maintaining and building a healthy environment. McMillian and Chavis (1986) theorize that sense of community is the result of a community development process. The interactions people have "stimulates opportunities for membership, influence, mutual needs to be met and shared emotional ties and support" (Chavis & Wadersman 1990, p. 56). The stronger the sense of community, the more empowered inhabitants are. McMillian and Chavis (1986) furthered their examination of sense of community and developed a theoretical model. They believe that there are four dimensions that influence sense of community; membership, influence, integration and the fulfillment of needs, and shared emotional connection. Evidently, sense of community is very much a construct of social interaction, however there are "substantive relationships between the qualities of the physical environment, the social environment and residential satisfaction" (Chavis & Wadersman 1990, p. 57; Rohe, 1985; Taylor 1982; Weidemann & Anderson, 1985).

Peoples' perceptions of the physical environment play a large role in how they will perceive other inhabitants living in the area. Users will either have a positive or negative perception of a space. Perceptions can vary greatly between individuals; however there are some common physical features that induce similar reactions in all users. These factors are often related to negative signs, such as litter, gangs on the street, graffiti, abandoned cars and dilapidated buildings. These negative signs can induce fear of crime, lower property values, and social withdrawal (Ahlbrandt & Cunningham, 1979; Lewis & Salem, 1981; Perkins, Florin, Rich, Wandersman, & Chavis, 1990; Skogan & Mazfield, 1981; Taylor, 1988). If the environment is perceived as negative, users are less likely to interact with others in the street. On the other hand, when an environment is perceived as being positive, users feel more comfortable within the space

and are more likely to engage in friendly conversations with shopkeepers, other customers and inhabitants in the area.

Brower (1980) argues that sense of community is a product of social interactions and common perceptions of one's environment shared amongst inhabitants and users. For example, "as people identify with their neighborhood, they personalize their home which contributes to the development of common symbols" (Chavis & Wadersman, p. 58 in Brown, 1987; Taylor, 1988). These common symbols create a sense of unity and membership. It is this creation of a common identity and sense of membership that is one of the key factors that fosters sense of community. Additionally, as "residents feel safer and more secure in their community, they are likely to interact more with their neighbors, feel a greater sense of community, and have more incentive to participate" (Chavis & Wadersman, p. 58). The physical form and appearance of a street has a large impact on the user's perception of the space, the people who inhabit the region and one's ability to engage in the sense of community process.

Mannarini et al. (2006) recently explored the relationship between the images of one's community and their feelings of sense of community. They also investigated the relationship between self and neighborhood images. This research was carried out in three Italian cities with differing sizes, features and geographic locations. In each city different neighborhoods in both the peripheral and central areas were selected in order to represent the whole city. Data was collected through a self-reported questionnaire. People were asked to use word associations to statements such as "my neighbourhood is". These statements provide the researchers with the inhabitants' perceived image of their neighbourhood, and city. The results of the study indicated that there is a relationship between the image of neighborhood and sense of community. Sense of community was stronger in areas where the images of one's neighborhood were positive and weaker where they were negative. They write that:

> " residents who provided positive descriptions of places, accordingly proved to have a more marked sense of belonging to the human and physical community defined by their

own place of residence; on the contrary those who associated it with negative traits were characterized by a weaker emotional bond with their neighborhood" (p. 211).

This relationship provides further data reaffirming the notion that "residents who negatively perceive their residential environment can distance themselves from it" (p. 211). This research clearly indicates that the physical form and appearance of a street or neighbourhood has an impact on one's ability to establish emotional ties to both the physical and social environment.

Kim and Kaplan (2004) have examined the physical and psychological factors in sense of community. They studied two suburban developments, Kentlands, Maryland, a new urbanist suburban development and Orchard Village, Maryland, a conventional suburban development. The emphasis of their study was on the perceived role physical features play in four domains, and their ability to foster attachment, identity, social interactions and pedestrianism. Their study contained a survey that assessed seventeen specific physical characteristics found in both communities. Public green spaces, footpaths, tot lots and either lakes or wetlands were given high ratings in all four domains. Street trees and other street landscaping was also among the top six ratings for each community" (p. 331). It was also discovered that Kentland participants "strongly identified with their community with respect to its unique appearance and mentioned how specific features, such as alleyways and porches, evoke memories of childhood places, strengthening their bond to the community" (p. 332). It was acknowledged that Kentland respondents more strongly identified with their community. They reported that its' "distinctive physical character was more satisfying" they felt "more attached to the community and had a greater appreciation for the local services and natural features in their walkable vicinity" (p.333). Kentland also reported a higher level of sense of community than Orchard Village. The neotraditional design of Kentland was intended to offer a greater diversity; "its architectural style and layout, the mix of housing types, and their design quality" were appealing to its inhabitants (p. 328). They also noted that the layout of Kentland included narrower streets and smaller residential clusters which promoted a greater degree of sociability and sense of community.

Evidently the diversity in land use and architectural style of Kentland resonated with its inhabitants leading to "higher levels of attachment to their community and a stronger sense of community identity than Orchard Village residents" (p. 335).

Many of the key elements identified by the residents of Kentland as enhancing their sense of community (public green spaces, footpaths, street trees, diversity in land use, landscaping, unique architectural style/ distinctive physical character) can be found within the sense of place principles outlined by Norberg-Shultz and Steele as well as in Jacobs' thirteen qualities that contribute. Sense of community is a component of place attachment. If a person does not feel attached to the environment it is unlikely that they will develop a relationship with the community at large. On the other hand, if place attachment occurs, they are more likely to socialize and take part in community events leading to and fostering a sense of community. Together, these pivotal components must be taken into consideration when designing streets and public spaces; their existence or lack there of can be a strong indicator of the sociability of a particular street.

Within today's society, there has been a breakdown in the development of streets that create a sense of place and foster place attachment and sense of community; not only for local inhabitants, but also for visitors. The city of Vancouver, British Columbia, is a prime example of a city where specific streets have no sense of community or have lost their appeal to a broader range of inhabitants. This lack of social cohesion can be attributed in part to the built form of the region. The notion of built form influencing perceptions and activities within a space is reaffirmed by Relph (1976) when he writes that the knowing of places can be quite superficial, in that the function of a particular place dictates its meaning. Vancouver's Fraser street, which has historically been a lower income neighbourhood, has in the past twenty years experienced a decline in the number of people frequenting the area. This has led to the closing of business and shops which has further degraded the sociability of the street. This decline will have a detrimental and lasting effect on the economic and social sustainability of the area if changes are not made. At the opposite end of the scale is Robson street, which is a very high end shopping

district in Vancouver's downtown core. Unlike Fraser street, Robson continues to attract many

people and businesses. It is a vibrant shopping area however the social interaction that does occur

is of a superficial nature. Individuals use the space to fulfill their particular needs, however there

is little to no interaction on a community level; the street is a thoroughfare in the heart of the

downtown core. This leads one to wonder why these places are not successful in fostering

positive social interaction.

Relph (1976) argues that planners and architects pay little attention to place theory. This

may be the reason why many spaces within cities are not thriving. He notes that planners and

architects have the largest impact on the creation of place and the development of meaningful

places. Thus,

> if places are indeed a fundamental aspect of man's existence in the world, if they are
> sources of security and identity for individuals and for groups of people, then it is
> important that the means of experiencing, creating, and maintaining significant places are
> not lost (p. 6).

Hay (1998) notes that within his study of residents and out-migrants, inhabitants felt

feelings of security, belonging and stability when a sense of place was allowed to fully develop.

Hay also mentions that without connections or ties to communities (a rooted sense of place)

(sense of community) "individual continuity, community and societal cohesion are themselves at

risk" (p. 26). Evidently, each academic believes that humans need to feel a sense of place,

experience place attachment and sense of community not only to fulfill their own personal needs

but also to contribute to a community where social cohesion is possible. Many academics have

examined place theory and the role this phenomenon plays within society. A key theme within

each academic's writing is that urban form and the natural landscape play a large role in the

ability of an individual to secure psychological, spiritual and emotional well-being. In order to

create vibrant, socially successful streets and neighbourhoods, practitioners need to take place

theory into consideration. Practitioners, urban planners and architects have either failed to

acknowledge the importance of place making literature or have been unable to implement its

36

principles in their planning practices. There has been a lack of attention given by practitioners

and developers to the deeper principles that have been established in the place making literature

by people such as Norberg-Schultz (1980), Steele (1981), and La Grange et al. (1992). In order to

create successful, socially vibrant streets, place making theory and the user's preferences, needs

to be incorporated within the academic driven guidelines.

2.5 Conclusions

Historically, streetscape design has been a result of the topography, political climate and

religious beliefs of the time. The most significant change to streetscape design came about in the

late nineteenth century when landuse zoning, population densities and building heights became

statutory regulations. The design of today's modern city is a direct result of the implementation

of these regulations. In addition, the emergence of the automobile greatly affected the form of

our streets from that of being primarily concerned with the pedestrian to the efficient movement

of vehicles. The resulting streetscapes did little to support or promote the sociability of the street.

As a result, academics and practitioners sought to create criteria and guidelines that would

promote more vibrant streets. These guidelines largely focus on the aesthetics and function of a

street but do not take into consideration how the resulting form influences the activities of the

user.

This thesis intends to shed light on the importance of the place making literature and the

lack of attention paid to particular design characteristics that have the greatest potential for

creating a socially vibrant street. By combining the theoretical concepts of streetscape design

with a case study this research will illustrate the importance of certain theoretical concepts that

are currently being undervalued and underutilized. It was through the examination and analysis

of the place making literature that it became apparent that through the creation of a sense of place,

feelings of place attachment and a sense of community that social interaction could be fostered.

Based upon the comparisons observed in Table 2.1 Jacobs (1993), Whyte and Sucher had

similar recommendations as to what elements they believe are essential for the creation of a

successful street. Whyte noted that sitting space, sun, trees, water and food are important elements but of greatest importance is ones relationship to the street. People need to feel as though they are a part of the street scene. All three scholars noted that high levels of transparency would help make the user feel more welcomed in the street. Jacobs' eight requirements for a great street focused on physical elements that would make the street aesthetically pleasing and functional. It was Jacobs' thirteen qualities that contribute that incorporated more of the place making principles. Sucher's recommendation fell in line with both Whyte and Jacobs' although he did place more of an emphasis on the need for traffic calming measures, widening of sidewalks and the narrowing of streets. Based upon the comparisons made it was determined that Jacobs' (1993) guidelines encompassed both Whyte's (1980) and Sucher's (2003) recommendations as well as provided additional characteristics that could be examined and would therefore inform the academic driven visualization.

When these guidelines were compared to the sense of place framework (see Table 2.2) it was determined that the academic guidelines of Whyte, Jacobs and Sucher have failed to emphasize the important principles of the place making literature. The concepts of strong location, character, geographic distinctiveness, genius loci, image, rich identity & imagery are missing from the academic guidelines. It is not until you take into consideration Jacobs' thirteen qualities that contribute that the sense of place principles are incorporated (see Table 3). Based upon the literature review it is clear that these principles have the greatest potential for increasing social interaction and cohesion. However, it is important to consult with the users to see if the current best practices/principles for urban streetscape design reflect their preferences/expectations.

CHAPTER III- METHODOLOGY

3.1 Introduction

The data for this thesis is derived from observations and interviews administered in three streetscapes in Vancouver, British Columbia. The three streetscapes selected have a range in the levels of social interaction occurring as well as a range of design elements. Opportunity sampling was employed in the first phase of interviews while purposeful sampling was used in the second phase. Interview guides ensured the topic of discussion revolved around streetscape design and social interaction as well as ways to foster sense of place, place attachment and a sense of community. A detailed description of this study's methodologies is provided in the subsequent section.

3.2 Methodological Approach

Based upon my own observations of streetscape design and the resulting activities that occur within a street, I felt there were varying levels of interaction. I wanted to examine why some streets are vibrant socially active environments and why others are not. The following research questions were developed in order to begin to understand the influence design has on streetscape users.

Qualitative research was employed in this study to answer the following research questions:

1) What are current best practices/principles for urban streetscape design?

2) To what extent do best practices/principles for streetscape design reflect public preferences/expectations?

Shin, Kim, and Chung (2009) note that qualitative research refers to methodologies that "help us understand what a world means to us by adopting and utilizing certain perspectives" (p. 850). This is done by studying participants in their natural environment while they experience the world around them. They acknowledge that qualitative research methods "include a variety of data-processing approaches designed to provide various types of information, diverse

perspectives, and multifaceted interpretation possibilities" (p. 850). Qualitative research is based upon constructivist knowledge claims which argue that humans generate knowledge and meaning from their experiences (Creswell, 2003, p. 18). Therefore, a qualitative approach allows for general information gathering and lends itself to unrestricted responses. Within this study, qualitative methods are the most appropriate research technique to solicit the users' initial feedback on what they believe creates a successful, socially vibrant street. The objective is to test or verify the current academic driven theories surrounding streetscape design and either confirm, disconfirm or expand upon the theory in relation to the users' feedback. Within this study, it is the initial qualitative data obtained in the first phase of interviews that has formulated the user driven visualization. It is this visualization that is re-evaluated by the public and professionals to gather further insight into the users' perceptions and preferences for streetscape design in phase two of the interviews.

3.3 Research Design

The research design of this study is exploratory. The goal of this study is to evaluate the current success of streetscape design guidelines in fostering social interaction based upon the users' perception and preferences. This evaluation is done in order to make a judgment about the value or merit of academic-based design guidelines. In this thesis the contribution to knowledge will be based upon the additional insight provided by the user and professionals, which will in turn, inform and extend the current theories on streetscape design. Allan Jacobs' eight requirements for a great street are the existing principles that will be used to compare the user driven perceptions against. Jacobs (1993) guidelines which were determined to encompass many other scholars' recommendations have been examined in the literature review and analysis and selected as the model to test. It is Jacobs' design guidelines that will be modified within this study based on the case study of Vancouver, British Columbia and the three streetscapes within the city that have been selected. The feedback provided by the users will be reflective of what citizens believe contributes to and creates a successful, socially vibrant street.

40

3.4 Research Framework

The framework for this research is a multiple case study approach. Case studies allow "the researcher to explore individuals or organizations…and supports the deconstruction and the subsequent reconstruction of various phenomena" (Baxter & Jack, 2008, p. 544). In a multiple case study approach the goal is to:

> "accomplish something other than understanding a particular situation. It provides insight into an issue or helps to refine a theory. The case is of secondary interest; it plays a supportive role, facilitating our understanding of something else" (p. 548).

Additionally, case studies provide a number of perspectives to be examined which "allows for multiple facets of the phenomenon to be revealed and understood" (p. 544). Within this study, where the goal is to provide insight into what the users' perception of streetscape design and social interaction is, a multiple-case study approach was the best option.

Stake (1995) notes that multiple case studies allow the researcher to analyze phenomena within each setting and across settings rather than just within the one setting. Within this study, it was important to examine several cases to understand the similarities and differences between the impact and influence different streetscape designs have on the user. It is this type of framework that allows readers to identify potentially key similarities in other cases of interest as well as provides the basis for generalizations. This case-study will shed light on the specifics of streetscape design in Vancouver, British Columbia; however the knowledge gained from this research can be applicable to streetscape design in other areas of North America.

This case study of three streets in Vancouver will provide an in depth understanding of streetscape design and the users' perception of what makes a sociable street through the use of observations and interviews. Baxter and Jack (2008) note that "a hallmark of case study research is the use of multiple data sources, a strategy which also enhances data credibility" (p. 554). This study's research framework and design takes into account a variety of perspectives including the users (individuals who frequent the selected streets), academics and professionals (Vancouver based planners and landscape architects) which enables the topic to be studied in depth.

3.5 Case Study Selection

The case study of Vancouver was selected for a variety of reasons. Firstly, Vancouver has an "international reputation for achieving a generally high standard of design" (Punter, 2003, p.xiii). Secondly, within the City of Vancouver's planning department there has been a conscious effort to create streets and neighbourhoods that are livable. Through a performance based application approval system the city of Vancouver has required a high level of urban design in all projects with the goal of making the public realm as attractive and functional as possible.

In order to understand fully the influence form has on social interaction, three streetscapes were selected within the city, as study sites. The goal was to select three streets with varying levels of design and social activity. The three streets were chosen according to the levels of pedestrian traffic (low, moderate, high), pedestrian activity (active or passive) and design character (refined or eclectic) based upon Jacobs' (1993) eight requirements for a great street as well as the sense of place principles. The goal was to examine a street that contained many elements of Jacobs' eight requirements for a great street, this street (Street One) was deemed to be refined. On the other hand it was also important to examine a street that contained few of Jacobs' eight requirements for a great street but still had a high level of pedestrian traffic and activity and an identity and character described in the sense of place literature (Street Two). The last street was to contain few elements of either Jacob's requirements or the sense of place principles. The goal with Street Three was to allow the users to provide feedback in an environment that clearly needed improvement.

- Street One: high level of pedestrian traffic and activity, and a refined street design.

- Street Two: high level of pedestrian traffic and activity, and an eclectic street design.

- Street Three: low level of pedestrian traffic and activity, and have neither a refined or eclectic street design.

Based on this set of selection criteria, both behavioural and environmental observations were made. Within each streetscape it was important to determine the levels of activity; this was based upon the types of interaction that were occurring, as well as counts of pedestrians passing by during the observations. Lastly, the physical form of each street was also used as selection criteria such as the streets width, building setbacks, landuse diversity, levels of transparency and appearance. The street's form, physical comfort, appearance and character was examined to determined if the street fell more within the refined street design of Jacobs or if the street had eclectic elements that were more consistent with the sense of place principles. Table 3.1 provides a summary of the selection criteria.

Table 3.1. Selection Criteria

Pedestrian Traffic- # of people passing by within an hour	*Low:* 0-300	*Moderate:* 301-600	*High:* 601-900
Pedestrian Activity	*Active:*		*Passive:*
	* people chatting with friends * people window shopping * shopping * people having coffee on patios * friendly interaction with strangers * leisurely movement		* people just using the street as a through space * purposeful movement (has somewhere to be) i.e.. catching a bus
Design of the Street	*Refined:*		*Eclectic:*
Form:	* consistent sidewalk width. * high quality of construction & design		* varying sidewalk widths and setbacks * older buildings with diversity
Physical Comfort:	* presence of awnings/ bus shelters		* awnings
Appearance:	* textured sidewalks * zero setbacks/strong definition * street trees * benches/outdoor seating * well maintained (clean) * qualities that engage the eyes * landscaping/flowers * transparency * unified banners		* not necessary * varying setbacks * street trees * benches/outdoor seating * not necessarily well maintained * qualities that engage the eyes * not necessary * transparency * banners
Character:	* Complementary Design		* Diverse Design

Based on the selection criteria, six streets were identified as being potential study sites. Of these six streets where environmental and behavioural observations were made: Victoria St E from 48th-50th, Main St. E 14th-16th, Broadway W from Mackenzie St to Trutch St., Commercial Drive from Grant St. to William St., Fraser St. from E 26th-28th, W41st Ave from West Blvs to Balsam St, the latter three were selected; Commercial Drive, Fraser St and W41st Ave. These three streets were the best fit based on the above selection criteria and had the same land use designation C-2:

> "Commercial District- the intent is to provide for a wide range of goods and services, to maintain commercial activities and personal services that require central locations to serve large neighbourhoods, and to provide dwelling uses designed compatibly with commercial uses" (Community Services Planning, 2007).

In addition, Street One, W41st Ave and Street Two, Commercial Drive, had the most similar levels of pedestrian traffic and activity and were good cases for a comparative analysis. Street Three (Fraser St) had the least in both levels of activity and design of all six streets and was a good example of an area that needs improvement. Victoria St, Main St, and Broadway's levels of pedestrian traffic and activity were too different to allow for a comparative analysis. Other environmental observations such as one street having more vehicle lanes than the others excluded its potential to be a study site as the goal was to find three streets with similar road widths but varying street treatments and design characteristics.

3.5.1 West 41st Ave (Kerrisdale)

West 41st Ave is located in the district of Kerrisdale (Figure 3.1). West 41st Ave, which is the main street of Kerrisdale, was established in the late 1860s by the settlers who had come to the area to farm. In the late 1890s the town of Steveston, just 24 km south of Vancouver, was the busiest fishing port in the world. When the canneries in Steveston began to flourish there was a need for workers which prompted the CPR to construct a railway from Vancouver to Lulu Island. The "Sockeye Special", went through the heart of Kerrrisdale, providing transportation for the first influx of people. From 1904 to 1912 Kerrisdale had a general store, a post office, a hardware

store and a real estate office. In 1912 streetcar service arrived on 41st Ave and would pass

through the developing commercial area. As the population of the area grew, Kerrisdale

amalgamated with Point Grey and became a part of the city of Vancouver in 1929. Today,

Kerrisdale "retains the basic development pattern of the early years which was influenced and

established by the Wilson Rd and Vancouver-Lulu island train tracks" (Community Web Pages,

2009).

Figure 3.1 Map of Kerrisdale Neighbourhood.

For many years Kerrisdale has been regarded as one of Vancouver's most affluent

neighbourhoods and remains so to this day. The commercial area running along W 41st Ave from

Maple St. to Larch St. has the oldest business association within the city of Vancouver. The

association has concentrated their efforts on five initiatives: beautification, finance, marketing &

publicity, parking and the Welcome Wagon. It is the beautification initiative that is of particular

interest to this study.

There has been a concerted effort in Kerrisdale to create a beautiful unified street in

which users would find pleasure. The Kerrisdale business association has "always strived to keep

the community, clean, safe and beautiful" (Kerrisdale Business Association, 2006). With this

goal at the forefront, the business association has taken on a number of projects that have

contributed to the beautification of the street. These projects include: sidewalk bricking, a

railway bus shelter at West Boulevard and West 41st Ave, parking lot paving, bricking and street tree planting, flower beds and granite stone walls. Additional design features include wrought iron newspaper box surrounds, wrought iron refuse containers in their official colours, large terra-cotta-style flower pots throughout the district and light standards painted in the official colours. There have also been "avenue art" projects which involves the hiring of a professional artist who designs the street banners, special event posters, magazine and newspaper ads. Overall the street has a unified cohesive look and it is evident that a real effort has been made to make the street as aesthetically appealing as possible. Figures 3.2, 3.3, & 3.4 provide a view of the street from a variety of vantage points.

Figure 3.2. W 41st Ave View 1.

Figure 3.3. 41st Ave View 2.

Figure 3.4. W 41st Ave View 3.

3.5.2 Commercial Drive

Commercial Drive is a well established street and neighbourhood in the Grandview

Woodland district of Vancouver (Figure 3.5). In the 1870s and 80s, Commercial drive was a skid

road, where newly cut trees would be transported to the Hastings Sawmill on Burrard Inlet.

During this time Commercial Drive was booming with British tradesmen and shopkeepers. In

1891 the street became one of the main transportation lines for the city's interurban streetcar. The

interurban lines and streetcars connected outlaying areas of the city, which in turn encouraged the

economic growth of these outer suburbs. Following WWI the demographics of Commercial

Drive greatly changed; there was a large influx of Italian, Chinese and Eastern European

immigrants. Since that time, the area has remained ethnically diverse and after WWII a second

influx of immigrants arrived from Italy. There was such a large population of Italians in the

Commercial Drive area that for decades, it was referred to as Little Italy. In the last twenty years

the area has become increasingly diverse with immigrants arriving from Asia, Latin America,

India and Africa.

Figure 3.5. Grandview Woodland District.
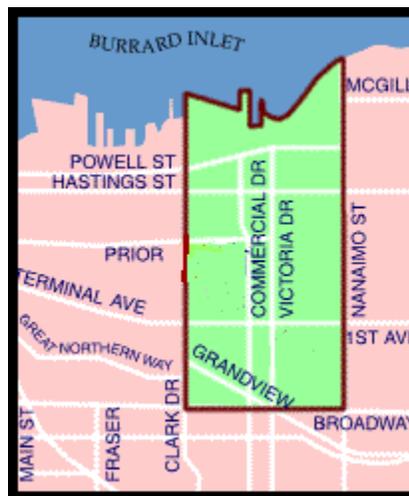
The area's businesses have reflected the rich ethnic diversity of the region. Local

markets and service shops run by the region's inhabitants were the norm where every store was

family owned and operated. In historic times Commercial Drive was an affordable

neighbourhood. Those recent immigrants who did not have a great deal of money behind them found the area to be safe and welcoming; a good place to call home. Many of the buildings reflect the initial influence of the early British settlers; today, Commercial Drive has the second largest inventory of historic buildings in the city.

In general, housing prices in Vancouver are out of reach for the average income earner and the Commercial Drive area is no exception. There are however, a large number of secondary suites in the region making it more affordable. With this housing mix the inhabitants of the area have diverse economic backgrounds. It has been stated that on Commercial Drive you will find the "most diverse mix of people, dining, shopping and entertainment that Vancouver has to offer" (Commercial Drive Business Society, 2010). Some Vancouverites would argue that people go to Commercial Drive because it rejects the mainstream and that it is one of the few places left in Vancouver where the businesses are small, independent and family owned. There is a real mix of ethnic shops, European style cafés, alternative stores, bars and entertainment venues. The dominant cultural groups of the day left their mark on the street leaving a vibrant and eclectic mix of businesses. Figures 3.6, 3.7 and 3.8 provide a variety of views of Commercial Drive.

Figure 3.6. Commercial Drive View 1

Figure 3.7. Commercial Drive View 2.

Figure 3.8. Commercial Drive View 3.

3.5.3 Fraser St.

The portion of Fraser St. that was selected for this study falls within the region of Riley Park/South Cambie (Figure 3.9). The area is bounded by 41st Ave to the south, 16th Ave to the north, Cambie Street to the west and Fraser Street to the east. The region was first settled in 1874 by loggers. This geographic area is the highest point of land in the city of Vancouver and is referred to as "Little Mountain". As settlers moved into the region wagon roads were constructed and Fraser St. was the first wagon road servicing the area. Many residents of the region mined basaltic rock at the Little Mountain Quarry. This rock was used for the early surfacing of the city's roads. As the population of the area expanded the physical form and function of the land shifted. Trees were cut down, and streams were filled in for farming, housing, industry and new roads. Historically this area of Vancouver has always been home to a working class cohort and today, the economics of the region have remained the same.

Figure 3.9. Riley Park/South Cambie

As was the case with both W41st Ave and Commercial Drive, Fraser St was originally settled by the British. With a large influx of immigrants after WWI and WWII the Riley Park/South Cambie area became home to many Chinese and South East Asian immigrants. As the different immigrant populations became more established they would move out of the Fraser St area to more affluent neighbourhoods that were perceived to be safer and were more

aesthetically pleasing. Today the region is home to many recent Filipino immigrants. The Fraser St area remains one of Vancouver's more affordable neighbourhoods for both rental units and single family homes. There is a perception that Fraser St is not the safest neighbourhood in Vancouver; however, this is not the case. In terms of violent crimes occurring within the area there are fewer in this region than other areas of Vancouver but in terms of property crime this district does have slightly higher levels. This negative perception continues to make the area less desirable and the land values reflect this.

The form of Fraser St is somewhat different than that of W 41st Ave, and Commercial Drive in that the traditional storefronts ranging from 15 to 25ft in width are broken up by larger old industrial buildings that can span up to 60 ft in width. This type of building frontage eliminates the potential diversity of shops in the area as well as the visual break often expected on a mixed use corridor. There are not many businesses in the area and a number of storefronts are vacant. The shops that do exist mainly cater to the Filipino community. There are a few restaurants but not many. There is one bakery in the area and no coffee shops. Overall the region is rundown and the buildings look old and neglected. The sidewalks are falling apart and are uneven. In Figures 3.10, 3.11 and 3.12 a number of views of the street are displayed.

Figure 3.10. Fraser St. View 1.

Figure 3.11. Fraser St. View 2.

Figure 3.12. Fraser St. View 3.

3.6 Data Collection Methods

A combination of data collection methods have been used in order to answer the research questions. These data collection methods include direct observations and interviews. A detailed literature review and analysis was used as a means of synthesizing current knowledge and to provide a framework for data interpretation. The sample size of this study consisted of a total of 44 participants; the first phase of interviews accounts for 30 of the participants and the remaining 14 were interviewed in the second phase. The literature review and analysis and each data collection method will be described in more detail in the subsequent sections.

3.6.1 Literature Review Analysis

The goal of the literature review and analysis was to examine the critical points of current knowledge surrounding streetscape design and determine which academic design guidelines would be selected to test the users' perceptions and preferences against. Allan Jacobs' (1993) eight requirements for a great street were selected, as they best reflected what the majority of academics described as creating the most successful streets. The second phase of the literature review and analysis was in regards to the place making literature on sense of place, place attachment and sense of community. Relph (1976) argues that Planners and Architects pay little attention to place theory. Therefore it was the intent of this literature review and analysis to extract the most important themes from the place making literature in order to establish an additional framework in which the users' perceptions and preferences could be compared. This examination can inform and further the design guidelines that already exist. The literature review and analysis was presented in Chapter Two.

3.6.2 Direct Observations

The first data collection method was direct observations. Direct observations are a useful method to use, to document activities, behaviours and physical aspects of a site without having to rely upon people's responses to questions (Patton, 2002). Additionally, direct observations are useful when direct information is wanted and or when one is trying to understand the relationship

between individuals and the environment in which they are located. In this study, direct observations were carried out within each streetscape to detail the activities and types of social interactions that were occurring. Within each streetscape observations were made at two times of the day, in the morning from 10:30 am to 11:00 am and in the afternoon from 3:30 pm- 4:00 pm. These observations were carried out on the weekdays of July 23rd to July 25th of 2008. An observation guide was prepared in advance to ensure that similar observation strategies and techniques were used in each streetscape (see A-2). Observation guides are noted as being particularly useful when one wants to compare information from several sites (Patton, 2002). Since there were three sites that were examined in this study, the structured format of these guides allowed for easier comparisons and categorization of the data collected.

The data collected from these direct observations has been analyzed and will be discussed in Chapter Five. The data was useful in providing initial insight into the relationship people have with the street and the other users within it. Additionally, these initial observations were essential in providing detail on the behavioural traits of the users within the street.

3.6.3 Interviews

3.5.3.1 Phase One

The second data collection method was semi-structured interviews. According to Walker (1985), interviews provide a means for the researcher to gather important information from the informant, in their own words and on their own terms, their experiences and attitudes towards the research problem. In this case, semi-structured interviews were chosen for this research as it facilitated direct interaction between the users and the researcher. This was important as it was the users' perspective that was required to shed light on the success and or failures of the academic streetscape design guidelines. A common data collection method within qualitative research as an aid to semi-structured interviews is photo-elicitation exercises which allow subjects to sort and discuss visual stimuli according to their own personally or culturally relevant conceptual categories (Harper, 2002). Within this particular phase of the study instead of photo-

elicitation, participants were questioned within the landscape that was to be studied; instead of looking at pictures of the streets they were questioned within the street.

There were two phases of interviews. The first phase was carried out during the weekdays of Aug 18th to the 21st 2008 with the purpose of gathering the user's initial impressions of the street, their perception of how form influences socialization and lastly to determine if the user felt there was a strong sense of place and community within the street and neighbourhood. Within this phase of interviews opportunity sampling was employed. Those within the street willing to participate were interviewed. Since the format was of a semi-structured interview, a general interview guide was on hand, however, the researcher was able to ask the user to elaborate on a thought or discuss other issues relevant to the research based on the feedback being provided. Overall the interview guide did provide structure and guidance to the interviews and ensured that the data obtained could be compared and categorized for the data analysis process (See A-3 for interview guide/questions).

Semi-structured interviews are useful for obtaining the user's preferences and perception of the street however there are a few limitations in this data collection method. The presence of the researcher can alter the feedback provided by the participant as they may feel intimidated or not comfortable enough to share their honest opinions. Every effort was made to ensure that the participants felt comfortable enough to express their true opinions and were ensured that there were no "wrong answers". Prior to the interview being conducted, verbal consent was required and upon completion of the interview the participant was given an information letter (See A-4) outlining the purpose of the research as well as providing contact information.

3.6.3.2 Phase Two

The second phase of semi-structured interviews was carried out on the weekdays of September 3rd, 4th and 16th of 2009. Within this phase of interviews, both purposeful and opportunity sampling were employed. Phase two started with the purposeful sampling and

interviewing of four prominent landscape architects, urban planners and urban designers within the Vancouver area.

Prior to phase two of the interviews it was determined that visualizations would be an effective tool to facilitate further discussion with professionals and users. Through the literature review and analysis it was determined that Jacobs eight requirements for a great street would form the basis of the academic visualization. Based upon the user driven feedback, the second visualization was created. The intent was to provide a visual image of the form that each framework could result in. Fraser St. was selected as the basis of these visualizations as it was the least desirable of the three streetscapes studied and would have the most to benefit from a redesign. These visualizations provided concrete images that were then used in the second phase of interviews. Table 3.2 outlines each principle and the resulting characteristics that were incorporated in the academic driven visualization.

Table 3.2. Jacobs' Eight Requirements for a Great Street and two of the Qualities that Contribute

Creating walking space	Encourage the creation of wide walkway.
Comfort- Micro Climate	Physical comfort- make the street comfortable for the user i.e. Offer warmth of sunlight, cool and shade & protection from the elements.
Street Appearance	Definition- boundaries, usually walls of some sort that communicate clearly where the edges of the street are.
Attributes within the Street	Academics promote Physical Elements- qualities that engage the eyes, many different surfaces over which light constantly moves that keep the eyes engaged.
Creating a transition from public to private space	Transparency- where the public realm of the street and the less public, often private realm of property and buildings meet. The experts purport that windows and doors give a high level of transparency.
Character of a street	Complementarity- The buildings on the best streets get along with each other. They are not the same, but they express respect for one another in height and in the way they look.
Maintenance	Maintenance Care- care of trees, materials, buildings, and all the parts that make up a street is essential. People prefer to be on well-maintained streets.
Building Materials	Quality of Construction and Design- workmanship and materials and how they are used. Materials must take a lot of wear and tear; those not capable of doing so usually have a negative impact.
Nature	Trees- they move and modulate the light; they can effectively separate pedestrians from traffic.
Seating	Street Furniture- they help keep people on the street; they invite our presence by permitting rest, conversation and the waiting for a friend.

Upon completion of the initial interviews in Street One, W 41st Ave, Street Two,

Commercial Drive and Street Three, Fraser St. the data was transcribed, coded and analyzed.

Based on the most common responses, the users' feedback was synthesized and categorized. The

results established a set of user driven guidelines and are displayed in Table 3.3.

Table 3.3. User Driven Guidelines

Creating walking space	Create wide sidewalks & close the street at particular hours of the day for pedestrian use only.
Comfort- Micro Climate	Ensure protection from the rain.
Street Appearance	Eclecticism- more diversity in buildings (Colours, setbacks, materials and business types)
Attributes within the Street	User focused on social realm of the street- Promote sidewalk sales. Community events and outdoor festivals. Allow buskers within the street.
Creating a transition from public to private space	Encourage products and produce to be displayed on the sidewalks. This invites the user into the private realm of the shop owner and the displays add visual interest to the street.
Character of a street	Create a strong sense of identity- draw on the local history of the street in the design of buildings and street features that will promote sense of place. Preserve and maintain heritage.
Maintenance	Clean well-maintained street- no garbage, graffiti, clean windows & awnings.
Building Materials	Diversity in materials is desired.
Nature	Green public space & Trees- Provide the user a break from the built environment and an opportunity to reconnect with nature
Seating	Ample outdoor seating.

For the last twenty years the use of computer visualizations has steadily increased. Their ability to allow the public, officials and experts to understand an environment and make changes to a project or decision that would affect the surroundings before it is built or occurs has become greatly valued in planning practices. Secondly, visualizations are an effective tool in helping communities to explore and build consensus on what their goals for future landuse are. Lastly, they have a strong ability to allow for the study of peoples relationship to their environment and learn and reflect the public's attitudes, values, perceptions and preferences of designs (Sheppard, 2001, p. 185). It is the latter of the three goals that was of primary interest to this study. With the

creation of these visualizations, additional insight into the preferences and perceptions of the users and the professionals could be obtained. The two sets of guidelines and their main differences will be examined in Chapter Four.

Within each visualization there were four constants: there were sidewalks in both visualizations (width was different), each image would portray clean well maintained streets & sidewalks, and there were street trees in both images as well as seating (benches). The subtraction of one of these elements from one image and not the other would significantly affect the comparability of the two sets of images and therefore were made constant to eliminate the users' preferences for those elements within the visualizations. In order to ensure the visualizations were as defensible as possible all five of Sheppard's (1989) guiding principles were adhered to.

The completed visualizations were then taken to the professions in order to get their opinions on the academic and user driven models on streetscape design. Within these interviews sixteen images were shown to the participants: eight images of the academic visualization were displayed along side eight images of the user driven visualization. In order to solicit what the participant thought about each design, five general questions were asked (Appendix 5). The goal was to determine which elements of a streetscape the professionals felt contributed to deeper levels of social interaction and the creation of a vibrant street. Additionally, they provided insight into why one urban form is more common than the other, as well as ways in which specific features could be achieved through policy work.

They identified the main elements that they believe contributes to a sociable street and have subsequently expanded the knowledge base on streetscape design. The fact that the professionals work closely with streetscape design schemes and other projects that enhance the public realm has played an integral role in informing the recommendations found in Chapter Five. These semi-structured interviews were carried out at the interviewee's place of work. An interview guide was created in advance to provide structure and direction, although additional

questions were asked and specific topics were elaborated on, based on the participant's responses and area of expertise. Verbal consent was required before the interview took place and an information letter was provided upon request (See A-6).

On Sept 4th, 2009, additional opportunity sampling and subsequent interviews took place within Fraser St. from E 26th-28th. The purpose of these interviews was to display the potential re-design of Fraser St based upon the academic and user driven frameworks. The participants were asked which set of images they preferred and why they liked one group over another. The sample size of these interviews is small n=10, however it is this data that provides additional insight into what the user prefers when it comes to the form of a street. The total sample size of the study with all interviews being accounted for is n=44. This again is a small sample size; however, the goal of this research has been to explore the topic of streetscape design and sociability rather than to make statistical generalizations.

3.7 Data Analysis

3.7.1 Transcription

The interviews obtained were recorded and then transcribed at the earliest opportunity. Notes were made directly after an interview if there was a need to further elaborate on or clarify any points made. Notes were also taken if physical gestures were made that would not be understood on the audio recording. Interviews were played back many times to ensure that the responses were accurately recorded. The interviews carried out in the second phase of this study were much longer than those in the first phase. Due to time constraints these interviews were not transcribed in their entirety but rather played and detailed notes were taken. When a particular statement was to be incorporated into the text of this thesis, those sections were replayed in order to capture the entire quote.

3.7.2 Content Analysis

Qualitative data which is often described as "rich descriptions and explanations of processes in local contexts" often results in large amounts of text (Miles & Huberman, 1994, p.1).

In order to analyze and make sense of all of the data and text obtained, a content analysis was

employed. Throughout this process Auerbach & Silverstien's (2003) book titled An Introduction

to Coding and Analysis; Qualitative Data, was consulted. The initial phase of coding started with

a thorough review of all transcripts and notes. The next step was to review the transcripts with

the research questions in mind; 1) What are current best practices/principles for urban streetscape

design? 2) To what extent do best practices/principles for streetscape design reflect public

preferences/expectations? Text that was related to these specific research questions was

highlighted. With the relevant text selected it was easier to identify repeating ideas and themes.

The text of each interview transcript was colour coded and assigned a number and letter that

corresponded with a sub-category. The repeating ideas and themes were organized under larger

more abstract headings such as culture, convenience and interaction, etc; refer to Figure 3.13 for

the entire list. This process allowed for the tracking of trends found within the data and enabled a

comparison of likes and dislikes about each particular street. The results of this content analysis

are found in Chapter Four. Figure 3.13 presents the categories and sub-categories that were used

in the data analysis process.

Figure 3.13. Interview Coding Categories

Category:

1) Culture
   a. Community events (festivals, etc…)
   b. Entertainment (live music, art shows, etc…)
   c. Ethnic diversity
   d. Need a community centre

2) Convenience
   a. Walkability (everything in close proximity)
   b. Variety of amenities
   c. Lack of amenities
   d. Positive location within city

3) Destination
   a. Desire to live there
   b. Desire to visit
   c. Positive Amenity
   d. Negative

4) Interaction
    a. Friendly open interaction
    b. Closed, no interaction
    c. Neutral interaction

5) Sense of Community
    a. Community events
    b. Know your neighbours
    c. No sense of community
    d. The people that live here create the sense of community
    e. Not inclusive

6) Impression of the street
    a. Positive
    b. Negative
    c. Neutral
    d. Safe
    e. Not safe
    f. Less traffic

7) Street Design
    a. Street layout positive
    b. Street layout negative

8) Physical Elements
    a. Trees
    b. Awnings
    c. Older buildings/
    d. Parks/Green Space
    e. Accessible (wide side walks, public transit etc)
    f. Street furniture
    g. Clean
    h. Up-date it more
    i. Textured sidewalks
    j. Mix use/ Residential and Commercial

9) Demographics
    a. More younger people
    b. More older people
    c. More kids
    d. Less kids.

3.8 Quality Checks

3.8.1 Internal Validity

Internal validity can be boiled down to the question of; do the findings of the study make

sense? Miles and Huberman (1994) provided the basis in which the internal validity of this study

will be examined. They acknowledge that by checking for representativeness and researcher effects and examining contrasts and comparisons while employing triangulation and obtaining additional feedback from the participants (phase two of the interviews) ensures that the study is more reliable and credible.

3.8.2 Representativeness

In order to ensure this study was as representative as possible a number of steps were taken. Firstly, during the first phase of interviews thirty people were interviewed to ensure that a broad range of views and perspectives were collected. Additionally, the participants were randomly selected based upon their willingness to participate. In addition to soliciting feedback from the users of the street, professionals were also interviewed to obtain their opinion as to what contributes to a socially vibrant street.

3.8.2.1 Checking for Researcher Effects

Often in case study work, field observations and interviews "outsiders can influence insiders and vice versa" (Miles & Huberman, 1994, p. 265). Within this study both observations and interviews were carried out in the field. Inherent to the interview process is the risk that participants will "craft their responses to be amenable to the researcher" (p. 265). In order to minimize the "researcher effect" every effort was made to ensure 1) that during the observations the researcher appeared to be a part of the street scene and 2) that during the interviews the participants knew that there were no "right answers" and that the goal was to obtain their honest opinion.

3.8.2.2 Making Contrasts/Comparisons

Miles and Huberman (1994) note that comparisons are a natural response to life's situations and are a time-honored, classic way to test a conclusion (p.254). Throughout this research a number of comparisons were made in order to further the knowledge base surrounding streetscape design and sociability. Initially it's the comparison of the academic design guidelines (Jacobs' eight requirements for a great street) with the sense of place principles outlined by

65

Norberg-Schultz and Steele. Through this comparison it was uncovered that the majority of Jacobs' eight requirements for a great street tend to fall under just one category of Norberg-Schultz and Steele's principles for the creation of a strong sense of place (Space: which referred to the physical elements and aesthetics of a street). It was not until Jacobs' thirteen qualities that contribute were compared with the sense of place principles that a more comprehensive design approach could be taken. Comparing and Contrasting the responses from the participants interviewed in phase one of this study enable the creation of a user driven framework. This framework informed the user driven visualization which was then compared to the academic visualization. Through the process of comparing and contrasting the different ideals of the users, academics and professionals, insight was obtained as to what elements increase the sociability of a street.

3.8.2.3 Triangulation

Miles and Huberman (1994) note that triangulation is an effective means of confirming findings. Baxter and Jack (2008) acknowledge that "triangulation of data sources, data types or researchers is a primary strategy that can be used and would support the principle in case study research that the phenomena be viewed and explored from multiple perspectives" (p.556). Within this study not only are there three phases of data collection; observations and interviews, phase one and two, but there are two phases in which the data is assessed and then re-assessed by the users' and professionals. It was through the process of determining the important elements outlined by Norberg-Schultz (1980) and Steele (1981), Jacobs' (1993) and the users that it became evident that the users identified sense of place principles as playing a key role in creating a vibrant socially active street.

3.8.2.4 Replicating a Finding

Miles and Huberman (1994) acknowledge that "findings are more dependable when they can be buttressed from several independent sources" (p.273). Not only did the literature analysis and direct observations provide support for the notion that form influences sociability but also

that attributes commonly associated with creating a strong sense of place plays an essential role in fostering a socially vibrant/sustainable environment. During the interview phases of this study the users and professionals acknowledged the importance of place making principles and their ability to create place attachment and a sense of community (socially vibrant /cohesive group). After the first phase of interviews were complete and the visualizations were made, the users then reaffirmed that the sense of place principles do create an environment that the users prefer and can see themselves socializing and interacting with others in, more so than that of the academic visualization based upon Jacob's eight requirements for a great street.

3.8.3 Reliability and Analytical Generalizability

Miles and Huberman (1994) write that the underlying issue in regards to reliability, dependability and auditability is with "whether the process of the study is consistent, reasonably stable over time and across researchers and methods" (p.278). Mathison (1988) notes that triangulation is typically a strategy used for improving the reliability of research. Mathison states that

> "triangulation has risen an important methodological issue in naturalistic and qualitative approaches to evaluation [in order to] control bias and establishing valid propositions because traditional scientific techniques are incompatible with this alternate epistemology" (p.13).

Patton (2002) advocates the use of triangulation by stating triangulation strengthens a study by combining methods. This can mean using several kinds of methods or data (p.247). In the case of this research study triangulation was employed and in the end the results which are displayed in Chapter Four and discussed in Chapter Five indicate that there was a consensus within the data collected. Since this study focused on multiple cases, analytical generalizations are made rather than statistical generalizations. The goal has been to generalize the results from the interviews with the users and professionals, to the broader theory of streetscape design.

3.9 Conclusions

      In order to answer the research questions set out for this thesis, a qualitative; multiple case study approach was employed. Through direct observations and semi structured interviews additional feedback from the users and professionals will shed light on the current success and failures of streetscape design guidelines. By selecting the three streetscapes of W41st Ave, Commercial Drive and Fraser St, a comprehensive analysis of the impact form has on sociability will occur. Each street had varying levels of street activity as well as a range in refined and eclectic characteristics. A more in-depth review and analysis of streetscape design guidelines will occur and current theories and concepts will be extended based upon the feedback obtained from the users and professionals.

CHAPTER IV- RESULTS/ANALYSIS

4.1 Introduction

The structure of this chapter is based on data collection methods employed within this

study and contains the results and analysis of the observations and interviews. The first data

collection method was direct observations where the behaviour and social interactions that were

occurring within the streets were documented. Particular attention was also paid to the physical

form of the street and how form influenced the activities and socialization of the users. The final

data collection method was a series of interviews that were conducted in a number of phases with

both the public (users of each streetscape) and professionals within the city (urban designers,

planners and landscape architects). It was both the public and professional's feedback that has

provided additional information to the knowledge base surrounding streetscape design and how to

create a successful, socially vibrant street.

4.2 Observations

4.2.1 West 41st Ave (Kerrisdale) Observations

Observations within West 41st Ave were carried out on Thursday, July 24th, 2008 from

10:30 am to 11:00 am and 3:30 pm to 4:00 pm. It was a clear, sunny, summer day with many

people out enjoying their surroundings. Within the half hour of observations, 316 people walked

passed me (counts on both sides of the street) in the morning and an additional 430 people in the

afternoon. A number of activities were going on: people were out window shopping, walking

their dogs and socializing. The majority of people were moving at a slower pace, they were

taking in their surroundings while on a leisurely walk. There were a number of moms out with

their children, there were some teenagers out with their friends and a number of couples walking

hand in hand. It appeared that a number of people within the street were from the area as on

occasion people would stop and chat with others. When close enough to listen in on the

conversations, they usually revolved around up-dates of what had been going on in each other's lives.

There are a number of different types of businesses and amenities found within the street. However, a large proportion of the stores are retail: there is a Gap Kids, a number of home décor shops, shoe stores and specialty adult clothing stores. There are also a number of restaurants, coffee shops, bakeries and delis. Overall, there is a mix of businesses and amenities catering to the higher end shopper. The physical design of the street is aesthetically pleasing. The side walks are textured with brick. The street is lined with trees that are fairly tall, the tree canopy adds that sense of enclosure that Jacobs' (1993) talks about. There is good definition with a strong line of buildings fronting the edge of the sidewalk. There are zero setbacks with the exception of one store which is approximately two meters set back from the sidewalk. The extra area in front of this particular store is nicely landscaped with flower boxes and there are also a number of benches. This area allows for the bakery to place a few small tables with chairs out front so that customers can enjoy their treats outside. The benches also provide a place for the user to sit down and relax within the streetscape. This particular location is where I was situated for the majority of my observations. The level of transparency from the private to the public realm is adequate; the stores have large windows with displays that give the user an idea of what is inside; there are no posters or paper covering the windows, the look is clean and uncluttered. Throughout the street there are flowers everywhere, and their scent was strong enough that I could smell them from where I was sitting. The physical form of the street has an ambiance to it; it is very beautiful and aesthetically pleasing.

When looking at how the form of the street influences the activities of the user, it becomes apparent that the outdoor seating found in front of the coffee shops and cafes are the areas where the greatest amount of social interaction occurs. The benches within the street provide seating for those needing a break. On occasion, conversations between people took place off to one side of the sidewalk. There is ample room for other pedestrians to walk by and space

70

never seems to be an issue. The sidewalks are fairly wide, approximately 6ft in width. Another form that contributes to the pleasant atmosphere found within the street is the rhythm of buildings and storefronts. The storefronts vary in width anywhere from 15ft, to no more than 25ft. This ensures that a number of businesses can serve the nieghbourhood and provide a diversity that caters to a variety of people.

Based on the observations that were made, W 41st Ave is an active and aesthetically pleasing street, however the users do not appear to be overly welcoming. During the interview portion of this chapter the users feedback as to what they like and dislike about the street will be addressed as well as what elements they believe contributes to and fosters social interaction.

4.2.2 Commercial Drive Observations

Observations within Commercial Drive were carried out on Wednesday, July 23rd, 2008 from 10:30 am to 11:00 am and again at 3:30 pm to 4:00 pm. It was an overcast day; a bit windy and cool, however, the inhabitants of the area were out and about. Within the half hour of observations, 265 people walked pass me in the morning and an additional 403 in the afternoon. There was a real mix of people within the streetscape, the affluent to the downtrodden, and a great variety of activities occurring. There were a large number of people meeting up with friends for a morning coffee, some patrons who were there on their own would strike up a conversation with those around them, there was a lot of social interaction occurring. There were groups of moms out on a walk, it appeared to be an organized group/meeting for everyone to get together and visit. There were a number of people out shopping; most people were on the move with places to go however some were walking more slowly looking around and taking in their surroundings. Outside of one of the coffee shops there was a gentleman sitting on the sidewalk at a bistro table facing the pedestrians and as everyone walked by he greeted them saying hello or good morning. There were also a fair number of people out walking their dogs. Within the street it was not uncommon to find people stopping to chat with someone passing by. There was a real sense that

the majority of people within the area knew one another or were very open to talking and engaging in friendly conversations with those around them.

As compared to W41st Ave. I found that Commercial Drive has a grittier, more organic feel. The buildings vary from historic Edwardians to more modern forms of mixed use developments. The rhythm and pattern of buildings is similar to W 41st Ave in that the building widths do not exceed 25 ft, however, the materials and colours of the buildings in Commercial Drive are much more diverse and not as uniform as those on W 41st Ave. The sidewalks are wide and offer ample room for pedestrians and there is a large amount of variation in setbacks and sidewalk widths. There is a common pattern to the sidewalk texture and that is of a regular square concrete block, however, the edge of the sidewalk where the street trees have been planted, there is a continuous strip of a pebbled type concrete surface. This texture adds interest to the walking path however does not dominate the look of the area. There are street trees throughout the corridor but they are not as regularly placed as those found on W 41st Ave, or as mature; therefore, the tree canopy today does not yet exist but these trees will be of a great benefit to the area in the future. Throughout the street, stores display their products and produce on the sidewalk, with many people slowing down to look at what is available; this spilling out of the store onto the sidewalk appears to makes the transition and transparency from the public to private realm fluid. Bright vibrant banners are found throughout the Commercial Drive corridor and are a great indicator of where "the drive"[4] begins and ends.

In terms of the levels and types of socialization occurring within the streetscape a large proportion of it happened on the patios and bistro tables in front of the restaurants and cafes. The Commercial Drive corridor has a greater number of outdoor patios and cafes as compared to W 41st Ave. Since Vancouver has a mild climate, the patios remained in use for the entirety of my observations. With the utilization of heat lamps and awnings, it appeared that people preferred to sit outside and enjoy the fresh air while under cover. The other locations that are conducive to

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[4] Commercial Drive is commonly referred to by Vancouverites as "the drive"

people stopping and carrying on conversations are the large setbacks in front of shops. It was common to see people step off to the side of the sidewalk and it is here that they conversed. There are benches within the street, but it appears that they are rarely used as it seemed people preferred to use the tables and chairs provide by the merchants. Although it was an overcast day, there were still a number of individuals making use of the park. There was a mother with young children who were using the play ground equipment and in addition a number of people were sitting in the park visiting.

Based upon my observations, it was apparent that Commercial Drive is a vibrant and socially active street. The form of the street did not contain many of the elements from Jacobs' (1993) design guidelines; however it remains to be a popular and dynamic area. During the interview portion of this chapter the users feedback as to what they like and dislike about the street will be addressed as well as what elements they believe contributes to and fosters social interaction.

4.2.3 Fraser St. Observations

Observations within Fraser St. were carried out on Friday, July 25th, 2008 from 10:30 am to 11:00 am and again at 3:30 pm to 4:00 pm. It was a sunny day and shop keepers in the area were walking in and out of their stores to enjoy the weather. Within the half hour of observations, 46 people walked pass me in the morning and an additional 37 in the afternoon. The level of street activity within this region was minimal in comparison to W41st Ave. and Commercial Drive. The majority of people that were within the street were on their way to catch a bus. Of those individuals, a large proportion were students (ethnically diverse population) and the remaining adults were of Asian decent. From my observations it appeared that the demographics of the area were not as diverse as those found on Commercial Drive. Overall there was very little activity going on within the street. During my half an hour of observations I saw a man who was out for a stroll, a father and son going for coffee and hot chocolate at the local

bakery, and another man out walking his dog. The shop keepers tended to stand in the doorways of their stores and stare out into the street; rarely did people go in and out of the stores.

In the previous section it was mentioned that the width of the storefronts of Fraser St. were different than those of W 41st Ave and Commercial Drive. The storefronts in those two streets varied in widths from 15-25 ft where as Fraser St storefronts spanned anywhere from 15 to 60 ft and this can be attributed to the industrial history of the area. There are a number of large buildings with unmarked uses fronting the street. These ambiguous buildings create a dead zone in which little activity is occurring. A number of the storefront had their windows covered in paper to inhibit the user from seeing inside. Along the corridor there is a real mix in the height of buildings; a portion of the street is lined with single story shops and directly across the street is a four story mixed use building. This drastic variation contributes to a lack of cohesion and increases a sense of disorder.

The Fraser St. area is under transition, however, the rejuvenation process is moving at a slow pace. This may be in part due to the fact that the region is so rundown that people are reluctant to invest in the area. Some elements that do contribute positively to the street are the presence of street trees and the recently improved pedestrian crosswalks and bus shelters. It was previously noted that the stores in the region are not very diverse; there is one market, a few restaurants and a thrift store. The remaining businesses are either accounting services, hair salons or dance studios. These businesses tend not to attract large numbers of people on a daily basis which may in part be one of the factors leading to the low levels of street activity.

When observing the street in terms of the levels of socialization occurring and how the form of the street contributes to or inhibits it, a variety of elements were lacking. In both Kerrisdale and Commercial Drive the majority of social interaction occurred in outdoor patios, cafes and in areas along the sidewalk where there was extra space to step aside and carry on a conversation. Within this portion of Fraser St., the bakery was the only business with two tables and chairs out on the sidewalk. The rest of the street had nothing; no benches and the sidewalks

were too narrow and uneven to allow for people to stop and visit. The levels of vehicular traffic within Fraser St were similar to W 41st Ave and Commercial Drive; however, the speeds at which people were driving were much greater. The combination of speed and the level of noise this created made the street much less desirable to be in.

Based on the observations that were made, Fraser St is inactive and in need of revitalization. The form of the street does not contain many elements from Jacobs' (1993) design guidelines and generally has very little going on. During the interview portion of this chapter the users feedback as to what they like and dislike about this street will be addressed as well as what elements they believe contribute to and fosters increased levels of social interaction.

4.2.4 Summary of Observations and Analysis of Street Activity & Form:

Street Activity

The following table displays the number of pedestrians counted in each streetscape as well as documents the types of activities that were going on (see Table 4.1). The demographic mix is also accounted for however it does not break down what groups were more prominent in each streetscape. Based on my observations it appeared that W41st Ave did have higher numbers of seniors than parents with children, adults and youth. Commercial Drive on the other hand had a even mix of each demographic group.   Fraser St. was mostly comprised of youth/young adults and adults.

Table 4.1. Summary of Street Activities on W41st Ave, Commercial Drive & Fraser St.

Types of Street Activities :	W 41st Ave	Commercial Drive	Fraser St.
number of pedestrians	746	668	83
window shopping	X	X	
people out walking their dogs	X	X	X
chatting with friends	X	X	
leisurely movement	X	X	
purposeful movement (had somewhere to be) i.e. catching a bus	X	X	X
shopping	X	X	X
people having coffee on patios	X	X	
friendly interaction with strangers		X	
Demographics:			
youth	X	X	
adults	X	X	X
parents with Children	X	X	
seniors	X	X	

Street Forms

Table 4.2 outlines the physical form, diversity of businesses, physical comfort and accessibility, and appearance & character of each of the three streetscapes.

Table 4.2. Physical Form & Characteristics of W 41st Ave, Commercial Drive & Fraser.St

Physical Form and Characteristics of the Street:	W 41st Ave	Commercial Drive	Fraser St.
Form:			
25ft modules	X	X	
wide sidewalks	X	X	
quality construction & design	X		
Diversity of Businesses:			
high		X	
medium	X		
low			X
Physical Comfort:			
awnings/bus shelters	X	X	X
Appearance:			
textured sidewalks	X		
zero setbacks/ strong definition	X		X
street trees	X	X	X
benches/ outdoor seating	X	X	
well maintained (clean)	X		
qualities that engage the eyes	X	X	
landscaping/flowers	X		
transparency	X	X	
banners	X	X	
Character:			
Complementary Design	X		
Diverse Design		X	

Analysis

When reviewing the observations it becomes apparent that the form of a street does have considerable influence on the level and types of social interaction that take place. Both W 41st

77

Ave. and Commercial Drive were noted as having the highest levels of social interaction. When examining the form of W 41st Ave. and Commercial Drive, it was discovered that both streets take the form of the old vernacular, 25ft wide modules/storefronts. This form has allowed for a greater number of businesses in the area which has been attributed to increasing the diversity of shops and local services. This in turn attracts higher numbers of pedestrians to the area and increases the potential for social interaction and the development of a sense of community. Fraser St., unlike W41st Ave and Commercial Drive, was identified as having a different street rhythm which was attributed to the region's industrial past. Here the buildings varied in width from 15 ft to 60 ft. It was noted that the larger buildings often created a dead zone along the street's edge. I sensed that these dead zones contributed to a feeling that the area was in an economic crisis; not only are these large buildings in-active but a number of smaller stores are vacant. Additionally, because of these larger buildings the area did not have as many storefronts and therefore less diversity resulting in lower levels of street activity and potential social interaction.

It was also noted that coffee shops, café's and restaurants with outdoor patios were the most popular gathering spots for social interaction. Of the three streetscapes, Commercial Drive had the most outdoor patios followed by W41st Ave where there were four and lastly Fraser St. which had one business with outdoor seating. The level of social interaction appeared to increase in accordance with the number of outdoor seating areas. Commercial Drive was the most socially vibrant of the three streetscapes followed closely by W 41st Ave. Fraser St had the lowest levels of social interaction and the fewest number of pedestrians present. Outdoor seating plays an essential role in increasing opportunities for social interaction within a streetscape. When examining the form of Commercial Drive in comparison to W 41st Ave it was noted that Commercial Drive had greater variation in building set backs and sidewalk widths, that better accommodated outdoor patios and spaces where informal conversations could occur. Businesses

on Fraser St were restricted to the number of outdoor seating areas due in part to the narrowness of the sidewalks.

When examining the data obtained from the observations carried out on Fraser Street, it was evident that the physical form of the street did not meet the needs of its users. Fraser Street's form is more conducive to the orderly movement of vehicles rather than the social interaction of its inhabitants. Little has been done to support the needs of the users and encourage a pedestrian friendly environment. A few stores have set up displays out on the sidewalk to catch the attention of passersby however the overall look of the street leaves much to be desired. The area is dirty, colourless, rundown and void of many types of positive activity. The area is well serviced by public transit which seems to be the main draw of people to the area.

The varying levels of street activity and social interaction in the three streets can be attributed to the physical form and amenities offered. It was not surprising to see higher levels of street activity in W41st Ave as it had the most characteristics of Allan Jacobs' eight requirements for a great street. Based on Allan Jacobs' framework it was also expected that Fraser St. would have low levels of street activity and social interaction. The results of the observations on Fraser St. appear to support Jacobs' Framework and the notion that a number of elements are prerequisites to ensuring that pedestrians will find pleasure in and frequent a particular street. However, it was somewhat surprising to see that Commercial drive had higher levels of social interaction considering that it has fewer elements of Jacobs' eight requirements for a great street. This illustrates that Jacobs' eight requirements alone may not solely predicate a socially vibrant street.

4.3 Interviews

4.3.1 Phase One of the Interviews

The first phase of interviews occurred from Aug 18th to Aug 21st 2008 and on Sept 27th 2008. These interviews were carried out in order to obtain the users' initial impressions of the street, their perception of how form influences socialization and lastly to determine if the user felt

a strong sense of place and community within the street and neighbourhood. The interview was comprised of a variety of questions with different objectives in mind. The initial three questions were created in order to establish the participant's familiarity and knowledge of the street and neighbourhood. The remaining questions either focused on the participant's perception and impression of the physical form and characteristics of the street or the types and levels of social interaction occurring.

4.3.1.1 Interviews on W 41st Ave

Over a period of several days ten interviews were carried out with users within the street. Overall the users' impression of the street was positive; eight out of the ten participants had a positive impression of the physical form and look of the street. One of the participant's responses to "what was your initial impression of this street" was: "Almost like a trip back in time. It's clean and has a nice selection of shops. Non threatening, nobody asking for change, and no people lying on the sidewalk (referring to there being no homeless inhabitants)". The majority of the other participants attributed their fondness for the street upon the physical features present. Specific elements that were mentioned as being positive were the street trees, the fact that the street is accessible, the character and history of the buildings as well as the fact that there is street furniture. The majority of users felt the area has a good mix of amenities and businesses. Many people liked the fact that they could do almost all of their shopping within the street. A few participants mentioned that they wished there was a large grocery store but otherwise people were happy with the current diversity of businesses.

When participants were asked if they felt the area had a sense of community there were varying responses. Young teenagers and professionals that lived in the area did not believe there was a strong sense of community. They did not have a feeling that they were a part of the larger community. On the other hand, seniors in the area were quite adamant that there was a strong sense of community with one of the main reasons being that they all knew one another. Another group that felt there was a sense of community were young mothers. They often remarked on

how the area was really family focused and that many of the community functions and festivals brought families together. Kerrisdale Days is one of the streets most popular festivals and one participant stated that "it's so busy that I would have to say there isn't enough space for all the people". Based on the interview responses it appears that some demographic groups feel as though they are part of a larger community while others feel more isolated.

Of the ten participants interviewed all but two either lived in the area or would like to live in Kerrisdale if they could afford it. The two people who did not have a desire to live in the area felt the current residents were not friendly; too "stuck up" and "hoity toity" for their liking. The remaining eight participants really liked the area and could not imagine living elsewhere in the city. One participant responded to the question of "do you think there is a sense of community here" with "umm, with Adults no, I don't find it the friendliest no" another participant stated that "Um here I don't find it all that friendly I mean people will say Hello but it's not…I don't feel a part of the community I guess, not so much". This leads me to the conclusion that those individuals who are not immediately connected to a pre-established socially active demographic group would struggle to connect with the W 41st Ave community.

When asked about the different types of social interaction that occurs within the street many participants indicated that Café Artigiano was a popular gathering place. The other coffee shop that people would often frequent was Starbucks. These two locations seemed to be the social gathering spots for inhabitants and visitors to the street; one participant stated that "there is a lot of mingling in the coffee houses…a lot of mingling outdoors in front of the coffee shops…even in the winter time, unlike Waterloo". The outdoor patios were often regarded as a positive feature to get people together but if anything participants felt there should be more as they stated it is often difficult to find an empty table on any given day. The benches in the area were also referred to as a place in which social interaction would occur. One participant felt that the elderly seemed to use them more often, he stated that "they often take breaks while those they are shopping with go in and out of the stores, they chat while resting, so yes, a lot of people do

81

use the benches". Many people also felt comfortable carrying on a conversation with someone they may know on the sidewalk. The width of the sidewalk seemed to be wide enough for the continued flow of those passing by.

When asked "Do you think there are certain elements that contribute to that sense of community" one participant responded with "Ah maybe coffee shops, I think what makes the perfect streets is when they have everything that you need, there's shopping here, there's restaurants here, there's a bread shop, and coffee shop. There has to be everything that you need". Another participant felt that the addition of more young people would increase the vibrancy and sense of community in the area. This particular individual felt there were too many elderly people and that she would more easily relate to people of her age. Yet another participant felt that the area could "benefit from a little park and seating area". He felt though that the cost of land and real-estate in the area would be too high and therefore a public space would probably never happen.

Analysis

Eight out of the ten participants interviewed in W 41st Ave had very positive comments about the physical form and look of the street. They appreciated the cleanliness, the selection of retail stores, the facades and uniform character of the street. They felt there was an adequate mix of amenities and that the street met their basic needs. They also reported that the area was free from crime and was very well maintained with no signs of neglect. Everyone thought the street was attractive and had a cohesive look.

When analyzing the responses of participants regarding the sense of community within the area, there were varying opinions. Youth and adults did not feel as strongly connected to the area as compared to seniors and young moms. The formality and clean, crisp image of the street may have played a role in the level of openness a user felt and their willingness to interact with others. It felt as though the form of the street and elements within it, which were very proper (traditional feel with elements of Edwardian design) and aesthetically pleasing, influenced the

users and their behaviours tended to reflect the formality of the street. Although participants reported that they liked the look of the street it appears that it has failed to create a unifying identity or image that everyone can relate to. As discussed in the literature review and analysis, a key element within the place making framework that fosters a sense of place is having a strong image, Genius Loci (Norberg Schultz, 1980) and rich imagery (Steele, 1981). W41st Ave is a beautiful street that has a unified look however it is not an image that all residents can relate to. This may in part be a result of the continued reference to a life of the past. The identity of W41st is strongly tied to the historical, Edwardian era. Inhabitants who are new to the area have yet to experience place attachment to the region on the same level that the seniors of the area have.

The users frequently referenced areas such as patios, cafes and open green spaces as providing opportunities for social interaction which in turn can foster a sense of community. Those who did not feel connected to the greater community reported that there was a lack of diversity in demographics' i.e. "too many seniors and not enough young people". With the continued addition of secondary suites and lane way housing, the area will experience an increase in the number of young adults and families which may in turn aid in the development of a sense of community within all residents of the area.

The data obtained from the interviews within W 41st Ave provided a great deal of useful information on what elements people prefer and believe contributes to socialization and sense of community. Kerrisdale, W 41st Ave has been a positive case study for assessing the user's perceptions and preferences within a street that possess all of the elements of Jacobs' (1993) eight requirements for a great street.

4.3.1.2 Interviews on Commercial Drive

People in the Commercial Drive area were very approachable and willing to participate in the interview process. Unlike W 41st Ave where peoples' positive impressions were in relation to the physical form of the street, in Commercial Drive people had positive impressions of the community, culture and diversity found within the street. When asked, "what was your initial

impression of this street?" a few of the responses included: "Umm I love it, it's a really neat part of Vancouver, it's like an old school community feel. It almost feels like everybody who works here, lives here, it's got an old school feel", another stated "I thought it was really interesting. Ya, I thought it was like a really interesting mix of a lot of different places, in a really small area", one person felt it was "funky, sometimes too many junkies, but that's Vancouver, Ah just eclectic umm not corporation invaded". Another participant stated "I really like it, I liked the sense of community, I like the mix of culture and the mix of different types of shops to go to and I like that its greener here. Greener spaces and more public parks here". And lastly, one participant felt

> "it's amazing. Ahh I don't know, Commercial's just really good. There's lots of cafes, and little bars and there's always live music on at night. You can walk down any day of the week and there are three shows going on. It's really cultural you know. It feels comfortable".

It was clear during the interviews that people had a real passion for the area; there was a lot more enthusiasm and engagement in their responses than those on W 41st Ave.

In regards to the physical look and elements within the street people were less positive. Of the ten participants that were interviewed just six individuals had a positive impression of the street. One participant stated "umm it's not that nice really, but it's got a nice vibe more so because when you start looking at it you're like eh (not the best) but just in general there's a pleasant feeling". Another woman stated, "ah it could be better…this area is interesting it's not a dive but it's not ah…I come from a European city personally and I find that architecture to be much more interesting, it's just ok here". Another participant felt the area could definitely use improvement. He felt that little details like clean windows, and sidewalks would be an improvement. He thought that some of the awnings looked too worn and should be maintained better. Overall most people felt the area could look better. The elements that people did appreciate and felt added to the feel of the street were the street trees and the look of the older buildings and facades. Many people commented on the park that was located directly off the sidewalk. Many felt this green space was a positive attribute within the streetscape. Another

84

factor that many people liked within Commercial Drive was that products are displayed on the sidewalk. Many individuals felt this added visual interest to the street as well as gave them an idea of what the store has to offer. From the users' feedback I would infer that these displays make the transition from public to private space much easier for the user; they feel as though they are being invited in. Lastly, participants like how accessible the street was; a few noted that the sidewalks were wide and allowed for the flow of pedestrians and those in wheel chairs. They also commented on the bus shelters and location of stops which they felt well serviced the area. Some participants indicated that they know a number of people who specifically take this bus route so that they can get off and wander around Commercial Drive before heading home for the day; "a lot of people stop here you know when they are commuting to different parts of the city, people stop here to do grocery shopping and to walk around and hang out and have a cup of coffee or something".

When asked about the social atmosphere and sense of community within the area there was an overwhelming response that yes, Commercial Drive has a strong sense of community and high levels of social interaction. When asked "how would you describe the sense of community in this area?" one participant stated "I think it's pretty strong. Ya, a lot of people know each other and that's why people are attracted to this area". Another individual stated "it feels like there is a real sense of community. There are always a lot of things happening, they put on little festivals and parades. It just feels like culturally kind of vibrant you know. As opposed to some other places where there's never anything going on". One participant stated that absolutely there was a sense of community; "to me and I am sure everybody would agree aside from maybe the top end near Hastings, no other part of town in Vancouver has a community feel like this". One woman stated that she had lived in Vancouver her whole life and it was not until she got a job in Commercial Drive that she noticed a difference in the social atmosphere of the area; "this was the first place out of all the places I have lived in Vancouver that felt like a community just because

85

of the way it is. So I actually ended up moving to Victoria and 11th to be closer". Evidently the consensus is that the area has a well established community and network of relationships.

When I asked where most of this socialization occurs, many people indicated that the cafes, coffee shops, restaurants and bars were popular gathering spots but that other forms of socialization would occur along the sidewalks, in the park and on the street benches. One participant really liked the variation in setbacks of the buildings. She states, "I've noticed that the store fronts are still inset. They're designing urban spaces so that you can't loiter anywhere, you can't sit down, there's no shelter because they want to keep you moving and they are also trying to keep it so there's not sheltered outside spaces so that people don't stop there. I really like that you know it's an older street that all of the store fronts you can rest there and they are not trying to usher you on". She felt that the variation along the street also enables people to step aside and carry on a conversation without impeding pedestrians passing by.

With such high levels of social interaction occurring and a well established sense of community it was important to hear what the user believes contributes to this phenomena. When asked "Do you think there are certain elements that contribute to that sense of community" people responded with: "Lot's of people in a small area…A lot of people have lived here for a long time or choose to live here and I think a lot of it has to do with the interaction that the business community has with the community". This particular participant proceeded to describe a relationship between a homeless woman and a shop owner on Commercial Drive who continually gives the homeless woman new clothing when needed and if the participant I was interviewing was ever worried about this homeless woman she was to go to this business and they would know what was going on. Others indicated that the residents had a lot to do with feelings of sense of community. One individual stated "I think it's partially the people that are attracted to living in this area. I think it's historically a cheaper place to live and so a lot of the artists and people moved here. I know some people complain that it's becoming more gentrified now, so that sense of community actually some people think it's going away a little bit more, umm but ya I think

86

that's probably where it started and ya just the diversity of food and shops…People are spending time here they are not commuting just to come here to get something and get out. It's a destination". Another participant felt that it was the cultural diversity of the area and that continued to foster the sense of community; he states "well a lot of it is the fact that you have such a great Italian community in the area. Umm it's those old European countries and a lot of those people immigrated here right…or I mean at least came here with their parents they probably still retain a lot of that you know that European feeling". This particular participant also felt that inhabitants of the area must feel safe because so many seniors are out sitting on patios in front of stores and are active within the street life of Commercial Drive. He noted that in other areas of the city you wouldn't see seniors out and about like you do in Commercial Drive.

When asking another participant whether she felt the street had a strong social atmosphere, she responded with: "Definitely, yeah. I think it's vibrant I think its eclectic there's a lot of different people a lot of different things here. Different shops, restaurants there's a lot of mixed use…there's a lot of housing around". She felt that the mix of commercial and residential was beneficial for both local businesses and inhabitants; she believed people were more likely to interact with their neighbours on a regular basis while out doing their daily activities. Other participants also attributed the strong social atmosphere and vibrancy of the street to the variety of amenities as well as the eclecticism within the buildings and street form. One participant liked that he could "see the places open, the windows are open and people are sitting outside and chatting this kind of thing". He went on to say that to create a really socially vibrant community city officials should consider closing down the street to traffic at particular times in the day. He stated

> "European people like to live life outside. They like to see other people we are missing this…not too long ago there was some kind of street party here with some ah arts and crafts and actually, I like you know, this city this part of the street to be partially closed to traffic so people can expand themselves you know more kind of together you know. This is quite a trendy thing back in Europe you know, in the core of the city the most populated street is being closed you know for a few hours during the peak time when people like to be together so they can gather you know walk".

A number of other participants also felt that the traffic noise inhibited their experience within the street. One participant hopes that eventually the street will only be open to public transit and cyclers; he felt that once the cars are gone the area would really benefit. He states "well you know what honestly the noise is crummy, the traffic noise it's a little too loud so if you can get it quieter and ah more cafés where people could put chairs out that would really get it totally pumping out here". The remarks of getting it "totally pumping out here" were in reference to an increase in social interaction and street vibrancy.

Analysis

Overall, Commercial Drive is a very eclectic, diverse street in both amenities and street form. I found that the people that are attracted to this environment seem to be very open to interacting with those in their neighbourhood. During the analysis of the participants' responses, it was interesting to discover that the initial impressions of the users of Commercial Drive focused on the community and its culture and diversity, rather than on its physical appearance. However, the majority of participants did feel that the street's appearance could be improved. They noted that the area could be cleaner and the buildings better maintained. This feedback validates the importance of Jacobs' guideline of maintenance; people prefer a street to be clean and well maintained. However, the form and layout of the street was to their liking. They greatly valued the diversity of buildings, colours & materials, mix of shops & services and the open green space. They felt the historical buildings were a positive feature. In addition, people commented on the fact that the area was accessible and transparent. They appreciated the outdoor displays and liked the large windows. Furthermore they noted that the variations in setbacks allowed for additional social interaction.

In general there was a common consensus that the sense of community within the street was strong and inclusive. The area had the right mix of businesses and cultural diversity. It was noted that the business owners were connected with the needs of the areas inhabitants and it was

felt that they had a vested genuine interest in the lives of the users. The diversity of businesses catered to a variety of economic and demographic groups. There were retail stores, grocery stores, a hardware store, a number of clothing outlets, bars, coffee shops and a variety of ethnic restaurants. This diversity contributed to a "vibe" which was identified by the participants on a number of occasions. In comparison, W 41st Ave was primarily comprised of retail shops and businesses that catered to the wealthy. .

Participants identified a number of elements that they believed played an integral role in developing and fostering a heightened sense of community. Community events such as festivals and parades that support the cultural and ethnic diversity of the area were thought to contribute to the sense of community. In addition, outdoor seating areas (cafes, restaurants, open green spaces) were identified as fostering social interaction. As mentioned in Chapter Four, Commercial drive is home to a large Italian and other immigrant populations. It was here that some users noted that "some cultures are just more social than others" and it's their presence that has contributed to a stronger sense of community. The users noted that density also contributes to the levels of street activity and resulting social interaction. The connection between the users and local business owners was identified as further fostering a sense of community. Membership within the community was extended to all walks of life, from the homeless to the wealthy. The overall sense was one of inclusiveness and feelings of safety and security.

The levels of interaction and sense of community within Commercial Drive were much higher than those found within W 41st Ave. Unlike W41st Ave, Commercial Drive had a strong Genius loci, the spirit of the place was evident to all and further fostered place attachment and a sense of community within inhabitants and visitors alike. The street's image was one of diversity and eclecticism. This case study has illustrated that Jacobs' eight requirements for a great street can not be solely relied upon to create a vibrant socially active environment. It is his thirteen qualities that contribute and the place making principles/framework that fosters deeper levels of social interaction and sense of community.

The people within Commercial Drive were very open to being interviewed and had strong opinions and beliefs about what made their neighbourhood successful. The data obtained from the interviews within Commercial Drive provided useful information on what elements within the street foster social interaction as well as what other factors contribute to a strong sense of community. Commercial Drive has been a successful case study of a street that has high levels of social interaction but does not contain many elements of Jacobs (1993) eight requirements for a great street.

4.3.1.3 Interviews on Fraser St

Within Fraser St., it was difficult to find participants as there were not many people in the area. Some people that I approached didn't feel comfortable being interviewed because they felt their English was not good enough. Others were on their way to catch a bus and didn't have time to provide feedback; however, in the end I was able to get ten participants to provide their opinions and perceptions of the street. Overall nine out of the ten participants had a negative impression of the street. Their negative impressions were in regards to the physical form and the perceived level of safety within the street. One of the participants felt the area was "busy and dirty", another reported that they felt the street was "dreary, and not appealing". Another man stated

> "Initial impression of this street, I saw it wasn't that great because some of this stuff here, like that old place, abandon places, ah people you know just walking I know it's just an ordinary everyday thing but they aren't really paying attention or saying hi. I noticed kind of a lot of snaky business in the back of the alleys, people just throw stuff in the alleys etc. I see it and I realize it".

This man's description indicates that there seems to be a withdrawal of people from the street and a degree of criminal activity. He felt that people were disengaged and not willing to partake in a friendly greeting. Another woman within the street stated that the area was too "noisy, too many cars". When asked what she liked about the physical form and elements within the street she stated "I don't really like it all that much". A gentleman who lived on Fraser Street stated he didn't really like the look of the street, he felt it was too busy looking and not very cohesive. He

stated "when I show friends like where I live, my apartment is really nice inside but the area doesn't look so great". Overall the consensus was that the area definitely needs improvement in both street appearance and form.

When it came to the topic of sense of community, the majority of people felt that this was lacking. A few people noted that if you were a part of the Filipino or Vietnamese community then you would more than likely have that sense of community within the cultural group, however, if you were of another ethnic origin that same sense of community would be missing. One women felt that the residents of the area were not very open or friendly, "unless they are the owners of stores", then she found the interaction to be just ok. Another participant stated

> "I can't really say that I have connected with anybody here on my walks, our own community which is seventeen blocks away is very connected. You know everybody; however, the Robson Park and family center have helped us. I am not familiar with this area I guess. But it seems friendly enough when you go into any store everybody talks to you".

This woman has noted that the shop keepers are very friendly but that during her walks she has yet to connect with other pedestrians. One lady felt that the sense of community in the area was ok, she noted that "people are friendly but it's not as close as the neighbourhood I live in (three blocks away)". When asked if the area had a strong social atmosphere one man stated "no, not so much, actually no which is kind of surprising because there are quite a bit of amenities. I think it's very well located but not so much on Fraser, I think everybody goes over to Main St for the social atmosphere". A number of other participants stated similar comments that people tend to go to Main Street for social gatherings and outings with friends.

It became evident that the majority of participants felt the area was lacking both a sense of community and a strong social atmosphere. This lead to a discussion of what the participants felt was needed to make the area more sociable and vibrant. One participant stated with some conviction,

> "Clean it up, I mean it's a frigin mess, now why would someone want to invest time and energy and the love and passion they have in their business when the landlord has it

looking like this and that's replicated right up and down the street. So if you want to clean up the neighbourhood and have a better quality of tenant and resident, clean it up!"

One woman felt that the area would improve if the buildings were more appealing. She felt that new construction might bring a better look to the street and give it a more "warm feeling". When I asked this same participant if she felt there were elements that could contribute to a stronger sense of community she felt that the area needed a block party so that people could get to know their neighbours. Another participant felt that the addition of "eateries, bars and pubs, things of that nature would increase the sociability of the area". In regards to the form of the street he felt that the particular stretch of the sidewalk we were on was pretty wide but that other areas are narrower and this makes it difficult to socialize on the street. He also stated that there were not many patios on this street, "so the likelihood of running into somebody is less". Other participants felt that if some how the area could have less traffic that would make the street more enjoyable. One man stated that the addition of a recreation center or community centre would increase the levels of social interaction in the area. Similarly, a few people also indicated that the addition of a park or playground within the street would make the area more inviting to users and people might actually stay within the street rather than just come and go quickly to the different shops.

Analysis

Overall the consensus within Fraser Street was that it was lacking a sense of community and all but one participant felt the area needed a new look to make it more enjoyable for the user. Nine out of ten participants had a negative impression of the physical form of Fraser Street. Many participants commented on the negative signs that made them feel vulnerable and unsafe including graffiti, liter and vacant storefronts. A lack of attention to the street's maintenance may in part be responsible for the further withdrawal of people from the street scene. Words such as "dirty", "dreary" and "unappealing" were used by the participants to describe the street's appearance. Vehicle traffic and noise was also a major concern for inhabitants. The businesses

92

on Fraser Street were not as diverse as those on Commercial. Within Fraser Street there were several restaurants and specialty grocery stores that catered to the Filipino community, however the remaining businesses were ones less frequented by the majority of users (accounting firm, alternative medicine, chiropractor and travel agent). This lack of diversity may be a contributing factor in the lower number of pedestrians and street activity.

Participants felt that unless you were a member of a pre-established ethnic group you would find it difficult to feel a sense of community. When asked, the users had a variety of recommendations as to how to better establish a strong sense of community. In order to attract people to the area, they suggested that the street be better maintained and that the form and appearance be more inviting. They suggested that traffic calming measures would decrease the noise and make the street more user friendly. The addition of eateries, bars, and pubs would also increase the sociability of the street. A park or playground, a block party and community centre were identified as elements that would enhance opportunities for social interaction and foster a sense of community. Fraser St has been a successful case study of a street that has low levels of social interaction and has few elements of Jacobs' expert driven design guidelines. Not only were people unhappy with the look of the street but a few felt it was unsafe and this may in part be one of the reasons people were less open and friendly, they tended to keep to themselves. Overall, the participants felt that the area was lacking a sense of identity and image that everyone could relate to. They felt a "new look" would create a more vibrant street. The feedback obtained from these interviews reaffirms the notion that Jacobs' guidelines are necessary to create a street that people want to be in and frequent. However their feedback also indicates that in order to establish and foster a strong sense of place and community, the place making principles/frame work and Jacobs' thirteen qualities that contribute must be given greater consideration.

The feedback provided from the users in each streetscape has shed light on a variety of aspects of streetscape design that the user values and what elements they believe are necessary for

increasing levels of social interaction. This feedback has been incorporated into a user driven

visualization that will be examined and discussed in section 4.4.3 Visualizations.

4.3.2 Analysis of Users Feedback and Sense of Place Principles/Framework

Based upon the feedback from the users there is more to fostering a sense of place and

community than purely creating an aesthetically pleasing and functional environment. It was

important to examine the user driven feedback in relation to the sense of place literature and

principles to determine what elements they (users) most identified with. Table 4.3 displays the

user driven guidelines in relation to the sense of place principles outlined by Norberg-Schultz

(1980) and Steele (1981).

Table 4.3. User Driven Guidelines & Sense of Place Principles.

User Driven Feedback	Sense of Place: Norberg Schultz (1980)				Sense of Place: Steele (1981)				
	Image	Space	Character	Genius Loci	Strong Location	Boundaries	Geographic Distinctiveness	Scale & Proportion	Rich Identity & Imagery
1) Wide Sidewalks		X							
2) Eclecticism			X	X					X
3) Social Activities-	X			X					
4) Products and Produce on display		X							X
5) Strong Sense of Identity-	X		X	X					X
6) Clean Well Maintained Street	X								
7) Green Public Space		X					X		
8) Ample outdoor seating		X							

Evidently factors such as the identity, character and imagery play a much larger role in creating a street that the users prefer and can see themselves socializing in. Jacobs' (1993) eight requirements for a great street are useful for preliminary works on making a street more aesthetically appealing and functional but based upon this research it has become apparent that in order to create a street that is vibrant and socially connected (exhibits a sense of place, place attachment and sense of community) other factors need to be given greater consideration.

4.3.3 Analysis of Users Feedback and Academic Framework.

As discussed in section 3.5.3.2 it was decided that Allan Jacobs' (1993) eight requirements for a great street would become the basis of the academic visualization. Ten categories were created to allow for a comparison between Jacob's guidelines and the user driven feedback. Table 4.4 displays Jacobs' guidelines and the user driven feedback (see A-7 p.157).

Within the ten categories four of the recommendations from both Jacobs' and the users are the same, these include: Comfort-Micro Climate, Maintenance, Nature, and Seating. Both Jacobs and the users stated that it is important to have protection within the street from the elements. Jacobs took all four seasons into account where as the users main focus was on protection from the rain. Vancouver is known for it's rain and it is understandable as to why this was their main concern. In terms of maintenance both Jacobs and the users emphasized the importance of a clean well maintained streetscape. Jacobs noted that if a street is un-kept many people perceive this as a sign of what the neighbourhood and people in the area are like. The users had similar impressions, an un-kept street would reflect poorly on the area. When it came to recommendations that fell within the Nature category, Jacobs' focus was on street trees. He felt that not only were trees aesthetically appealing but their presence was a good buffer from pedestrians and vehicles. The users also indicated that street trees were a desirable feature within a streetscape for their aesthetic beauty but also felt that the introduction of more open green space would be an added benefit. They felt that not only would the green space be beneficial environmentally but that it would also provide additional opportunities for users to socialize and relax within the streetscape. Lastly, seating was another commonality between Jacobs' and the user driven guidelines. Ample outdoor seating was important to both groups as it provided a place within the street where people could stop and rest, visit and watch people go by. The remaining six categories held different recommendations from Jacobs and the users, and will be discussed in the subsequent section.

Within the category of creating walking space, both Jacobs and the users felt that wide walkways were essential to a successful pedestrian oriented streetscape. Both the user and Jacobs reported that wider sidewalks allow for comfortable movement of pedestrians along the streets edge and can also accommodate people stopping on the sidewalk to visit. It was also noted by both Jacobs and the users that with wider sidewalks there is more space for bike storage and street furniture. To encourage a socially vibrant street, it is important to take into account the needs of

96

the user and both street furniture and bike racks have been identified as important elements. It is also important to note that a number of users felt that the street should be closed off to traffic at certain hours of the day or entirely and designate the street corridor for public transportation and other active modes. People felt that with the elimination of cars the noise levels would go down dramatically making the area a more pleasant environment. Additionally, some users felt that with the exclusion of cars there would be more space to have street activities and additional café and restaurant seating. With more opportunities to sit within the space, they felt this would increase the sociability of the street and lead to a more vibrant active community. When creating the two visualizations it was important to ensure the differences were not so different that biases would be introduced. Therefore, the decision was made that it would not be beneficial to this study to eliminate cars from the user driven visualization. Although this does not mean that the feedback provided has been ignored. I believe that as society moves to more active modes of transportation, the ability to close street corridors to automobiles will become a more likely possibility. As for now, I felt the exclusion of vehicles would greatly bias the user driven images over the academic driven images. Figures 4.1 and 4.2 display the academic (based upon Jacobs eight requirements for a great street) and user driven visualizations with an emphasis on sidewalks.

Figure 4.1. Academic Model- Wide Sidewalks.

Figure 4.2. User Driven Model- Wide Sidewalks- Mid Block Crossing

Another key difference between the academics and the users was the emphasis placed on

mid-block pedestrian crossings. Typically pedestrian crossings are at main intersections and

users have to walk the entire length of the block to cross to the other side of the street. It was

important to create a streetscape where the pedestrian was given priority rather than vehicles.

The second area of focus was on the streets appearance. The academics are adamant that

a street needs to have strong definition with boundaries. They believe it is important to

communicate clearly where the edges of the street are. They also believe that zero setbacks are

ideal with every building fronting the sidewalks edge. The users had a much different response as

to what a streets appearance should be. There was an overwhelming consensus from the users

that an eclectic mix of buildings, building colours, setbacks, materials used and business types

would create the most visually appealing and socially vibrant street. The following images

display what the academics recommend and what the users prefer.

Figure 4.3. Academic Model -Street Appearance

Figure 4.4. User Driven Model - Street Appearance

It is evident that in the academic image there is a strong line along the street's edge. To further emphasize the edges of the streetscape within the academic driven model, railings are dispersed throughout the sidewalk to further distinguish the pedestrian corridor from the vehicle corridor. The form of the academic model is predictable; there are no spaces within the streetscape that are left to be discovered. The same pattern of buildings and store fronts is replicated up and down the street. In the user driven model it is apparent that a much different form exists. The variation in setbacks is evident; there is additional space in front of buildings for outdoor patios and seating areas. This additional space would not be found in a conventional streetscape design. The diversity of colour and materials used also contributes to an eclectic feel. The users indicated that ideally a street would have a variety of tenants with a wide selection of merchandise, eateries and grocery stores. Since it is hard to control what types of commercial businesses enter a space it is hoped that the diversity in street form would attract a variety of businesses to the area.

The third area of focus is on the attributes within the street. The academics focused on the physical characteristics within a streetscape. Their emphasis is on qualities that engage the eyes. This can be achieved through the use of different materials and surfaces over which light constantly moves and keeps the eyes engaged. Many separate windows, or doors, and surface changes can create visual interest; however, it is important to note that "visual complexity is what is required, but it must not be so complex as to become chaotic or disorienting" (Jacobs, 1993, p. 282). Jacobs (1993) also notes that trees have a unique ability to make an environment visually pleasing; he states "what makes trees so special is their movement the constant movement of their branches and leaves, and the ever-changing light that plays on, through, and around them" (p. 282). Both the academics and users indicated a preference for street trees; it is through the use of different surface materials and awning treatments that additional visual interest has been added to the academic driven model. As for the user's preference in regards to attributes within the street that contribute to a vibrant streetscape, there was a strong consensus that the promotion of socialization is key. Many users felt the street would benefit from sidewalk sales, community events, informal opportunities to interact (game of bocce or chess) as well as formal events such as outdoor street festivals. The addition of buskers was also mentioned as being a positive addition to a streetscape. The users all noted that with these types of activities occurring people are more likely to stay within the street and socialize with those around them. The social atmosphere of an area can be enhanced with the display of local artist's work, sidewalk sales and the inclusion of buskers.

Figure 4.5. Academic Model- Attributes Within the Street-Visual Interest

Figure 4.6. User Driven Model- Attributes Within the Street- Social Interaction

The fourth category to be discussed is the way in which a transition from public to private

space can be achieved. The experts term this transition as transparency- where the public realm

of the street and the less public, often private realm of property and buildings meet. Jacobs

(1993) notes that "usually it is windows and doors that give transparency. On commercial streets,

they invite you in, they show you what is there and, if there is something to sell or buy, they

entice you" (p.286). The users confirmed that large windows with displays in them often enticed

them to come into a store; however they felt that displays out on the sidewalk increased their

interest and likelihood of entering a store. They liked the fact that they could see a small

sampling of what the store had to offer. Another factor that the users felt created a seamless

transition form the public to private realm was the use of large windows and doors that opened

entirely to the street. Weather permitting, these large windows can be opened, allowing the user

to feel as though there is no wall or barrier between them and the private realm; the spaces flow

into one another with no clear demarcations. It is this type of design that the user indicates as

creating an open, friendly environment.

Figure 4.7. Academic Model- Transition from Public to Private Space- Windows and Doors.

Figure 4.8. User Driven Model- Transition from Public to Private Space- Outdoor displays and opened windows and doors.

The fifth category revolves around the character of a street. The academics argue that a successful street has buildings and design features that are complimentary. Jacobs (1993) writes that "the best streets get along with each other. They are not the same but they express respect for one another, most particularly in height and in the way they look" (p. 287). He also notes that buildings should fit in and not stand out from the others. The academics believe that a cohesive design and form is one of the key elements to creating a successful, enjoyable environment. The users on the other hand preferred a street that had a strong sense of identity. For instance Commercial Drive has an identity of diversity. The mix of buildings, historic and new, colours, setbacks, and form of the street have all contributed to the identity of Commercial Drive. It was here that people had the strongest sense of place and community.

Within the user driven model, the identity of the street is based on the local history of the area. A great deal of thought was given to the design of buildings and street features that would promote a sense of place along Fraser St. Apartment buildings have decks that open onto the

street and many of the buildings are setback from the sidewalk to allow for additional outdoor seating. These design features allow for social interaction and play an important role in fostering a sense of place and attachment. Murals that reflect the heritage of the area are displayed on the walls lining the public green space. The buildings surrounding this open green space are designed as mixed use, commercial on the main floor and residential above. The store fronts of the commercial buildings are industrial garage doors, intended to be open when the weather permits. The goal is to create a sidewalk sale retail component to the space. The users reported that they preferred displays outside of the stores as it added visual interest and activity out in the streetscape. There was a conscious effort to use a wide variety of building materials and colours to create diversity. It was also important to preserve and maintain the area's heritage. The goal was to create a diverse environment with its own unique identity. When you compare Figure 4.9, the academic model, with Figure 4.10, the user driven model, it is easy to see the difference in colours, materials used and variations in height. Figure 4.11 provides a closer look at the character and cohesive look of the academic model where as Figure 4.12 displays other elements such as the murals and variation in set backs found in the user driven model.

Figure 4.9. Academic Model- Character of the Street- Complimentarity

Figure 4.10. User Driven Model- Character of the Street- Diversity

Figure 4.11. Academic Model- Character of the Street- Unity & Cohesion

Figure 4.12. User Driven Model- Character of the Street- Identity

The sixth category to be examined is the role nature plays in streetscape design. Within this category both the users and academics have identified street trees as important elements in streetscape design. As noted earlier, Jacobs (1993) identifies that trees have an ability to move and modulate the light. This movement of light adds visual interest to the street. Additionally, the academics note that trees are also effective in separating pedestrians from traffic; a line of street trees along the sidewalks edge creates a buffer for pedestrians from vehicles. Moreover, once trees mature, their canopy creates a sense of enclosure within the street. This sense of enclosure adds definition to the street and makes the user feel more at ease within the space. The majority of users indicated that they prefer the presence of street trees but also indicated that the addition of green space within a streetscape would be a positive attribute. Not only can open green space provide an escape from the built environment and an opportunity to reconnect with nature, but it can also facilitate social interaction. Within the user driven model an open green space was created mid block. Within this space additional trees were planted, informal seating was created and children's play structures were added. The users felt that this space would provide another reason to stay within the street and increase the sociability of the area. Figure 4.13 displays the academic model with an emphasis on street trees and their ability to soften an otherwise harsh environment. Figure 4.14 displays a birds eye view of the open green space found in the user driven model. The informal seating was created through landscaping and other amenities such as a bike storage shelter has been provided. It was important to take the Crime Prevention through Environmental Design guidelines into consideration particularly with the design of this space, as open spaces can be vulnerable to devious activities if not under surveillance. In this design the green space is lined by commercial and residential buildings and therefore ensures there are "eyes" on the space at all times.

Figure 4.13. Academic Model- Nature- Emphasis on Street Trees

Figure 4.14. User Driven Model- Nature- Open Green Space

To conclude, ten categories were created based upon the academic guidelines (Jacobs's eight requirements for a great street) and the users' feedback. It is interesting to note that six out of the ten categories that the users felt contributed to a successful street were different than those of the academics. These included the creation of walking space, street appearance, attributes within the street, creating a transition from public to private space, character of a street and nature. During the literature review and analysis in Chapter Two it was also established that the academic guidelines (Jacobs's eight requirements for a great street) did not contain many elements of the sense of place principles. It was only when Jacobs thirteen qualities that contribute were examined that the sense of place principles would be incorporated. Conversely, the users feedback did in fact contain many of the sense of place principles set forth by Norberg-Schultz (1980) and Steele (1981) refer to Table 4.3 p.95. Evidently, the users preferences and expectations of what they believe creates the most socially vibrant street with a strong sense of community extends beyond Jacobs' eight requirements for a great street. It was through a second phase of interviews with professional planners, urban designers and landscape architects that these differences are further elaborated upon.

4.4 Phase Two of the Interviews

4.4.1 Interviews with the professionals

The second phase of interviews took place between Sept 3, 2009 and Sept 16th, 2009. This phase of interviews was conducted with professionals who work in the Vancouver area. Through purposeful sampling, key players in streetscape design and its implementation were identified and interviewed. Their names will remain anonymous and the following pseudonyms have been used: David Walsh (Senior Urban Designer), Tracy Miranda (Urban Planner), Petra Cheema (Urban Planner) and Sam Peace (Landscape Architect/ Urban Designer). The interviews were open ended but supplemented with an interview guide. Each professional was shown images from both the academic and user driven visualizations. They provided their feedback regarding the elements of each streetscape that they felt contributed to deeper levels of social

interaction. Furthermore, they provided insight into factors that they believe influence our cities resulting built forms.

Upon displaying the two groups of visualizations it was important to establish first which set of images the professionals felt was most representative of current streetscape designs. All four professionals acknowledged that the academic images took the form and look of what we see today in our built environment. They noted that a strong line of definition is a common characteristic of current streetscape design practices. Three of the four professionals made the comment that having a strong line and zero setbacks within a streetscape is essential to the retail success of a street (Figure 4.15, p.127). They noted that if there are significant set backs from the sidewalk either horizontally or vertically then pedestrians are less likely to enter the stores. In their experience, the most successful streets have very little to no set-back variation. This input is in strong contrast to what the users preferred. The users indicated that they liked variation in set backs as it allowed people to step aside and carry on conversations with those they meet in the street. Additionally, this variation was identified as allowing for increased outdoor eating areas, patios and rest stops. Evidently there is a discrepancy between the users and academics/professionals opinions on setbacks.

Figure 4.15. Academic Model- Top Down View

The second characteristic that the professionals identified as being a common trait seen in current streetscape designs is a unified cohesive look, particularly in larger mix-use developments. Not all of the professionals felt this was a particularly positive attribute, however, they all indicated that building facades should be no more than 25 ft in width. They stated that when buildings exceed these widths the facades are no longer visually interesting and tend to lower the vitality of the street. On the other hand the professionals indicated that the acquisition of a critical mass of land for larger developments is the most common approach to the revitalization process as it is this type of building form that is the most profitable. The professionals note that there are all kinds of development and financial bottom line factors that affect the resulting built form. The goal with these larger mix-use buildings is often to try and break up the façade by emulating the old street vernacular of 25ft width modules while maintaining a cohesive look. It is often difficult however, to establish an authentic rhythm within these larger buildings and often the developers and architects attempts fall short.

When asked which street design is more conducive to social interaction all four professionals indicated that the user driven images provided the greatest number of opportunities for socialization. They noted that in the user driven model a greater number of edge conditions were created: patios opening onto a green space, alcoves and vestibules. They stated that these spaces definitely allowed for additional social interaction. Petra Cheema (Urban Planner) noted that in the user driven model a pedestrian could socialize within the street and not have to be a paying customer. In the academic driven model, which reflects current streetscape design, the majority of opportunities to socialize are tied to a commercial venue.

The professionals felt that the most socially successful streets took the form of the old vernacular, they reiterated that the 25ft wide storefronts increased the vitality of a street; "Vancouver is very unique, there is a strong stance in the planning department and they know what they want, a 25ft modular creates a break, the most successful streets are the old vernacular" (David Walsh). Additionally, narrower storefronts accommodate more businesses and this increases the shopping opportunities for the user. With increased diversity a street has a greater appeal to the users, leading to a more vibrant street. The professionals also felt that programmed spaces are important for fostering social interaction; people need to be able to identify the space that has been designed for their use and enjoyment. Furthermore, they indicated that a streetscape should feel like an outdoor room and that there needs to be a sense of enclosure. This is achieved through proper scale and proportions of buildings, David Walsh notes that; "ideally a building will have commercial at grade, two floors of residential and then a stepped back 4th floor of residential". Street trees also play an important role in creating a canopy which can further a sense of enclosure. All four professionals emphasized that in order to get people to stay longer within a street; the area has to be comfortable. They all believe that features such as awnings and bus shelters are important in providing physical comfort. Ambient lighting adds interest and is essential in making the area safe to be in at night. Transparency is also very important in fostering social interaction; they note that the blurring of private and public realms creates an

113

"open" atmosphere and a feeling that, "it's ok to interact with others and move freely through the space".

It is important to note that the professionals acknowledged that a socially vibrant street is not only successful because of its form. The connection that local shop owners can establish with the user plays a significant role in a street's sociability;

> "the quality of the stores and the ability of shop owners to get to know their customers and be in touch with their needs can be what separates a good street from a great street. There are some successful streets that don't have much in the way of amenities but have social interaction because they have local serving shops. Mom and Pops' stores that have been there for years, they know their customers. People go in, they see their neighbours they chat, stop and have a coffee. This is the ideal type of social interaction. Therefore, the role of the street is to not make it uncomfortable for the pedestrians. Things like parked cars or boulevard strips with trees make people feel a little bit more comfortable on the sidewalk." (Tracy Miranda).

They acknowledged that a number of these factors are out of their hands; however, planners and urban designers can to a degree, control the type of uses that are permitted. They have indicated that it is important to minimize certain uses in the core of a streetscape, like banks and lobbies. These types of businesses and residential entrances do not animate the street; only small fractions of the users enter these spaces, therefore, the majority of these areas become dead zones along the streets edge.

Another factor that decreases the vibrancy and level of transparency within a streetscape are businesses and storefronts that put posters on their windows. Video stores, pharmacies and some grocery stores are notorious for plastering every available window with advertisements. Pedestrians are no longer able to see inside which creates a wall between the public and private realm. This wall creates a disconnect between the users of the space. David Walsh states, "blank walls and mirrored walls are enough to kill a street, anything that mutes or diminishes interactivity and transparency is negative to creating an environment that people would want to interact in". Vancouver is now prohibiting the excessive papering of windows and instead encouraging the creation of window displays. The professionals indicated that to create a successful transition from the public to private realm it is important to have layering in the

transition zone; the space between the sidewalk and storefront. Ideally, a business would have products displayed either on the sidewalk or in a window display. These displays not only add visual interest but also make the pedestrian feel at ease and welcomed in the space. Evidently there are a number of factors that have a large impact on the sociability of a streetscape that are out of planners', urban designers' and landscape architects' control. There are however, a number of elements that have continually proven to detract from social interaction and it is these factors that need to be considered.

As noted earlier, all four professionals indicated that the user driven model was more conducive to social interaction, however, there were many comments in regards to the layout and form of the user driven streetscape that the professionals felt could lead to the street's failure. The main concern was in regards to the setbacks and location of retail space from the sidewalk (Figure 4.16, p.132). "Retail has to be at the property line; the rule of thumb is don't siphon off the retail from the street" (David Walsh). The professionals stated that when there are even minor setbacks people are not as willing to enter these spaces and the businesses suffer. They acknowledge that streetscape design is a balancing act between ensuring commercial success, which draws people to the area in the first place, and promoting the design of a space in which people want to linger and socialize. The open green space seen in Figure 4.16 was both a positive and negative feature in the professionals' eyes. They noted that some "plazas if not designed correctly can be public realm killers rather than animators" (Tracy Miranda). If the elements are not taken into consideration these open spaces can become harsh environments in which the users walk quickly through or past. On the other hand if these open spaces are designed correctly, they can become very positive spaces in fair weather conditions.

> "In other seasons that aren't as favorable, this area would become a dead zone. If you talk to commercial retail consultants they will tell you that developers won't like to do this because on a rainy day you are creating a dead zone where there will be no animation" (Tracy Miranda).

115

The conventional wisdom is that a commercial street will have two really strong, core blocks where you don't want a single gap, and the rest of the street beyond the core will tend to peter out.

When it came to examining the edges surrounding the open green space, it was noted once again that these businesses would struggle in comparison to those directly fronting the street. The professionals acknowledged that through experience it has been observed that people do not like to veer off the most direct path. In their opinion, the businesses surrounding the green space would have to be specific to those that are frequented on a daily basis. It was noted that if those buildings were occupied by travel agents, or a bank, the area would surely fail as those amenities are not usually frequented daily by the average user. "It's essential that these edges surrounding the green space are active, so a popular restaurant where outdoor seating exists would have a better chance of surviving than a bank" (David Walsh). It was noted that the permeability of the area was good; the corners allowed for transient movement and provided spaces where the businesses could expand and contract easily. It was indicated that the area should be more urban and not given over to singular programming (green space). Hard spaces and not soft "green" spaces would be preferable and it was noted that the success of this plaza would rely on the "right mix of tenants" (David Walsh). The professionals have acknowledged that these spaces are appealing in theory but when put into practice they are not as successful as they were originally thought to be. Designing a streetscape becomes difficult as economic, seasonal and human preferences need to be taken into consideration.

Figure 4.16. User Driven Model- Top Down View

The professionals remain skeptical regarding the elements found within the user driven

model. In addition, a number of other factors also inhibit the creation of this type of streetscape

design. Public open space, like the one found in the user driven model "always comes down to

zoning, landuse and land ownership" (Tracy Miranda). The professionals believe that many

developers would be willing to create a small open space of this sort within their development

sites but the zoning becomes an issue. The most successful examples of this type of design are

part of a comprehensive redevelopment plan. It would be costly and inefficient for the city to

consider comprehensive redevelopment plans for every site with a proposed commercial mix-use

development. Additionally,

> "in order to get this kind of space on private property without the municipality having to
> buy it, you have to make sure that the numbers crunch. Developers will provide it if it
> doesn't hurt their bottom line and they know they are maximizing their development
> potential" (Tracy Miranda).

The professionals go on to note that a streetscape design such as this would most likely be

successful in one of the "hot blocks", the core of the streetscape. If it were located outside of the

core, the open green space would mostly definitely become a dead zone further diminishing the potential vibrancy of the street. "If you have a space like this in an area outside of the core and the edges are not engaged (businesses are not flourishing or vibrant) then you are not going to get the social interaction" (David Walsh). A developer has little incentive to create an open green space and streetscape like the one in the user driven model; not only will their bottom line be affected, but they run the risk of creating an inactive environment in which both commercial and residential units are hard to fill and sell. Petra Cheema notes that another factor limiting the user driven layout with regards to setback variations is the fact that a number of commercial and mixed use zones already prescribe zero setbacks in their zoning by-laws.

In addition, the professionals felt that parking plays a significant role in the form and function of the street and could inhibit the creation of the user driven design. Sam Peace stated that those within his office often joke that "form follows parking". The cost of underground parking in Vancouver can be anywhere from $35,000 to $45,000 per stall and in many cases it is not even an option as a result of geotechnical constraints. Therefore, often parking continues to play a major role in the layout and form of a site and building. In many cases the city planners will relax parking requirements if the project is something they want to go ahead but if there is too little parking then the developer will find it hard to sell units and attract commercial tenants. The professionals noted that on street parking is another issue that both the users and merchants will fight for. In the user driven model a few of the parking stalls were covered with bulges, adding an extension to the sidewalk (Figure 4.4, p.100). These bulges are essential if one wants to create additional space for benches, bike racks, street trees and landscaping. "People really resist having their parking taken away, even that much parking, two cars to make a bulge they'll fight" (Tracy Miranda). Sam Peace stated that "you need to optimize not maximize parking, currently conventional wisdom states that the more parking you have the more successful you'll be". Evidently, the professionals have acknowledged that parking remains a key issue in the design of streetscapes. Although they have all indicated that parking is still essential to the

118

success of a street they do believe that sidewalk bulges provide more benefits to a street's vitality rather than two extra parking spaces would. They went on to state that such methods of widening the sidewalk and minimizing the perceived width of the street have a positive effect on the overall feel of a street. Boulevard strips are also an effective means in creating a perception that the street is narrower. When people perceive the street to be a smaller scale they feel more comfortable in the space; it appears as though the other side of the street is not so far away and creates a more intimate atmosphere. The professionals all indicated that lay by parking is the most conventional form found on commercial streetscapes but they recommended that to further delineate this space from the sidewalk and street, pavers or another surface types would be a positive addition. This zone could then become "flex parking" where for the majority of the week it remains as conventional parking spaces but maybe once a week on a Saturday or Sunday afternoon, it is blocked off and utilized for sidewalk sales.

When addressing the images and look of the two streetscapes it was apparent to the professionals that the user driven model had more diversity in colour, setbacks, height and types of materials being used. They also acknowledged that when it comes to new development, the developer is faced with; "what's the context of the area, what existing building stock remains and where do I go from here?" (Sam Peace) They note that "no architect will want to create a heritage knock off but will try to keep the heritage of the area in mind and do a modern expression of a building" (Sam Peace). It takes a very skilled architect to create a modern building that expresses the heritage and identity of an area. In many cases very little of the heritage or identity of the neighbourhood is actually represented in the new building and this is why many areas tend to loss their character and uniqueness. They also made the comment that when areas such as Commercial Drive become too popular the street will experience development pressure. Once this occurs and corporate businesses arrive, such as Starbucks, London drugs and Subways, the authentic, unique charm and character of the neighbourhood soon disappears. The professionals indicate that factors such as these are beyond their control; when a commercial area

119

"is up and coming and then becomes gentrified the area to a certain degree losses it's sense of place" (Tracy Miranda). They note that neighbourhoods evolve and that market factors play a big role in the planning and design process; "in thirty years maybe Commercial Drive will be the next Kerrisdale" (Sam Peace).

Ideally, the professionals feel that it would be great if the identity of a street could remain over time but because of gentrification and the fact that new buildings and developments will only take on a modern expression of the regions heritage, it is unlikely to occur. They do note that some neighbourhoods and districts are able to keep their identity more successfully than other areas, for example, China Town. This is in part attributed to the strict design guidelines that were created by the citizens of the area and city officials where the goal and objective was to preserve and maintain the region's identity.

The interviews carried out with the professionals shed light on some of the underlying reasons why a number of the user driven elements do not exist in today's streetscape designs; although, they do acknowledge that these elements have the greatest potential for increasing socialization. The feedback provided by the users has indicated that there are a number of elements that they perceive to be essential for the design of a socially vibrant street, that are not reflected in the academic streetscape design guidelines (based upon Allan Jacobs eight requirements for a great street). Through this analysis it has been established that the design of a street plays an important role in fostering and promoting social interaction. It also became evident that the academic streetscape design guidelines do not fully reflect the preferences nor do they fully address the social needs of streetscape users.

4.4.2 Taking the Images Back to the Users

It was important to take both the academic and user driven visualizations back to the users for further assessment and comparison. This portion of interviews was carried out on Sept 4th 2009 and ten participants were surveyed. The goal of this survey was to identify which set of images they preferred and why. Two user driven images were displayed next to two academic

images and the participants were asked to look at each set and comment on their preferences and perceptions of the two visualizations. Nine out of the ten participants surveyed preferred the user driven streetscape design as compared to the academic. When asked why they preferred the user driven visualization over the academic visualization, they stated they liked the: diversity of colours, the increase in the number of trees, the creation of outdoor seating and areas for socialization, as well as the open green space. The explanations were largely in relation to the open green space; "I like there is a green space", "I like that there is an open space for people to enjoy, sit down and relax in", "I mainly like the green space", "this one has more spaces for people to hang out in", and lastly "this one is the best for people, they've got a green space". Other comments about the user driven model were: "it looks like more fun, I like the colours, and the other set (academic driven images) are too boring", another participant liked that the user driven model had trees down the middle of the road and a green space. Only one participant preferred the academic visualization over the user driven, due to the fact that they appreciated its cohesive look. They did however remark that they wished the academic visualization had an open green space.

Analysis

This last set of interviews has reiterated the fact that the users prefer a street of diversity and eclecticism with ample outdoor seating and an open green space. The image of the user driven visualization represented a "fun" active environment whereas the academic visualization appeared to be "boring" and predictable. This feedback indicates that Jacobs' eight requirements for a great street do not fully reflect public preferences / expectations. Based upon phase one of the interviews it has become apparent that the users identify with the place making principles / framework and Jacobs' thirteen qualities that contribute.

Through the observations and interviews it was determined that the form and appearance of a street does influence the levels of social interaction and resulting sense of community.

Valuable knowledge was gained on users perceptions and preferences for streetscape design and what elements they believe fosters a socially vibrant street.

4.5 Conclusions

The data collected during the observations and interviews indicated that the form of a street does have considerable influence on the level and types of social interaction that takes place. The results of the observations indicated that to a certain degree Allan Jacob's eight requirements for a great street are successful in creating a street that users find attractive and functional. It was however surprising to see that Commercial Drive had higher levels of social interaction considering it had fewer elements of Jacob's eight requirements for a great street. As a result of the data collected during the observations it became apparent that Jacobs eight requirements alone do result in the most vibrant socially active street.

The feedback obtained form phase one of the interviews with the users provided a perspective that has to date been lacking in the creation of streetscape design theories and guidelines. Through these interviews it was once again established that to a certain degree Allan Jacobs' guidelines are successful in creating a beautiful, functional street that the users enjoy. However, based upon their feedback it became apparent that in order to foster a strong sense of community and increase the levels of social interaction a street needs to have a strong image and identity that all users can relate to. Commercial Drive was the perfect example of a street that does not conform to Jacobs' guidelines but has high levels of social interaction and a strong sense of community. It was determined that the diversity of buildings, colours and materials, mix of shops and services and the open green space were more appealing and well received than the uniform look found on W41st Ave. Additionally, it was identified that the cultural festivals, diversity and community events that occur within Commercial Drive were essential for further fostering and solidifying the sense of community within the regions inhabitants. Evidently, the users' preferences and expectations of what they believe creates the most socially vibrant street with a strong sense of community extends beyond Jacobs' eight requirements for a great street.

The feedback obtained from the professionals provided insight into the underlying reasons why a number of the user driven elements do not exist in today's streetscape designs. It became evident that a number of the elements that the users identified as being essential to the creation of a vibrant socially active environment were perceived by the professionals as not conforming to conventional practice. Additionally, the professionals felt that financial bottom line factors and parking demands play a greater role in a building's form than one might anticipate.

The images were taken back to the users to obtain one last set of feedback. Nine out of the ten participants indicated that they preferred the user driven visualization over the academic driven visualization. Through this analysis it has become apparent that the academic driven streetscape design guidelines do not fully reflect the preferences nor do they fully meet the social needs of streetscape users. Chapter Five presents a discussion that will outline the implications of this study for professional practice as well as provide recommendations and areas for future work.

Chapter V: Findings, Implications of Results, Recommendations & Future Work

5.1 Introduction

This study set out to examine the influence the physical form of a street and current best practices for urban streetscape design have on sociability. Academic streetscape design guidelines were examined to see if they fully reflect the users' preferences and expectations of what elements contribute to increased levels of sociability. Through a qualitative approach, a greater understanding of what criteria is needed to foster sociable streets was provided through the analysis of current streetscape design best practices and the data obtained during observations and interviews. The goal of this exploratory research has been to obtain feedback from the users and professionals in order to evaluate the current success of streetscape design guidelines. Their feedback has provided additional knowledge surrounding streetscape design and has also informed and extended current streetscape design theories.

5.2 Research Questions & Findings

This study focused on two specific research questions: 1) What are current best practices/principles for urban streetscape design 2) To what extent do best practices/principles for streetscape design reflect public preferences/expectations?

It was determined that Allan Jacobs' eight requirements for a great street are currently considered the best practices/principles for urban streetscape design. His framework encompassed all of the other scholars' recommendations as well as provided additional characteristics that should be considered. Through the literature review and analysis it was discovered that the academics did not place the same emphasis on characteristics that would foster a sense of place, as they did elements that would create an aesthetically pleasing and functional environment. The goal of this study was to provide additional insight into which elements create and foster a more socially vibrant and cohesive street. The sense of place literature provided the theoretical basis upon which the academic and later the user driven

feedback was compared to. It became apparent that the users feedback and their perceptions of what creates a vibrant street largely fell under the sense of place principles and Jacobs' framework. The users preferred an environment that fosters a unique sense of place and community as well as an aesthetically pleasing and functional street.

It was determined that not only does the physical layout and design of a street influence its sociability but that more importantly, factors such as a street's image and character are what sets a great street apart from a good, aesthetically pleasing and functional street. The current academic streetscape design guidelines, on their own, do not adequately address the social needs of streetscape users. The current guidelines, based upon Jacobs' (1993) eight requirements for a great street, are effective in creating an aesthetically pleasing and functional environment but they fail to create a strong sense of place, place attachment and sense of community. It was found that in addition to Jacobs' eight requirements the users also prefer characteristics and elements found within Jacobs' thirteen qualities that contribute and the place making principles/framework.

5.3 Implications and Recommendations for Professional Practice

Based upon the feedback provided from both the users and professionals it became apparent that the current academic driven streetscape design guidelines are failing to create vibrant socially active streets. Based upon the professionals' feedback the following discussion will provide an inside look at the challenges and barriers commonly encountered in today's professional practice and provide recommendations as to how we can create more vibrant socially active streets.

During the interviews with the professionals they all identified that the academic visualization best exemplified the form and look of today's streetscapes. Two key features in particular were recognized by the professionals as being common characteristics found in today's designs; the first being a strong line of definition and zero setbacks and secondly, a unified cohesive look. Today's larger developments (wider than 25ft modules) are attributed to creating a more uniform, homogenous environment. These new developments are created to fit within the

predetermined zoning requirements that have long been pre established for the land. I believe one way in which we can move away form creating these uniform landscapes is by implementing form-based zoning. Kaplan (2005) defines form-based zoning as a process that "focuses on the proposed buildings' design and form, rather than predetermined zoning criteria" (¶. 5). In general, form-based zoning focuses on neighbourhoods or districts of a city and de-emphasizes land use in favor of building form and typology. This type of zoning pays particular attention to the streetscape and public realm. Kaplan notes that unlike conventional zoning codes, form-based zoning involves a significant level of public consultation; " citizens are invited into the design process and given a feeling of ownership as a redevelopment plan moves through its creative stages" (¶. 9). Not only will this type of zoning ensure a higher level of design but the users have an opportunity to provide their input as to what they think best suits their neighbourhood. Throughout the review of the place making literature and the feedback obtained from the users it became clear that in order to create a vibrant socially active street the users must be able to identify with its image and character.

The professionals concluded that the academic visualization contained a number of elements that are essential in the creation of a successful street. In general the professionals reiterated the need for streets to contain: a sense of enclosure, physical comfort, transparency and a demographic mix. However, they noted that the opportunities for socialization were not as great (in both quantity and quality) as those found in the user driven visualization. They also acknowledged the important role that merchants play in fostering a sense of community. Tracy Miranda noted that areas that have a strong sense of community often have shops that are owned by local inhabitants (Mom and Pop businesses). The professionals all agreed that the user driven visualization had a greater number of edge conditions where patios, green space, alcoves & vestibules could be accommodated for, this in turn increased the opportunities for social interaction. It was also acknowledged that one would not necessarily have to be a paying customer to participate in the street's sociability.

126

The first and most commonly reported element that the professionals felt was a negative design feature within the user driven visualization was the variation in setbacks, particularly those around the open green space. They indicated that through their professional experience, horizontal and vertical changes along the streets edge leading to retail and residential space inhibits the user from entering the space. They also questioned the existence of the open green space. They felt that if it was not properly designed it could be a public realm killer rather than animator. They noted that a strong line of definition with zero setbacks has been the rule of thumb for the economic success of businesses along the street.

Secondly, the professionals indicated that the financial bottom line dictates to a large extent the development and form of a building. Developers want to maximize their profitability therefore, it is unlikely that a developer would be willing to provide an open green space if it were to cut into their development potential. It was noted that comprehensive redevelopment plans provided the most flexibility in the creation of a space such as the open green space found in the user driven visualization. This type of zoning however requires more attention and processing at the municipal level. An interesting comment made by both David Walsh and Tracy Miranda was that the user driven visualization and its form would most likely only be successful in one of the "hot blocks" of a neighbourhood. They noted that often a commercial/residential street has only two really strong blocks that are successful and after that things seem to peter out. With that in mind, city planners could potentially identify those "hot blocks" in each neighbourhood and allow for more flexible zoning requirements. This way property owners' have the flexibility to create a space that not only contributes positively to the public realm but would also give added benefit and marketability to their development.

Parking was also identified as a potential issue within the creation of the user driven visualization. As noted in Chapter Four, Sam Peace stated that landscape architects, architects, urban planners and designers often feel that "form follows parking". Luckily within the City of Vancouver the planning department is very receptive to lowering parking requirements.

127

Unfortunately, the large majority of municipalities and cities in the province and across the country continue to require minimum parking standards for both residential and commercial buildings. These standards tend to be fairly high, requiring more parking than might actually be needed.

In the opinion of the professionals, many of the elements present in the user driven visualization are great in theory but difficult to put into practice when external forces are at play. David Walsh noted that particular business types do not attract high levels of activity therefore decreasing the potential for social interaction. Sam Peace acknowledges that when places such as Commercial Drive become popular the area faces development pressures. Gentrification can then occur, degrading the unique sense of place. Additionally when new development occurs it is difficult to maintain or preserve the unique features and diversity of storefronts leading to a diminished sense of authenticity. The evolution of these nowhere places, where the buildings and shops in one place are identical to those in the next town is further perpetuated by the increase and popularity of chain stores. Not only do I have concerns that a bland approach to urban design is producing standard streetscape designs but that commercial forces are reducing many small towns' economic diversity to a handful of chain stores.

Based upon the feedback obtained from the users and professionals the subsequent section will provide recommendations that have the potential to create a more balanced approach to streetscape design.

Outdoor Seating & Setback Variations

The academics, users and professionals all acknowledged that wide sidewalks are essential in allowing ease of movement of pedestrians but more importantly increase opportunities for social interaction. Patios, outdoor seating, alcoves and vestibules were identified as the sites of greatest social interaction. In cases where the sidewalks are too narrow to allow for these spaces, it is recommended that on-street parking be reduced to allow for street bulges. As little as two parking stalls are needed to create these outdoor spaces. Another means

128

of achieving greater widths and variation in sidewalks, is through the implementation of building setbacks. In the case of Fraser Street, sites could be rezoned to require minimum setbacks. The resulting spaces could then accommodate additional outdoor seating and areas for interaction.

Old Vernacular 25 ft wide Street Modules

Through observations, interviews with professionals, and a review of Jacobs' "qualities that contribute", it was determined that the old vernacular of 25ft wide street modules provides the most diversity within a streetscape. Not only does it provide for a greater number of businesses but there is also a greater opportunity for diversity in architectural design. Given the nature of today's large block developments, municipalities would be wise to require 25ft breaks in the facades and in the number of storefronts offered at grade.

Strong Identity and Image

Reference to an area's historical background can play a pivotal role in maintaining a strong identity and sense of place. Heritage registries and the preservation of historically significant landmarks and buildings is one way in which to maintain an area's image. By-laws that enforce the preservation and promotion of a region's identity are essential. A prime example in Vancouver is the successful preservation and promotion of its Chinatown. Other regions of the city would benefit from the implementation of similar by-laws that would promote and protect their unique identity.

Open Green Space

The users voiced an overwhelming consensus that open green spaces were not only desirable areas for social interaction but they also provided areas where people could enjoy the street at their leisure. Despite the negative feedback from the professionals who indicated that such spaces are unlikely to be successful and or even developed, cities and municipalities need to strive to create public open spaces within our street corridors. These spaces will increase the opportunities for social interaction and begin to foster a sense of community. Therefore it is up to

the professionals to begin to provide for, or require these types of spaces within our cities despite the obstacles they currently face.

Zoning/ Increased Density/ Diversity in Demographics

Zoning that is form-based and allows for mix-use developments and the densification of both the street and its surrounding area, could heighten the vibrancy of the street. It is important to allow for a variety of housing types that will draw people in from varying economic and demographic groups. Seniors housing, co-operative housing, work/live studios and public social housing could augment the existing housing stock, creating a more complete community. Inhabitants of work/live studios tend to have a vested interest in the success of the street. Additionally, services such as a community centre and library were identified by the users as playing a role in fostering a sense of community. It was acknowledged by the professionals that a busy street lends itself to increased opportunities for economic & social success and can potentially increase the demographic and cultural mix of the street.

Parking / Traffic Calming Measures

Parking was identified by the professionals as greatly impacting the resulting built form of our streets. They felt that in some instances the parking requirements were over and above the actual need. I would strongly recommend that cities and towns reevaluate their parking standards and even look at implementing maximum parking allowable to ensure that vehicles do not inhibit and further degrade the built form of our cities. A positive spin off of reduced parking would be the increased reliance on public transportation.

In Fraser Street a number of participants commented on the level of noise resulting form the speed in which vehicles traveled along the street. The addition of pedestrian oriented mid-block crossings would give the users greater control of their movement as well as slow down traffic in the area.

Well Maintained Street & Implementation of CPTED

The academics, users and professionals all noted that a well maintained street goes a long way to making people feel secure and comfortable. It is important for developers and municipalities to review applications with the Crime Prevention through Environmental Design guidelines, in mind. This can greatly improve the user's perceptions of the street and foster place attachment.

Active Business Associations

There were active business associations in both W 41st Ave and Commercial Drive. Their role has been the promotion of community events as well as the maintenance and beautification of the streets. These associations play an integral role in the planning of community events such as family days, winter carnivals, fall harvest days, the day of the dead, car free days and folk festivals. In conjunction with the City of Vancouver, each association designed banners that reflected the image and identity of the area. In addition, the business associations have the potential to identify future needs of the community and communicate those needs to the developers. This consultation process would ensure that developers were more responsive to the user's needs, which in turn would increase the success of their developments. I would suggest that Fraser Street and any other mix-use commercial street that needs revitalization create a business association that would increase the economic and social vibrancy of the area. These types of organizations can foster a deeper merchant / user relationship and result in increased sense of community.

The most important aspect of these recommendations for professional practice is how they have the potential to create streets that have a unique sense of place which can lead to and foster place attachment and a sense of community. These recommendations will to a certain degree improve streetscape design and foster social interaction; however, to ensure their complete success a review of the planning process must take place. The complexity of the process is highlighted when one examines the number of people who have an influence on a street's design

and form: private developers, property owners, tenants, designers (architects, landscape architects, and urban designers), transportation/highway authorities, planning authorities, emergency services, conservation agencies, utility providers, civic advisory committees and residential groups. Each of these players has a different set of goals and objectives when it comes to the design and function of the street and few have the overall quality of the streetscape in mind. To date very few municipalities and communities have one authority that co-ordinates the actions, activities and work carried out in our streets. If we want to ensure the delivery of high quality streets and improve the public realm then a coordinated effort will be required.

In addition to this lack of coordination, Matthew Carmona (2001) notes that the majority of players involved with streets lack an understanding of design. He argues that part of the problem "has been caused by the polarization of professions and a historic move away from a central concern for urban design" (¶. 35). He acknowledges that retailers have stringent and often uncompromising design and cost parameters that degrade the character and identity of the street. He notes that this is also a problem within the development industry where investment in better design is rarely a priority. Additionally, Carmona concurs with Sam Peace (one of the professionals interviewed for this study) when he states that architects often create individual landmark designs which have little reference to the surrounding context. Investment in design, maintenance and improvements of our streets is urgently needed. Carmona argues that investing "up front in better guidance in the planning process may save resources further down the line in negotiation and needless appeals on design. However, both public and private resources are needed to ensure high quality streets are delivered in the first place" (¶. 39).

There clearly is a need for a coordinated approach to street management, design and maintenance. In my opinion cities should have one department where key players work together to create a street that is functional but more importantly has a sense of place. Vancouver already has an urban design review panel in place. This panel is responsible for reviewing applications based upon the quality of design and the projects contribution to the public realm. The panel

makes recommendations as to how each project can best suit the needs of Vancouverites. This review panel has played an integral role in the current success of Vancouver's high level of urban design. Presently the City of Vancouver has a streets division that is part of the engineering services department. The streets division is responsible for the design, construction, and maintenance of sidewalks, streets, bridges, and structures for pedestrians, cyclists and vehicles. The goal within the streets division is to enhance the public realm and create a vibrant community experience. The city has made significant progress in the revitalization of many city streets, however, there are many more streets that need improvement and if during the revitalization process not all players are involved there is a high likelihood that the new design may fail to meet the needs of the user. In addition if the revitalization process merely focuses on the aesthetics and function of the street rather than the identity and character of the region it will be hard to establish a strong sense of place and community. Unfortunately, Vancouver and its planning approach to streets and urban design is an anomaly within the province. The remaining cities and municipalities remain divided in their planning approach and lack the resources to create a cohesive unit where the goal is to achieve the highest level of urban design possible.

5.4 Future Work

As an exploratory study, this research has made significant progress in closing the knowledge gap in identifying the role that the physical design of our streets have on the development of a sense of place, place attachment and sense of community. Additionally, this research acknowledged that current streetscape design principles have failed to emphasize the importance of the place making principles. The users acknowledged that the place making principles play the most significant role in creating an active, socially vibrant street. While this research narrows the gap between theory and practice in streetscape design, questions have arisen that are outside the scope of this research.

It was documented throughout this study that the physical form of a street has a large impact on one's ability to experience a sense of place, place attachment and sense of community.

133

It was noted that once a sense of place and place attachment are able to develop within inhabitants of a street/neighbourhood, the potential for a strong sense of community to develop is greatly increased. Today, many cities strive to be economically, socially and environmentally sustainable, however the ways in which to achieve social sustainability have not been as clearly defined. This research has identified potential areas where additional work could be done in researching the link between the physical form of our cities and its effects on the sociability and cohesion of inhabitants. Cochron (1994) acknowledges that

> "along with political activity, a strong sense of community can lead to greater informal social control by neighborhood residents, which can aid in addressing local problems like crime. People with a strong sense of community generally perceive that they have control over their immediate environment, they feel more empowered to manage their own lives and to participate in the lives of their neighbors, and they have more positive perceptions of both their neighborhoods and the social relations in their neighborhoods (p.95).

The potential benefits from creating streets and spaces that exude a sense of place and promote place attachment and sense of community are far greater than purely designing an aesthetically appealing and functional environment. Therefore, it would be of great benefit to cities and municipalities if further work was carried out on the role the physical design and form of our streets plays in ones ability to experience a sense of place, place attachment and sense of community. Quantitative research is needed to measure the levels of sense of place, place attachment and sense of community that users experience in relation to particular physical forms. Additionally, "old conventional wisdoms" need to be challenged and re-evaluated. When it came to the discussion of setbacks and their effect on commercial retail success there clearly was a discrepancy between what the professionals and academics recommend, and what the users want. Furthermore, the notion that "the more parking you have the more successful you will be" is another area of concern. Studies that look into the commercial success of retail stores in pedestrian oriented streets that have fewer parking stalls than a conventional street are needed. Without challenging the status quo, it is not likely that we will experience the significant changes that are needed to make our street more socially active and vibrant.

5.5 Thesis Conclusion

This research aimed to identify the current best practices/principles for urban streetscape design and establish to what extent these principles reflect the publics' preferences and expectations as to what makes a socially active, vibrant street. The goal was to examine the role the physical form of our streets have on our ability to experience a sense of place, place attachment and sense of community. It was discovered that the physical form of our streets does play a large role in our ability to experience and establish the place making concepts mentioned above. It was important to identify specific design features and concepts in order to bridge the gap between streetscape design and place making theory, and professional practice. Input obtained from the users and professionals provided valuable insight into the current success and failures of existing academic guidelines. It was determined that Jacobs' eight requirements for a great street were successful in creating an aesthetically appealing functional street however they did not fully meet the needs of the streetscape user. It was not until Jacobs' thirteen qualities that contribute were examined that a more holistic approach to streetscape design would occur. The users identified with, and preferred a streetscape that had a unique identity, image and character. These place making concepts had not been given the level of importance that they deserved. The users' feedback has extended the knowledge base surrounding streetscape design and has identified the importance of community involvement in the planning process and the users need to feel a sense of place and belonging within their built environment.

Through the interviews with the professionals it was discovered that there were discrepancies between what the users want and what the professionals feel are important elements in streetscape design. With such discrepancies being identified it has become apparent that current streetscape design practices need to be challenged and re-examined to establish further what really creates a socially vibrant, active street. As Worpole (2003 a) notes, it "is in our public spaces that many of us sustain our sense of physical contact and familiarity with other people, in the daily routines of setting out from home, waiting at the bus-stop or station, taking the children

135

to the park, or going shopping" that is of greatest importance (¶. 17). The built environment plays such an important role in the lives of all citizens. It has been well documented that good design is essential in creating an environment in which people want to frequent and become a part of, but what sets a good street apart from a great street is the people who use it. Once a sense of community and attachment is established users can sense "the vibe" that is present and can not help but be attracted to the area.

It was determined that Vancouver has a unique approach to urban design which has resulted in a city with an overall high quality, public realm. However there are areas within the city, such as Fraser St that need to undergo revitalization. It was identified that a coordinated effort in street design, maintenance, and improvements has the greatest potential for creating a successful, socially vibrant streetscape. This type of coordinated planning process should be replicated in communities and municipalities across the country. Carmona (2005) notes that "the built environment is a fundamental 'public good', just like it has been doing for schools and health care, the government needs to invest in the skills that are required to guarantee its future quality" (¶. 17). Additional research and support needs to be given to the wider development processes and built environment outcomes. Carmona has identified that "policy and practice is driven too often by fashion and unsubstantiated hearsay, with little serious evidential base. Long-term, well funded research programs are required…given the universal impact of the built environment on health, wealth and well-being, it is astounding how little we actually understand it and the processes though which it is shaped" (¶. 19). The results of this study have indicated that the current guidelines are failing to meet the social needs of streetscape users and that additional principles must be taken into consideration. In addition it was recommended that a more coordinated planning effort is needed amongst municipalities and communities across the country if we are to effect change in our built environments. The role of planning needs to shift from largely being a controlling service to more of an enabling process.

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Appendices

<u>Appendix 1- Glossary</u>

<u>***Sense of Place Principles:***</u>

Boundaries-There needs to be a clear delineation from the setting and its surroundings.

Character-Refers to the style of the buildings, architecture and landscaping.

Genius loci-Refers to the Spirit of the place which is a result of all the elements and

physical characteristics within the space that can invoke a similar feeling within   the user

and inhabitants.

Geographic distinctiveness-Special Setting can be centered on a single feature but is most often

the result of a relationship created by several features.

Image- Does the area for example create a sense of mystery or local character.

Rich identity & imagery-Refers to the richness and imagery of the setting. What's conjured up in

the user's mind

Scale & proportion-Must be complementary.

Space-What physical elements does the space have to offer (what's the feeling one gets from the

elements present?).

Strong location-How does it relate to the surroundings.

<u>***Allan Jacobs Eight Requirements for a Great Street***</u>

Place for people to walk with some leisure- There have to be walkways that permit people to

walk at varying paces, including most importantly a leisurely pace, with neither a sense

of crowding nor of being alone.

Physical Comfort- The best streets are comfortable, at least as comfortable as they can be in their

settings. They offer warmth or sunlight when it is cool and shade and coolness when it is

hot. They offer reasonable protection from the elements without trying to avoid or negate

the natural environment.

Definition & Meandering Form- Great streets have definition. They have boundaries, usually

walls of some sort or another, that communicate clearly where the edges of the street are,

that set the street apart, that keep the eyes on and in the street, that make it a place.

Additionally, there seems to be an overwhelming opinion that a winding street adds more

interest and character to the place.

Qualities that engage the eyes- Great streets require physical characteristics that help the eyes do

what they want to do, must do: move. Generally, it is many different surfaces over

which light constantly moves that keeps the eyes engaged; separate buildings, many

separate windows or doors, or surface changes. Visual complexity is what is required,

but it must not be so complex as to become chaotic or disorienting.

Transparency- The best streets have about them a quality of transparency at their edges, where

the public realm of the street and the less public, often private realm of property and

buildings meet. Usually it's windows and doors that give transparency. On

commercial streets, they invite you in, they show you what is there and, if there is

something to sell or buy, they entice you.

Complementarity- The buildings on the best streets get along with each other. They are not the

same but they express respect for one another, most particularly in height and in the way

they look.

Maintenance- Care of trees, materials, buildings, and all the parts that make up a street is

essential. Given a choice, and there usually are choices, people would prefer to be

on well-maintained rather than poorly maintained streets.

Quality of Construction and Design- Has to do with the workmanship and materials and how

they are used. Materials that in a given situation will have to take a lot of wear and tear

but are not capable of doing so usually have a negative impact.

Allan Jacobs Thirteen Qualities that Contribute

Trees- for many people, trees are the most important single characteristic of a good street. Their

    physical characteristics not only add visual interest to a street but they also play a role in

    maintaining the physical comfort of an area. In the summer they provide shade and in the

    winter when their leaves have fallen they allow sunlight to reach the street.

Beginnings and Endings- Most great streets have notable starts and stops and these points should

    be well designed. These points say, in effect, that one has arrived, or left, or they give

    boundaries. They are palaces to meet at and reference.

Many buildings rather than a few-Generally, more buildings along a given length of street

    contribute more than do fewer buildings. With more buildings there are likely to be more

    architects, and they will not all design alike. With more buildings and owners, change is

    more likely to come incrementally rather than all at once, and that, too, adds visual

    interest as well as a sense of continuity.

Special Design Features, Details- Details contribute mightily to the best streets; gates, fountains,

    benches, kiosks, paving. Lights, signs, and canopies call all be important, at times

    crucially so. The most important elements being streetlights and benches. Because street

    lamps are placed regularly through a space, they form lines that the eyes grasp and

    follow. They emphasize the linearity of the street and illuminate the street at night

    making it a safer place to be in at night. The best street lamps are not too tall, less than

    20 feet. Benches help people stay on the street; they invite our presence by permitting

    rest, conversation, waiting for a friend, passing the time. They help to make community.

Places- Somewhere along the path of a fine street, particularly if it is long, there is likely to be a

    break. These include small plazas or parks, widenings, or open spaces. Each is different

    from the next, in shape and in activities, but each provides places to sit, to eat, to meet,

    and to talk. In that sense they are community-building.

Accessibility- People must be able to get to the street with ease.   Besides being places one can
    walk to, great streets seem to be accessible by public transit, whether crossing them or
    along them or under them.

Density- Streets with many people living along them or near them are more likely to have people
    on them than those that do not. It is a matter of numbers and ease of access. It is difficult
    for streets to help make community if there are not people to get to them easily: nearby
    density.

Diversity- It is in an area that is physically and economically diverse that a great street can arise.
    Diverse uses enliven an area and the street, it brings different people for different
    purposes, and it helps to keep it going. On most great streets there exist many different
    kinds of buildings designed for their uses- cinemas, theaters, or schools- or for earlier
    uses no longer present but adapted to present occupants- movie houses that became
    restaurants or stores- all of which add to interest and activity. Varieties, activity,
    liveliness of physical places are likely effects of diversity of uses.

Length- Great streets come in all lengths. Yet at some point it can become difficult to sustain
    visual interest, diversity, eye and thought provoking images. Enough can become
    enough, or too much. If something special continues long enough it may no longer be
    special. Though we cannot specify just how long is too long, we can hypothesize that at
    some points along a long street some changes are necessary if interest is to be sustained.

Slope- More often than not, the best street have noticeable changes in elevation, albeit none very
    steep. Topography and slope help by increasing views and adding drama.

Parking- On-street auto parking is permitted and provided for along many of the best streets, far
    more than where there is none, but almost certainly in amounts that are far below demand
    or what any contemporary standard would require.

Contrast- Contrast in design is what sets one street apart form another, and ultimately what
    makes one great and another less so. Shape or size or regularity within an urban physical

148

context may make it more noticeable, may give it a head start toward being special, but

that is not likely to be enough and may not be a critical factor in determining a great

street. It is the design of the street itself that makes the difference.

Time- If it is history and age that we want to see of a street, then there is nothing like time to gain

them. To the extent that incremental building and change do bring the diversity and

sense of history that can give body and substance to a street, it may be argued that

smaller, rather than larger, building parcels help. Diversity is likely to be greater initially

as well as over time, as building decisions can be made incrementally.

Appendix 2- Observation Guide

Street Name:	
Zoning:	
Date & Time of Observation & Number of People Walking in the area:	
Types of interactions going on: morning	

Types of interactions gong on: afternoon	
Types of amenities/businesses:	
Elements of Streetscape Design that currently exist:	

Any other Observations:	

1) What has brought you here to this street today?

2) How often do you come to this area in a month?

3) Typically, how much time do you spend in the area on each visit?

4) What was your initial impression of this street?

5) What do you like most about this street?

   In regards to 1) physical elements
                 2) amenities

6) Do you run into people you know?

7) Do you ever arrange to meet people here?

   In what capacity?

8) Would you ever interact with other individuals that you may not know?

9) Would you like to live in this area based on the feelings you get from walking through this street?

10) If this street were to undergo change, what would you like to see?

11) How would you describe the sense of community in this area?

12) Do you think there are certain elements that contribute to that sense of community?

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August 2008

Dear: Participant

I would like to thank you for your participation in this study. As a reminder, the purpose of this study is to identify the perception and preferences of the user as to what makes a good street.

The data collected during interviews will contribute to a better understanding of the appropriate direction of further development in streetscape design and its' influence on the levels of social interaction and vibrancy within it.

Please remember that any data pertaining to you, as an individual participant will be kept confidential. Once all the data is collected and analyzed for this project, I plan on sharing this information with the research community through a thesis and presentations. If you are interested in receiving more information regarding the results of this study, or if you have any questions or concerns, please contact me at either the phone number or e-mail address listed at the bottom of the page. If you would like a summary of the results, please let me know now by providing me with your e-mail address. When the study is completed, I will send it to you. The study is expected to be completed by April 31st 2009.

As with all University of Waterloo projects involving human participants, this project was reviewed by, and received ethics clearance through, the Office of Research Ethics at the University of Waterloo. Should you have any other comments or concerns resulting from your participation in this study, please contact Dr. Susan Sykes in the Office of Research Ethics at 519-888-4567, Ext., 36005.

Sincerely

Laura Frank

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Appendix 5- Phase Two Interview Guide

1) Which set of these images is representative of current streetscape design practice?

2) What is your initial impression of each streetscape design?

3) Which design do you believe is more conducive to social interaction?

4) In your opinion how can the design of a street encourage or foster deeper levels of social interaction?

5) What prevents professional planners/designers from designing streets consistent with these images (Group 2, User Driven Visualization)?

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August 2009

Dear: Participant

I would like to thank you for your participation in this study. As a reminder, the purpose of this study is to identify the perception and preferences of the user as to what makes a good street. In addition, your professional opinion on streetscape design is being solicited to further understand the different factors that influence street designs as well as ways in which you believe streets could better foster social interaction and vibrancy.

The data collected during these interviews will contribute to a better understanding of the appropriate direction of further development in streetscape design.

Once all the data is collected and analyzed for this project, I plan on sharing this information with the research community through a thesis and presentations. If you are interested in receiving more information regarding the results of this study, or if you have any questions or concerns, please contact me at either the phone number or e-mail address listed at the bottom of the page. If you would like a summary of the results, please let me know now by providing me with your e-mail address. When the study is completed, I will send it to you. The study is expected to be completed by April 31st 2010.

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Sincerely

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156

Appendix 7- Table 4.4. A Comparison of Jacobs Guidelines and the User Driven Feedback

	Creating walking Space	Comfort-Micro Climate	Street Appearance	Attributes within the Street	Creating a transition from public to private space	Character of a Street	Maintenance	Building Materials	Nature	Seating
Jacobs Guidelines	*Wide Walkway	*Physical Comfort- make the street comfortable. Offer warmth or sunlight, cool and shade & protection from the elements	*Definition- boundaries, usually walls of some sort that communicate clearly where the edges of the street are.	Physical *Qualities that engage the eyes- many different surfaces over which light constantly moves that keep the eyes engaged.	*Transparency- where the public realm of the street and the less public, often private realm of property and buildings meet. Usually it's windows and doors that give transparency.	*Complementarity- the buildings on the best streets get along with each other. They are not the same, but they express respect for one another in height and in the way they look.	*Maintenance Care- care of trees, materials, buildings, and all the parts that make up a street is essential. People prefer to be on well-maintained streets.	*Quality of Construction and Design- workmanship and materials and how they are used. Materials must take a lot of wear and tear, those not capable of doing so usually have a negative impact	*Trees- they move and modulate the light; they can effectively separate pedestrians from machines.	*Street Furniture- help people stay on the street; they invite our presence by permitting rest, conversation, waiting for a friend
User Driven Feedback	*Create wide sidewalks & close the street at particular hours for pedestrian use only		*Eclecticism- more diversity in buildings (colours, setbacks, materials and business types.	Social *Promote sidewalk sales. *Community events and outdoor festivals *allow buskers within the street.	* encourage products and produce to be displayed on the sidewalks. This invites the user into the private realm of the shop owner and the displays add visual interest to the street.	* Create a strong sense of Identity- draw on the local history of the street in the design of buildings and street features that will promote sense of place. Preserve and maintain heritage.	* Clean well-maintained street- no garbage, graffiti, clean windows & awnings.		* Green Public Space & Trees- provide the user a break from the built environment and an opportunity to re connect with nature	*ample outdoor seating