Revisiting the Image of the City:

Exploring the Importance of City Skylines

by

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AUTHOR'S 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

As the world's cities have grown, so too, have their skylines, such that they are now common sights to behold both in reality and in media. Despite being one of the most popular sights of a city, the planning profession has not given much attention to skylines in its daily practice. By pulling together a limited body of research, this study shows that some academics and professionals have deemed skylines to be an intriguing and important aspect of our cities' built form. This exploratory study builds upon Kevin Lynch's work on city image by asking people what skylines they prefer and why, and what skylines mean to them.

Using a qualitative interviewing technique, 25 participants from planning departments and neighbourhood associations in Kitchener and Waterloo provided their input by viewing a series of skyline images. Participants were found to prefer complex skylines, and they identified important physical features that were necessary to achieve high levels of preference. The same physical features that contributed to preference also sent strong messages about a place, leading participants to find a wealth of meaning in a skyline.

The implications of these results for planning practice are presented along with a discussion of how cities may be branded due to the messages their skylines send. Recommendations to introduce skyline planning in mid-size cities are made, based upon the lessons learned from the larger cities used in this research. The exploratory and qualitative nature of this study helps to fill in the literary gaps of this relatively unexplored field, and recommendations for future research are made.

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1.0 INTRODUCTION

1.1 The History of Skylines

Our houses are usually full of pictures. We hang them on our walls to convey messages about our tastes and the flavour of the room. The cities of the world are very much like these rooms in that they have different functions and flavours, and they, too, have pictures to convey their message. If a city were a room, then its pictures would likely be of its skyline.

Skylines are "the outline or silhouette of a building or number of buildings or other objects seen against the sky," (Oxford English Dictionary) and their prominence on the landscape has made them "one of the meaningful measures of human civilization," (Attoe, 1981, p. xii). As *civilization* is sometimes defined as "a word that simply means 'living in cities'" (Standage, 2005, p. 25), it is easy to see how skylines would become an appropriate measure, being physical representations of cities' growth and perhaps their values. While not everyone may live in cities, civilization throughout history largely revolves around them, and we are now at a point where over 80% of us live in cities. Skylines, then, are common sites to behold and are experienced by many people.

Skylines have long been of importance to civilization. Thousands of years ago, human exploits in the Middle East resulted in the storied Tower of Babel, sending a profound statement about the ambitions of early man. In Europe, the spires of churches and cathedrals deliberately towered above cities, reflecting the influence of and focus on religious institutions. Nearly 800 years ago, skylines took on a different form of

symbolism – one emphasizing business and success. In the Italian city of San

Gimignano, tall towers were erected by merchants simply to boast of their wealth and

status (WGBH, 2000; Attoe, 1981). Consequently, the city's skyline was used as a

measure of prominence both by inhabitants and visitors alike. San Gimignano's towers

are tall – approaching the height of a modern 18-storey building – and they were

precursors to the skyscrapers that make up our skylines today.

Skylines are ancient symbols that have been captured for centuries by artists and

admired by travellers. Humankind's historic cities were the starting point in the

evolution of the word 'skyline', a word that is only now used in relation to buildings on

the horizon (Attoe, 1981). With the introduction of the skyscraper in the 1880's, skylines

grew in size and became a widespread phenomenon. In 1981, architecture and urban

planning professor Wayne Attoe said "a book about skylines would not have been written

a hundred years ago, for skylines are largely a 20th century concern," (Attoe, 1981, p. xi).

While this seems to belie the historic importance of skylines over the last several

thousand years, perhaps Attoe was trying to suggest that only in the last hundred years

have skylines (and skyscrapers) appeared in all of the world's cities. In the span of one

human life, skyscrapers and skylines have leapt from Europe and the Middle East to

North America, Asia, South America, Africa and Oceania. The buildings that make up

skylines have also blossomed to include office, residential and hotel towers, rather than

predominantly religious or government edifices. Building heights, shapes and materials

have also changed dramatically over a short time. The invention of the modern

skyscraper ushered in a new era of building construction that would see the horizon of the

world's cities rise by a few degrees.

Today, skylines appear in a variety of forms and media. They can be drawn abstractly, in silhouette, or in clear photographic form. They appear notably in film and television, on postcards, greeting cards, travel brochures, calendars, as well as in countless books and Internet websites. They are also among the first images to appear when typing a city's name into an Internet image search engine. Academics who have performed analyses on skylines have said that "the form of the urban skyline is an extremely important component" of a city's image (Heath, et. al., 2000, p. 542). Why, then, do they receive little attention from urban planners?

1.2 Research Questions

This research is built upon existing literature on city form and the image of the city, which was pioneered by Kevin Lynch in the 1960's. It is an extension of this subject area but instead of focussing on form from *within* the city (as is the focus of Lynch's *The Image of the City*), this research expands current thinking to include studying city form from a distance, specifically the form of skylines. Two questions will be investigated through this research:

1) Do people prefer certain skylines to others?
2) Do skylines bear any meaning?

This research is exploratory, and, through in-depth interviews, asks planners and members of the public to critique, analyze and interpret city skylines to discover whether they send a certain message to the viewer. This study may yield results that prove useful to city planners who are working to better understand or improve the image of their city,

or even brand it.

1.3 Do People Prefer Certain Skylines to Others?

There is some indication that skylines are aesthetic experiences; objects of visual appeal and beauty, (Attoe, 1981). It is reasonable, then, to assume people have preferences for certain skylines, based upon a variety of factors including form, viewing circumstances such as vantage points and ephemeral conditions, and the observer's frame of mind (Attoe, 1981). Indeed, as Heath et. al., (2000) point out, preference for skylines can be affected by aesthetic variables such as complexity, and Arthur Stamps suggests that visual contrast would conceivably make cities look better (Stamps, 2002). It is important to more fully understand the characteristics that influence skyline preferences.

Strong evidence exists of the desire to favour certain skylines (Attoe, 1981; Emporis, 2009; Gramsbergen & Kazmierczak, 2009; DiSerio, 2009; UltrapolisProject, 2009), as any Internet search for "best skylines" will show. These attempts at rating and ranking skylines are also based on certain characteristics, whether they are building heights, density, style, uniqueness, or surroundings, but the results are reached by the author, and are not based on public input. It is important to know what the public prefers, rather than relying on certain individuals or organizations.

1.4 What do Skylines Mean?

The idea that skylines can provide information is not unusual. Any planning and architectural literature that speaks of skylines identifies them as being physical representations of a city's facts of life (Spreiregen, 1965), symbols of a culture, (Attoe, 1981), having the ability to evoke a sense of place, and providing perhaps the most representative image of a city (Tugnutt and Robertson, 1987). Kevin Lynch has expressed the relationship between planning and human emotion, opening his book *The Image of the City* with: "looking at cities can give a special pleasure, however commonplace the sight may be," (Lynch, 1960, p. 1). Skylines are certainly commonplace today and so Lynch's proposition that the city can evoke feelings can be extrapolated to include the skyline as an evocative element of the city.

French historian Jacques Barzun likely captured the sentiment of many people when he said: "New York is a skyline, the most stupendous, unbelievable, man-made spectacle since the hanging gardens of Babylon," (Barzon in Krupat, 1985, p. 23). To Barzun, New York *is* a skyline – Manhattan has been built to such a degree that the entire island is a symbol. Its symbolism is seen largely through its skyline, which is massive and highly imageable to people like Barzun. City critic Lewis Mumford wrote that "the city… is clearly more than bricks and mortar, more than a utility for living; it is the visible expression of man's value system… the supreme expression of civilization," (Mumford in Pocock and Hudson, 1978, p. 77-78). The skyline is a visual expression of any city and so its significance as a symbol of meaning is worth exploring.

1.5 How do Planning Policies Influence Skylines?

Building form has been regulated for some time, but New York City's first zoning bylaw of 1916 was a direct attempt at mitigating the impacts of very tall buildings in Manhattan. This bylaw sculpted the massing of the city's future skyscrapers, resulting in a skyline of varied geometry in the form of setbacks. Planning regulations like these have direct and highly visible impacts on the skyline. Decisions in building massing, height and location may yield a city skyline that is celebrated and revered, or one that is reviled or shrugged off as uninteresting. People's opinions of skyline form are largely influenced by the decisions of urban planners, so it would be a significant discovery to learn whether meaningful skylines are also the ones people find most preferable.

If meaningful skylines are also the ones people find most preferable, then the characteristics that were found to contribute to preference may inform how regulations are written and executed in the future. This research will provide valuable qualitative data about how people react to urban planning policies that shape and influence the skyline.

1.6 Importance to the Planning Profession

Skylines are very much a planning consideration. The scope of the profession is broad enough that nearly every element of built form may be subject to the policies of a planning department. The city skyline is one of these elements, and planners are actively engaged in shaping the skyline of their cities through their daily activities, such as development approvals and policy creation. Attoe says: "skylines do not just happen.

They are the result of real forces at work in communities. …It is always in someone's hands," (Attoe, 1981, p. 120). Those hands belong to planners, architects, developers, and city councils, and since it is the planner's task to coordinate between all parties, the planning profession shoulders much responsibility for the development of a city's skyline.

Renowned city form author Gordon Cullen said: "one building standing alone in the countryside is experienced as a work of architecture, but bring half a dozen buildings together and an art other than architecture is made possible," (Cullen, 1971, p. 7). This "art" is what planners are involved with; their work encompasses not only individual buildings but also the spaces between and around them. They do this by way of zoning (which controls height, bulk, set-backs), urban review panels (which review shapes, heights, façade treatments and sometimes even density), and urban design plans (which influence height, character, shape, location) (Attoe, 1981).

Where they exist, "the principal criticism of existing skyline controls is that they are routine rather than imaginative. They accomplish too little," (Attoe, 1981, p. 117). This is presently the case in Vancouver, where strict limitations were placed on developments within the city's crowded peninsula. The city's height limit and view corridors are often under review because many say the policies "confused the goal of preserving views with a mathematical set of rules that often didn't make sense," (Bula, 2009). There is increasing desire to change the image of the city by altering the skyline – not just in Vancouver, but in Melbourne, Philadelphia, Frankfurt and the La Defense area of Paris (Kostof, 1991). London has also been encouraging bold new skyscrapers in the old City in an effort to enhance its image through striking design, (McNeill, 2002).

Many of these desires to alter the city's image have been at least partly caused by efforts to brand the city. Shanghai is one city in particular that has aggressively attempted to re-brand itself as a "model city and environment for the rest of the world to admire and seek to emulate," and it has sought to do this through "the creation of symbols and icons to signify prosperity and a return to modernity," (Gilmore, 2004, p. 442). Gilmore also states that how a city is perceived affects levels of investment by property developers and companies and decisions to live and work there. Therefore, its ability to brand itself positively rests partly on the shoulders of planners.

Planners are at the forefront of every skyline-altering development, and while capitalist dreams may radically change the face of cities around the world, "laissez-faire skylines are not the norm," (Kostof, 1991). Regulations still exist, and planners will continue to balance private sector interests with those of the community. In an age of globalism and homogeneity, cities – like businesses – attempt to stand out, competing for people and industry. It is beneficial for advertisers, artists, travel agencies, news broadcasters, and businesses to have highly imageable and identifiable skylines that act as icons for their various purposes, (Attoe, 1981). The planning profession may be forced to re-evaluate the relationship between policy and the skyline's impact on city symbolism and image.

1.7 Organization of the Thesis

Following this brief introduction to the development and increasing importance of skylines, a foundation will be set for the exploratory research of this study in the Review

of Literature in Chapter 2. The literature review will expand upon the notion of *city image*, and how the skyline forms a fundamental component of it. Current research on city skylines is limited, but this chapter will bring together literary works on image, symbolism, meaning, perception, and preference in an effort to draw parallels between skylines and these diverse fields of study and demonstrate the importance of further research on people's perceptions of skylines.

The research instruments and procedures used in this study will be introduced in the third chapter, Research Methods. Many of the instruments and methods are derived from the techniques employed by academics like Lynch and Heath et. al., as well as from the psychology field of Gestalt. Chapter 3 will describe in detail the tests used to answer each of the three research questions, as well as a breakdown of, and rationale for, the persons interviewed.   This chapter will also discuss how data was collected and analyzed from the qualitative interviews, ending with a description of the validity and reliability of this research.

The study findings will be presented in Chapter 4, which will focus on interviewees' preferences for skylines and the meanings that they observed in them. This chapter will detail how participants arrived at their conclusions, and will also describe the relationship between meaning and preference. The insights from these findings will support a discussion in Chapter 5 about skyline planning and city branding. It will follow by making recommendations for future research and highlighting the important role urban planners play in influencing the messages sent by a city through its skyline.

2.0 LITERATURE REVIEW

2.1 Introduction

The purpose of this research is to discover whether skylines are meaningful and whether planners and the public prefer certain skylines. While interviews in the field are necessary to achieve results, a review of skyline literature is also required to support the interview findings. How people perceive skylines also requires a review of principles of perception, specifically as they relate to environmental perception.

Skylines have not figured prominently in the urban planning profession and there is a sizeable gap in literature devoted to them. Mention of skylines is often not the central theme of a text, and material must be pieced together from individual chapters and articles. However, those books and journal articles that do address the topic tend to extol the virtues of skyline analysis and the necessity of planning their form.

This chapter will highlight three authors as the primary source of information, Wayne Attoe's *Skylines: Understanding and Molding Urban Silhouettes*, Spiro Kostof's *The City Shaped* and Kevin Lynch's *The Image of the City*. Before reviewing the relevant works of these authors, it will be necessary to introduce concepts of perception, beginning broadly with environmental perception. Environmental perception will demonstrate a logical progression to Gestalt psychology, then to perception of the built environment, and finally to the perception of skylines.

By the end of this review, it will be apparent that a theoretical foundation exists for the study of skylines, but that very few studies of people's perceptions have taken

place. The contributions of Gestalt psychology as well as established work on environmental (built and natural) perception will also be apparent. A severe gap in the body of literature on city skylines will be identified, and the case for carrying out this research will be made.

2.2 Why the Three Seminal Authors were Chosen

As previously mentioned, books and articles devoted entirely to skylines are limited in number. This review encompasses a variety of works from the fields of planning, architecture, environmental perception, and brand management. Some offer literature that is more relevant than others, and from these most relevant sources three authors were selected as making particularly important contributions to the research.

Perhaps most well known is Kevin Lynch, author of *The Image of the City*. This work was identified as important to this research for its focus on perceiving cities, whether their look is of any importance, and whether it can be changed (Lynch, 1960). Lynch's work was a partial inspiration for this research, given his belief that "the city is in itself the powerful symbol of a complex society. If visually well set forth, it can also have strong expressive meaning," (Lynch, 1960, p. 5). A city's "expressive meaning" may be attributable to its skyline, and while Lynch's work does not explore this possibility, it offers a starting place for it.

Famed architectural historian Spiro Kostof published a series of books, of which *The City Shaped* contains a lengthy chapter devoted entirely to skylines. This work is of great importance due to its more recent publication date (1991) and the author's respected

standing. Chapter Five introduces the concept of a city relying on its skyline to improve its image, as well as acting as a symbol for the place, (Kostof, 1991). He sees cities as being the most complicated artifact we have ever created, and skylines as carriers of the collective values of those who live there. Thus, he puts great emphasis on the responsibility of the populace to guide their design (Kostof, 1991).

The only scholarly text devoted entirely to skylines is architecture and urban planning professor Wayne Attoe's *Skylines: Understanding and Molding Urban Silhouettes*. This book explores the aesthetic, social, and symbolic impacts of skylines, and is a self-proclaimed "comprehensive" package that examines this "complex feature of urban civilization," (Attoe, 1981, p. xiv). He approaches the topic with the intent of eliminating any confusion that may result from the study of skylines, since they are, after all "complex features" of our modern cities, and he collects his thoughts in six distinct chapters. Attoe directly identifies planners as having "the power to influence skyline form," (Attoe, 1981, p. 113), but yet very little has been done by planners to analyze and plan their cities' skylines.

Lynch provides the basis for a study of skylines, and Kostof and Attoe make their respective calls for public and professional participation in their development. Their work is supplemented by a diverse collection of literature from which basic theories emerge; this literature review will now summarize these concepts, beginning with an exploration of perception. How we, as people, view natural and built environments will provide a foundation for a study of skylines themselves.

2.3 Perception of the Environment

If any analysis of skylines is to be carried out, one must first understand the way in which we *view* the subject. Skylines are a visual entity and thus *perception* of our environment, both built and natural is a logical starting point before exploring how skylines are perceived. The subject of perception is large, so only the most pertinent sources to this research will be examined. As such, our discussion begins with some of the most respected researchers in the field, Rachel and Steven Kaplan.

While the Kaplan's works (specifically *The Experience of Nature*, which will be studied here) focus on perception of the natural environment, many of the same observations can be applied to perception of the built environment. One of the basic similarities is that these two studies are about "things many have known but few have tried to study empirically," and "things for which there is only a limited vocabulary," (Kaplan and Kaplan, 1989, p. 2). The way in which we view skylines can be summarized in this way: "landscapes are like the books which we constantly look at but rarely read," (Winter, 1969, p. x).

If people truly rarely read the landscapes around them, then the need to examine the perception of landscapes is critical. The Kaplan's began their study into the perception of the environment with the intent of discovering the relationship between people and nature. They reinforce the notion that human functioning depends on information, and that "much of this information is provided by the immediate environment," (p. 3). They suggest that there are signs that provide guidance to behaviour, there are combinations and arrangements of elements that constantly require

deciphering, and that while some of it may be important, some is difficult to ignore despite its irrelevance to one's goals," (Kaplan and Kaplan, p. 3). It is perhaps this last reason that is the cause of so much apparent indifference to landscape perception. The skyline is difficult to ignore, causing many to gaze at it, but it is not relevant to their daily lives, so there is greater indifference towards it.

This is of tremendous importance to the city skyline. As a built component of the landscape, it is looked upon constantly, but few attempt to think about or understand it, including those who build it, like planners, developers and architects. The perceived signs, combinations and arrangements referred to by the Kaplan's can be applied to skylines in the following ways:

Signs that provide guidance to behaviour

The Kaplan's suggest that there are signs in the environment that people use to guide their behaviour. Using signs and landmarks to function in an environment is closely related to identification in a city. People use buildings as landmarks to find their way around a city and to orient themselves. These landmarks provide distinct identities to streets, neighbourhoods, and even entire cities, enabling people to easily guide their actions. This concept is re-iterated by Jane Jacobs in her seminal publication *The Death and Life of Great American Cities*. She observed that large buildings provided good orientation and visual interest for people at a distance, and that landmarks even clarified the order of cities through their ability to state that a place is important (Jacobs, 1961, p. 385-386). This implies that cities with large, landmark buildings may be perceived as important; this finding suggests that there may be very basic interpretations of skylines:

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big denotes important, for example, so does small denote unimportant? What are the characteristics that denote certain meanings? These questions are left unanswered and must be addressed.

Combinations and arrangements of elements

The Kaplan's also suggested that the many combinations and arrangements of elements in the environment require deciphering. Applied to cities, one could say that buildings are combined with other buildings on the skyline to create a continuous picture of the city. Often these buildings are arranged in some significant way, whether it is through zoning bylaws or decisions on building placement on a site. Some evidence of this is through an increasing tendency to regulate tall buildings so that they achieve a desired aesthetic effect (Heath, et. al., 2000). The end result may be a skyline that is rich in history, for example, or some other kind of symbolism or meaning.

It may be possible for all of the combinations of elements in a skyline to provide a wealth of information to the viewer. If human functioning depends on information, then what information might we gather from a skyline, and how do we explain why certain elements contributed to meaning and preference? There is a theory of perception that will help answer this question: Gestalt. This theory places its emphasis on explaining perceptual organization – how small elements become grouped into larger objects (Goldstein, 2007, p. 97), making it ideal for studying skylines. After all, skylines are shapes and *gestalt* is the German word for *shape* (Kohler, 1969). Skylines are collections of smaller parts that constitute a larger whole; the buildings are grouped together to create the skyline.

2.3.1 Gestalt Principles of Organization

Gestalt has made important contributions to aesthetics (Kohler, 1969), and to

understanding object perception (Goldstein, 2007). Goldstein suggests a number of

principles that specify how we organize small parts into wholes, and four in particular

have remarkable implications for skyline research:

Principle of Pragnanz

Pragnanz (or figure-ground) states that every stimulus pattern is seen in such a way that

the resulting structure is as simple as possible (Goldstein, 2007). Our perceptual patterns

show "a tendency to assume particularly simple and regular structures," (Kohler, 1969, p.

91), so this can be extrapolated to the skyline by saying that when we view these

collections of buildings, we have a tendency to simplify the pattern into something

coherent, rather than a jumble of complex lines, colours and shapes. Rather than looking

at buildings in isolation, this predominant principle of Gestalt helps to explain why

collections of buildings (figures) may be taken together as a whole and how they relate to

their surroundings (ground).

Principle of Similarity

Similarity states that similar things appear to be grouped together, and that grouping can

occur because of similarity between shape, size and orientation (Goldstein, 2007). It is

possible for objects in the same grouping to appear different when they bear different

shapes, sizes, or colours, and in the scene may appear to have two subgroups (Kohler,

1969). This principle of similarity is easily applied to skylines through the visual

differences of independent buildings. Buildings that appear unique and dissimilar from the rest may form a variety of subgroups in the skyline. This principle may explain why certain buildings have a tendency to stand out, and why some cityscapes are perceived as homogenous, and others diverse.

Principle of Proximity or Nearness

Proximity or Nearness states that things that are near each other appear to be grouped together (Goldstein, 2007). Objects may, no matter their shape, size or colour, be grouped together if they are located in close proximity to one another. On a skyline, buildings come in a variety of shapes, sizes and colours, but regardless of their apparent dissimilarities, may be seen as groups if they are clustered together in, for example, a central business district. Outlying or suburban clusters of buildings will not appear to be related to those in the CBD even if they are similar. Using this law, cities may find explanations for the perceived rhythm and flow of their skyline, and how disjoined areas contribute to that perception.

Principle of Meaningfulness and Familiarity

Meaningfulness and Familiarity states that things are more likely to form groups if the groups appear familiar or meaningful (Goldstein, 2007). Kohler states that human beings become acquainted with entities and objects (which he calls regions of the perceptual mosaic) from early childhood and they become impressed on the child's memory. Later, "when the same regions of the mosaic appear again, the earlier experiences… are recalled," and they become perceptual units. Previous experiences do influence the way a visual scene looks, (Kohler, 1969, p. 50). For these reasons, a skyline with elements

that are easy to identify may become enhanced due to the impression those elements left upon an individual. This principle is particularly important for those cities that appear frequently in media, or are often visited; their easily recognizable landmarks and built form may contribute strongly to the meaning of their skyline.

All of these principles posited by the field of Gestalt psychology show that skylines can be studied as shapes, and their organization can be analyzed. Gestalt provides a highly suitable framework for their presentation and analysis, through the principles outlined above. The principle of Pragnanz in particular has been applied by Heath et. al. (2000) in their study of preferences toward complex building silhouettes on the skyline, so there exists a suitable rationale for utilizing silhouetted skyline images in a preference test. Despite the connection between skylines and Gestalt, there have been very few attempts to study the interpretation of skylines, with Heath et. al. saying that "there has been very little work on urban skylines," and that research on "urban aesthetics has focused on the street level," (2000, p. 542). With this admission that the topic has received little attention, this research seeks to further build upon Heath's work and focus more analysis on city skylines, using Gestalt as part of the foundation. Theories of perception – Gestalt included – can be applied to cities, and while there has been little done on skylines, much work has been dedicated to perception of cities from within, focusing on the street level.

2.4 Perception of the City from Within

Looking at skylines requires perceiving the city from a distance. There has been a fascination with studying people's perceptions of cities from within, and this has proven to be valuable research. It can be applied to studying cities from a distance by building upon some of the principles provided by Kevin Lynch. Lynch performed a series of investigations into the "imageability" of certain cities, whereby citizens of each were asked how they perceived that place in their daily travels, (Lynch, 1960). Lynch's focus was on the image of the city from inside at street level, and his research suggested that it was possible to learn a great deal about the "character and structure of the urban image," (Lynch, 1960, p. 45).

It was through his research in *The Image of the City* that Lynch explored a city's imageability, which he defined as "that quality in a physical object which gives it a high probability of evoking a strong image in any given observer," (Lynch, 1960, p. 9). He suggested that an environmental image may be analyzed into three components: identity, structure, and meaning. An object must be identifiable, which implies its distinction from other things; an object must be related to other objects spatially or through patterns; and the object must have some practical or emotional meaning to the observer (Lynch, 1960). Lynch's rule of structure mirrors that of Gestalt psychology, reinforcing the concept that the built environment can be broken down and analyzed visually, according to the orientation, size, colour and configuration of its shapes.

Meaning is a more complicated one, Lynch admits, as it is "not so easily influenced by manipulation as are [the] other two components," (Lynch, 1960, p. 8). He

suggests that it may be wise to allow meaning to develop without our direct guidance, as we are building cities for the enjoyment of a widely diverse populace. The individual meanings of a city may vary, but Lynch still offers his own thoughts on the meaning of the Manhattan skyline: "vitality, power, decadence, mystery, congestion, greatness…" (Lynch, 1960, p. 9). While these may be just one interpretation, how much do the meanings truly vary? Some investigation must be carried out to determine if skylines do, in fact, have any meaning for their viewers, and how similar those meanings may be. If there are similarities in the meanings derived from skylines, then cities may be able to explore branding options that utilize their skyline.

The study performed by Lynch reveals other important results of significance to perception of the urban environment. Of the 6 elements of imageability – paths, edges, districts, nodes, and landmarks – one (landmarks) is most applicable to skyline perception. Landmarks, as described earlier by Jane Jacobs, often stand out for their size, making them visible on the skyline as well as from within the city. For this reason, they will constitute an important component of a skyline analysis. Lynch describes landmarks as being more easily identifiable and more likely of being significant if they have a clear form, if they contrast with their background, and if there is some prominence of spatial location (Lynch, 1960). The same rules may apply to their significance on a skyline, and are again supported by Gestalten principles that concern contrast among shapes, and their relative location.

In fact, Lynch condones the use of the figure-ground method in determining

contrast; landmarks must be unique against their backgrounds, (Lynch, 1960). This is particularly relevant to skylines, as buildings often have a backdrop consisting of other buildings, especially in denser cities. As seen in Heath et. al.'s application of the principle of Pragnanz to justify the use of silhouettes, this method is supported by Lynch as a successful tool for viewing buildings.

Landmarks with spatial prominence are more visible from a variety of locations, and Lynch says even distant ones were often well known (Lynch, 1960). This provides some evidence that the city is indeed being viewed from a distance, and it receives some attention in the text. Examples of landmark buildings often cite their dominance in the skyline, but this fact is a side-note. Of interest is that some cities cannot be imagined without the presence of their landmark (i.e. Florence), and that distant landmarks were used in symbolic ways more frequently than orientation (Lynch, 1960). It is reasonable to hypothesize, then, that there may be some symbolism and meaning inherent in a skyline.

Through his studies, Lynch uncovered a particularly important result: people were deriving an emotional delight from broad panoramic views. He suggested that "a well-managed panorama seems to be a staple of urban enjoyment," which was specifically seen in respondents' views of the Manhattan skyline (Lynch, 1960, p. 43-44). His research, however, ends there and the issue of skylines is not studied further, likely because it required additional investigation. Additional investigation did not come quickly, though, and skylines continued to evolve around the world. It wasn't for another

twenty years that the perception of city skylines was addressed; in 1981 Wayne Attoe published an entire volume dedicated to this particular field of study. Ten years later it was followed up by and referenced in Spiro Kostof's *The City Shaped*, in which the last chapter dealt exclusively with urban skylines.

2.5 Perception of City Skylines

Wayne Attoe's book came at a time when the tallest buildings in the world had just been constructed (The World Trade Center in New York, the Sears – now Willis – Tower in Chicago, and the CN Tower in Toronto). In the decades since Lynch's *The Image of the City*, buildings of great height were constructed, and in enormous numbers. This is not to say that the buildings of the early half of the 20th century were not especially tall, as indeed they were (the Empire State Building and Chrysler Building in New York are still among the tallest in the United States today), but rather that their existence was limited to a few cities in America and even fewer in the rest of the world. Tall buildings were unique to certain cities, and in fact, the earliest known definition of the word 'skyscraper' in 1891 read: "a very tall building such as now are being built in Chicago," (Maitland's American Standard Dictionary, in Girouard, 1985, p. 319). It was not until much later that skyscrapers became elements of skylines in cities worldwide.

Attoe's work focuses on the American skyline experience, particularly because of the role the United States played in the development of tall buildings. He acknowledges that skylines have existed for centuries, but emphasizes that they did not become a

widespread phenomenon until the innovation of steel frame buildings in Chicago and New York. It is arguable that skylines were indeed widespread throughout Europe and the Middle East in particular; even San Gimignano predated Chicago and New York as the first true "corporate" skyline. However, these skylines were notably shorter and smaller in size than their modern counterparts.

Perhaps this is why no studies were deemed necessary on skyline perception; they were not dramatic enough in size and scale to be noticed until skyscrapers were added to them. "It was this new building type [skyscrapers], or rather an agglomeration of its specimens, that dramatically redefined the way city-form related to its natural setting and the civic messages it conveyed," (Kostof, 1991, p. 279). Tall buildings have "the most obvious impact on skyline form," and also contribute to skyline legibility (Southworth, 1985, p.57), and, taken together with other buildings, can influence the image and messages of the skyline. Attoe helped to form a critical foundation for the study of skylines and explored the civic messages referred to by Kostof. He said that, "the ability of skylines to represent so much, to stand for power and inventiveness, to symbolize the American experiment, and still to be very simply beautiful, is perhaps what makes skylines so remarkable and compelling," (Attoe, 1981, p xii).

There are two very important points made here by Attoe, the first being that *skylines represent so much*, and the second being *skylines are beautiful*. These form the basis of a study in his book *Skylines: Understanding and molding urban silhouettes* where he analyzes the characteristics of skylines and what it is that might make them

beautiful and that enable them to convey messages. He demonstrates that skylines can be a symbol for a city and its citizens, that they can reflect social values, that they can fulfill utilitarian roles through orientation and identification, that they can become icons or brands, and that they can be appreciated for their aesthetic qualities.

2.5.1 Skylines as Symbols

People have, for many years, erected monuments to themselves, to deities, to groups and organizations; all are testimonials to something and they have captivated us for centuries. Attoe suggests that skylines function in a similar way for another kind of social grouping: city dwellers. "A skyline is the chief symbol of an urban collective. It testifies that a group of people share a place and time, as well as operate in close proximity and with a good deal of inter-dependence," (Attoe, 1981, p. 1). The urban collective, or social group, as Donald Appleyard states, may be represented by their environment because it has been influenced by the meanings they have attached to it, (Appleyard, 1979). Cities such as Madison, Wisconsin; Portland, Oregon; Kansas City, Missouri; and Singapore have found that the skyline is a meaningful component of their environment and they have transformed it into graphic symbols for transportation departments, visitors associations, newspapers, and national currency (Attoe, 1981).

When cities do not have distinct or identifiable skylines, there is sometimes an effort to create one to act as a collective symbol. Attoe provides an excellent example of the city of Moscow, where, during the Soviet rule of the 1930's, a proposal was made for a new city skyline. This skyline was to be focused around an enormous skyscraper called

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the Palace of the Soviets (crowned with a statue of Lenin), with surrounding buildings

utilizing the very same architectural form and detailing, but decreasing in height as they

increased in distance from the focal point. This would have given the city a very distinct

and easily recognized collective symbol (Michailow, 1953 in Attoe, 1981). Soviet

authorities denounced American skyscrapers as symbols of capitalist greed, whose

disorderly cluster destroys community values and urban quality, (Kostof, 1991), which

likely explains why Moscow's skyline had such a strict hierarchical plan.

The Soviets were not the only ones to regard American-style skyscrapers as

destructive forces on otherwise orderly skylines. Some citizens of London, England

voiced their concerns over the loss of their distinctly historic skyline at the hands of bank

towers introduced into the financial area. The headquarters of the National Westminster

Bank dwarfed the once-dominant St. Paul's Cathedral, and, along with other modern

high-rises, slowly transformed the skyline from a "cathedral town" to a "commercial

center" (Attoe, 1981, p. 5). Opinions differ among the public, planners, architects, and

politicians on the introduction of modern high-rises in London, but compromise has

resulted in "two distinctive skylines – two symbols of the city," (Attoe, p. 1891, p. 9) that

are created by historic and modern landmarks.

Modern landmarks, however, have been seen as a way to distinguish a city and

ensure it avoids anonymity. Attoe states that it is difficult to distinguish between some

cities because their skylines are not strong symbols on their own; they need the help of

something memorable to form a collective symbol, whether that be a distinctive bridge or

tower-structure. Because the skyline is *identifiable*, it *symbolizes* that city. Whether it symbolizes anything other than the identity of that city, however, is a different matter that will not be explored here. Attoe believes skylines can also provide information *about* those cities and their people.

2.5.2 Skylines as Reflections of Societal and Cultural Values

Stemming from the controversy surrounding the introduction of modern landmark high-rises that brought with them new principles and values, the question arose of what those values might be. One of the solutions was proposed by John Pastier, an architecture critic at the Los Angeles Times; he suggested that only buildings that were in some way communal – those representing special values – should predominate, (Attoe, 1981). These buildings were identified as churches, government buildings and monuments, and it was appropriate for them to dominate a skyline since they represented public as opposed to private interests.

Attoe correctly identified the need to expand this notion of a building hierarchy to include cities where other values are espoused. He suggests four values that could more broadly capture the sentiments of people in any city or town: spiritual, communal, laissez-faire, and ecological (Attoe, 1981). Spiritual skylines indicate to us that the community values its religious institutions, allowing places of worship to remain dominant and uncontested. Communal skylines portray civic buildings such as city halls as most prominent, placing emphasis on places that people share with one another. Laissez-faire skylines express non-interference and freedom, reflecting the most potent

forces in the city. Ecological skylines show respect or adherence to the natural

landscape, with buildings complementing the scene. Skylines can convey information

about a society's values, which may subsequently inform a city's identity.

2.5.3 Skylines as Utilitarian Devices

"Skylines help individuals know where they are and how to get where they want to go,"

(Attoe, 1981, p. 43). Distinct landmarks that exist on a city's skyline enable people to

locate certain activities and uses, and depending on the values mentioned above, these

will be easier or harder to find in certain cities. One will likely be able to locate a bank in

a laissez-faire city, just as one will be increasingly more likely to locate the necessary

place of worship in a spiritual skyline. Since cities can be distinctively shaped by the

values they exert upon themselves, they may also become uniquely identifiable, making

viewers aware of where they are.

The latter point is a key consideration for advertising the city. If viewers are

aware of where they are, or what city they are observing, that city must have a strongly

identifiable skyline. This has not gone unnoticed in the business world, where skylines

have appeared on countless advertising and promotional material. Both private enterprise

and public agencies have used skylines to advertise a place.

2.5.4 Skylines as Icons and Brands

Wayne Attoe describes skylines as sometimes being "exploited to capitalize on the

meanings and associations inherent in them," (Attoe, 1981, p. 108). This is an intriguing

branch of skyline review that bridges a gap between planning and another burgeoning

discipline in the marketing field: place branding. Skylines that are exploited are ones that

are distinct and identifiable, and that have "emblematic buildings, structures that are

visually unique… and which, due to unusual shape or detailing, are identifiable among

others in the skyline," (Attoe, 1981, p. 108). This practice began on a smaller scale with

individual buildings acting as advertisements for their owners' companies.

Called 'Advertising Skyscrapers', individual buildings, particularly in New York,

were designed to make a statement or symbolic message about cultural legitimacy, social

status and economic power (Girouard, 1985, Domosh, 1988). These companies were

often in competition with one another and their owners "knew the value of height,

splendour and a memorable silhouette in establishing their image or increasing their

sales," (Girouard, 1985, p. 322). Therefore, individual buildings in New York became

easily identifiable, and this technique eventually caught on as other companies attempted

to stand out even more from the rest.

This helped many companies distinguish themselves from one another, but the

practice has now expanded from individual buildings to entire cities. This is why place

branding has grown in importance. Places can be branded the same way as consumer

goods and services (Caldwell and Freire, 2004), leading cities around the world to brand

themselves in an effort to remain competitive, (Anholt, 2005, Kotler, et al., 2004, Kerr,

2006, Virgo and Chernatony, 2006, Warnaby et al., 2002). "How a city is perceived, the

image it creates of its physical and environmental desirability, affects not only the levels of investment by property developers and companies, but also the decision of employers and employees to live and work there," (Gilmore, 2004, p. 442). The skyline is, therefore, an important tool in the image-building of a city, as Attoe has previously identified it as the chief symbol of the city.

2.5.5 Skyline Aesthetics

Skyline aesthetics have changed over time from the introduction of the first high-rises in the late 1800's to present-day. Initially, skyscrapers were met with concern, and regarded as violators of the accepted urban aesthetic of the time, which, in America was one of order and "horizontal monumentality," (Holleran, 1996, p. 558). This desire for lower development was evident in some cities more than others (Boston and Washington, D.C.), but in those cities that allowed tall buildings (New York and Chicago), the unanticipated ensemble of skyscrapers in the skyline began to challenge the ideal of the low and orderly city (Holleran, 1996). With the introduction of the skyscraper, the aesthetics of the city were forever changed, and the skyline became the subject of assessment.

The aesthetic qualities of the skyscraper perhaps contributed to skylines becoming symbols of the city and its people. In Boston, for example, the citizens thought little of the symbolism of their skyline, but "knew their city was being judged by it," (Holleran, 1996, p. 568). In New York, architects were "nurturing" the skyline aesthetic, as Holleran refers to it, by producing a "fantasy city" of gables, spires and domes. These

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characteristics of city form can be broken down into various principles, which are described by Attoe, and to some extent Kostof.

Kostof reaffirms that expressive skylines were not always needed, as in the case of Boston during the turn of the 20th century. Just as Boston was following the European model (Holleran, 1996), other parts of the world like China maintained flat profiles (Kostof, 1991). These profiles elicited a certain aesthetic, which was, as mentioned, low and orderly, but as skylines grew, so, too, did each city's aesthetic. Cities grew differently because they were affected by various locations and situations (Birdsall et. al., 2005), causing skylines to subsequently take on different forms. Manhattan, Downtown Vancouver and Hong Kong, for example, are surrounded by large bodies water, forcing high growth to be accommodated within tight geographic confines. Additionally, the presence of mountains may influence the built form, while each city's economic history also impacts the size and spread of its buildings. Attoe states that people will seldom experience skylines in a simple fashion since they are products of countless forces and may encompass many aesthetic principles (Attoe, 1981).

The aesthetic principles described by Attoe are rhythm, harmonious fit, netting the sky, punctuation, abstract form, layering, framing, approach, sequential revelation, juxtaposition, and metaphorical seeing, (Attoe, 1981). They are without a doubt the most comprehensive assortment of assessment criteria for skyline aesthetics in academic literature. Another, more specific, form of skyline assessment was recently put forward by Heath et. al. (2000), who found that levels of complexity could influence people's

assessments of, and preferences for, skylines. Their study represents one of the only

academic forays into skyline analyses with a public study group.

2.5.6 Skyline Studies

People are able to respond to the aesthetics of a skyline; "people can point out specific

visual features or attributes in an environment that create pleasant feelings and

distinguish those features from other environmental attributes that evoke negative

emotions," (Ataov, 1998, p. 240). Additionally, someone may respond to what they see

in relation to a physical form, and draw inferences about it (Nasar, 1997, Rapoport,

1990). For example, a person may recognize an area as a residential neighbourhood, and

if it is well kept, they may infer that it is a safe neighbourhood, (Ataov, 1998). Likewise,

people may also respond to what they see in the physical form of a skyline and be able to

infer qualities based on those observations.

Heath et. al. published the results from their study on the influence of building

complexity on skyline preferences in 2000. They sampled students living in Brisbane,

Australia, and asked them to view and rank a series of black and white images of

synthetic skylines. These skylines had each been constructed so that their buildings

included varying degrees of silhouette and façade complexity. Their results showed that

greater preference was shown for skylines with greater *silhouette* complexity, and that

façade articulation was less important. They identified limitations in the applicability of

the results to other places and people, that viewing distance was restricted to one constant

distance, and that images were only monochromatic. They suggest that further research

make use of colour photographs in natural light, skylines with wide ranges of complexity, and sampling of a more diverse group.

Their study followed a limited number of tests performed by Stamps in 1991 on the influence of height, complexity and style on preference for individual buildings, and by Smith, Heath and Lim in 1995 on the proportion and spacing of tall buildings in influencing preference (Heath et. al., 2000). The limited number of tests speaks to the sparseness of this research area, but they also focused mainly on tall buildings and did not use actual cities as stimuli, preferring to employ synthetic images. These tests were also largely quantitative and did not explore the thoughts and feelings of participants, which is why a qualitative study of skylines is needed.

The only skyline studies that appear to obtain more qualitative data are government-led surveys, open houses and engagement websites. These studies are usually consultation processes that invite members of the public (typically from that city only, although recent Internet-based mediums have invited non-inhabitants to participate) to provide their opinions on the city's future physical form. In these studies, cities may provide images for discussion and take participants' suggestions under consideration when crafting future policies. However, these skyline studies are not widely employed and despite evidence showing that people are able to respond to what they see in a skyline, only some cities like London and Vancouver have chosen to engage the public in a discussion of skyline aesthetics.

London's ambitious project, entitled "Virtual City" was intended to stimulate online public participation in determining future city form (Hudson-Smith et. al., 2005). Using an interactive website, people could login and manipulate proposed buildings in a large model of the city, post snapshots of their re-arrangements, and have live discussions with other online users in a virtual meeting room, (Hudson-Smith et. al., 2005). Virtual City could easily have served as a basis for public discussion about London's skyline, but the project was aborted in 2007 due to licensing issues with the mapping software (Michael Cross, 2007). As a result, London has not been as successful in engaging its citizens in skyline discussions, leaving Vancouver as one of the more progressive urban centres in this respect.

Vancouver has a longer history of acknowledging and protecting views. In 1996, the City of Vancouver embarked on a new skyline study as a response to increased development pressure since the initial adoption of its View Protection Guidelines in 1989. City Council directed planning staff to address concerns that had arisen with respect to the skyline and to create a policy for dealing with tall buildings (City of Vancouver Policy Report, 1997). The study asked residents of the city to comment on the aesthetics of the skyline, specifically with respect to building heights. The consultation found that some felt the skyline lacked visual interest and needed taller buildings, while others were afraid tall buildings would compromise the natural setting.

Planners presented the public with 5 skyline alternatives, viewed from eight popular vantage points. There was no clear majority in support of one particular

alternative, but two important results were uncovered: many wanted the North Shore mountains to remain the predominant element in the skyline, and most respondents felt that the skyline was "important and symbolic," (City of Vancouver Policy Report, 1997). Planning staff proposed a "dome-shaped" skyline policy permitting taller buildings in the centre of the downtown, and while Council adopted this policy, it found itself revisiting the topic again in 2008.

Vancouver began a new study lasting from 2009 to 2010 that asked the public to consider changes to the permitted heights and intrusions into view corridors. This was done through telephone and online polls, and through a series of public open houses. The study concluded that the public favoured protecting view corridors to the mountains, but were open to the presence of taller landmark towers in an effort to create a more varied skyline (City of Vancouver, 2010).

The results of this study were mirrored in a private sector initiative named "Shape Vancouver 2050," led by the firm of Busby, Perkins & Will, the creators of Vancouver's original view protection corridors. The initiative is an interactive website inviting people to manipulate an image of the Vancouver skyline, and was intended as a survey for collecting data to inform the city's future zoning regulations. During the two-month survey period, it received interest from almost 5,000 online users, resulting in over 1,200 skyline submissions (Shape Vancouver 2050, 2010).

It is evident that interest in skylines is growing, and that people consider them to

be important. Much of the work done in Vancouver provides a strong basis for research on skyline perception and indicates that people are able to respond critically to a skyline image.

Academic studies providing quantitative results and government studies providing qualitative results have been carried out too sporadically and in too few places. Aside from Vancouver's encouraging lead, there has been little government interest in the matter, which is perhaps because there have been few compelling arguments put forward by academics and professionals outlining the benefits of performing a study. Therefore, new academic research must be produced that is qualitative, and which identifies important and preferred skyline elements.

2.6 Conclusion

Research on city skylines would seem to benefit greatly from the surveying of a sample group to derive answers to the questions posed by Attoe, Kostof and others. It would re-affirm the theoretical background upon which this research is based, and perhaps this is why such research has not seen much expansion. Kevin Lynch commanded great attention to the perception of cities because of compelling empirical data gathered through the study of sample groups. Much in the same way, research on the perception of city skylines may garner more interest if it gathered evidence in the same way.

There is a case to be made for research into the perception of skylines, as there is a body of research by credible academics devoted to it. There exists a theoretical

foundation for further study that is reinforced by not only the planning profession but by the architectural and psychological professions as well. These professions have shown that built form may elicit responses, so there are compelling reasons to broaden the scope of perception to include skylines, as skylines are widely visible and easily experienced. Since they are much more than an individual building, and rather are collections of them, they may also be expressive symbols of the collective populace.

Their symbolism contributes to the way in which they are used to promote, advertise and orient, so the question "what makes them so meaningful?" must be addressed. The compelling relation between Gestalt psychology and skyline form makes applying their principles to any such studies very appropriate, and some academics have begun to do so, in an effort to determine what physical forms are more preferred. Their work, however, is quantitative, and does not allow us to learn *why* certain skylines were preferred. Some governments have shown they are interested in pursuing this field of study, since they are actively trying to build desirable cities that have high degrees of preference. Therefore, it must also be asked: "what skylines are most preferred and why?" These two important questions will form the basis for this research and ultimately provide a qualitative analysis that explores people's perceptions of city skylines.

3.0 RESEARCH METHODS

3.1 Introduction

It has been established, following the Review of Literature in Chapter 2, that there is a distinct lack of studies conducted on the topic of city skylines. For this reason, such a study will prove to be informative for planners, architects, and anyone wishing to better understand the effects of skylines upon their viewers. Due to the infancy of this study area, the investigation carried out in this research must be narrow in focus and supplement existing related literature. It will carry out the first qualitative exploration of people's perceptions of skyline form, and will yield a number of opportunities for further study.

This chapter will begin with a review of the research questions and describe the approach this research will take in order to answer them. A description of the sample population used in this research will then be provided, followed by a rationale for the qualitative interviewing technique utilized. The research instruments will be described in detail and the interview process used for each sample group will be explained and justified.

3.2 Methodological Paradigm

The study of city skylines has prompted little exploration, and those who have entered into this field of study have done so in minor capacities. Few questions or hypotheses have been produced through skyline research, but Wayne Attoe closes his book with a

series of questions people might ask about skylines, from which some of this study's questions were borne.   Major themes such as meaning and preference have been identified in the literature review as central to the study of skylines, and this research further explores these themes by asking the following questions:

1) Do people prefer certain skylines to others?
2) Do skylines bear any meaning?

This research will be primarily exploratory in nature, due to the lack of study that has been conducted on city skylines. To answer the research questions, it is necessary to explore the topic in more detail, and to do this a *qualitative interviewing* approach was taken.

The study is qualitatively based because it is intended to gain in-depth information from the population, a task requiring questions to be asked of respondents in a controlled interview setting (Trochim, 2005).   The information obtained from respondents is composed of thoughts and opinions, which are qualitative data. A quantitative research approach was deemed inappropriate because it would not allow responses and explanations of the same richness; it would not enable the question "*why?*" to be asked. As stated by Miles and Huberman (1994), "just naming or classifying what is out there is usually not enough. We need to understand the patterns, the recurrences, the plausible whys," (p. 69). The interview format was deemed the most appropriate research method for gathering qualitative data because the researcher must be able to prompt the respondent or probe deeper as important thoughts are discussed. This same level of detail may not have been as successfully discovered if respondents were asked to fill out a survey, for example.

Interviews are one of three methods described by Michael Patton as qualitative-based methodologies, the others being observation and written documents (Patton, 2002). Qualitative methods, and interviews specifically, are widely accepted data collection methods in a variety of disciplines, (Miles and Huberman, 1994, Kvale and Brinkmann, 2009). Interviewing provides the researcher with an opportunity to uncover people's experiences, opinions, feelings, and knowledge (Patton, 2002), and this form of fieldwork forms an acceptable basis for qualitative research. However, this qualitative approach is not composed of verbal interviewing alone – photographs have been identified as an important component of a successful interview, (Harper, 2002) and will be used here. This research on city skylines necessitates a visual approach using photographs and images, as previous studies have concluded that skylines are best analyzed when viewed in pictorial form. Therefore, in-depth interviews with visual media depicting skylines will be used to elicit qualitative responses from participants.

3.3 Participant Sampling

This research was based in the cities of Kitchener and Waterloo, Ontario. It was deemed important to obtain the views and opinions of practicing planners and members of the public. Heath et. al. (2000) recommended that a diverse group of respondents be used in a study of skyline preference, so it may be important to learn how those educated and actively working in the planning profession read and interpret skylines compared to those who are not directly involved and are outside the realm of policy-making.

Conducting the research in Kitchener and Waterloo was based largely upon convenience, as time and money were limiting factors. However, there were also distinct reasons for drawing the sample from these cities. Kitchener and Waterloo have recently begun to run out of available greenfield land, necessitating infill re-development that often produces high-rise buildings. The regional Growth Management Strategy and provincial Places to Grow growth plan require both cities to intensify development in a variety of areas, particularly downtown (Region of Waterloo, 2010; Province of Ontario, 2010). This will lead to an increase in high-rise building projects that will impact the skylines of both cities. Since they are on the cusp of this redevelopment, Kitchener and Waterloo were identified as ideal candidates in which to carry out a study on skyline perception.

Second, there were three governmental planning departments available to interview, two at the local level and one at the regional level. This presented a unique opportunity to gain a potentially diverse set of professional planning opinions, as each city may pursue different models of re-development that may, in turn, result in different skylines. The presence of a third, higher-tier planning organization that operates at a regional level presented an opportunity to explore opinions on regionally-integrated skylines. This is notable because Downtown Kitchener and Uptown Waterloo (identified as growth nodes) are located in close proximity to one another and share a common main street (King Street) as their focus. Professional ties between the researcher and these planning departments allowed for easier access to this sample group.

This study utilizes purposive sampling methods, which was necessary because one of the objectives of this study was to engage participants who were knowledgeable

about city image and form. Random selection was not appropriate for this research since it would not guarantee the provision of knowledgeable participants. Miles and Huberman (1994) suggest that when sampling for qualitative research, the sample tends to be selected purposively, rather than randomly. It was not only the group of planners that had to be targeted, but the public group as well. Since the purpose of this research is to uncover perceptions of city skylines, useful data from informed individuals was a requirement; data from participants who had no interest in city image would not be helpful, as their less-detailed responses would not have provided clear results.

Informed public participants who cared about the image of their city were valuable to this research (and therefore targeted) because if their perceptions were unclear, then it would be highly likely that the broader public would be equally or more unclear. Alternately, if public participants who cared about city image provided clear perceptions of skylines, their comparison to the highly knowledgeable planning group would be easier, as both sets of responses would be similarly detailed. Sampling non-planners is an important consideration in this research, as Miles and Huberman (1994) caution that there is a danger of sampling too narrowly (going to the most study-relevant sources). They suggest that it is important to also "work a bit at the peripheries – to talk with people who are not central to the phenomenon but are neighbours to it," (p. 34). Therefore, the public sample group will be essential in generating perceptions for this exploratory research.

The planning group was largely selected using snowball sampling, an accepted sampling method for cases where potential participants may not be known (Trochim, 2005). Through previous employment in planning, a professional relationship existed

between the researcher and members of the Kitchener and Waterloo planning departments. Using the snowball method, other planners who may have an interest in the research were recommended by those who were known to the author. Planners also suggested some members of the public as possible research participants.

Members of the public were not purely sampled according to the snowball method, but were more often purposively targeted. Leaders of and representatives for various neighbourhood associations were deemed to be informed individuals who had an interest in city image. Not having any previously established connections to these groups, each one was contacted individually and requested to participate.

The distribution of participants between planners and members of the public is shown in Table 3.1, below.

Kitchener Planners	Waterloo Planners	Regional Planners	Kitchener Public	Waterloo Public
6	5	1	7	6

Table 3.1: Distribution of Study Participants

In this sample there is an even distribution of planners and members of the public, with planners accounting for 12 of the 25 interviews.

3.4 Data Collection

3.4.1 Interview Approach

After interview requests were accepted, dates and locations were arranged for the interviews to take place. Participants were given the choice of where the interview would be conducted, with locales ranging from places of work to private homes and coffee

shops. Respondents were greeted professionally and asked to read and sign an Interview

Consent Form from the University of Waterloo. Seated across from the researcher at a

table, the respondent had the study and interview process explained to them. Before

beginning, participants were asked whether they understood the task and were given the

opportunity to ask any questions for clarification. All participants were also asked

permission for the interview to be recorded and assured of complete confidentiality.

All interviews followed the same format and contained the following exercises:

1) Ranking of figure-ground (black and white) skyline images.
2) Ranking of full-colour skyline photographs.

Each of the two exercises required the same tasks to be completed. Participants were

asked to sort a series of skyline images into three piles: most preferred, medium preferred

and least preferred. The researcher laid down three labels across the table named Most,

Medium and Least, allowing participants to easily sort their images into the categories.

After doing so, participants were asked to justify why they sorted the images the way

they did. To help participants justify their reasoning, they were given a list of adjectives

that may be applied to the skyline images. They were also asked to identify any

meanings or symbolism they saw in each skyline, with the aid of the adjective list if

necessary.

Participants were shown the black and white figure-ground images first so that

they would not be biased by the amount of information available to them in the colour

photographs. Information was revealed gradually through this method, ensuring that full

familiarity with the skyline was not achieved until the very end. Perceptual principles of

Gestalt (specifically the principle of Meaningfulness and Familiarity) state that items and features that are familiar to an individual will be remembered and make an impression during a later viewing. Therefore, it was necessary to ensure that as little information as possible was presented first, avoiding any preconceived notions of what the skyline looked like. This level of control would have been lost had the colour photographs been shown first, and a level of bias may have been unnecessarily introduced.

These exercises led to the question of whether skylines were important for cities to focus on and whether planners and other decision-makers should pay extra attention to them. After each response, a discussion ensued about how the skylines of Kitchener or Waterloo might develop, and what goals, objectives or policies might be suitable to attain the preferred skyline. Interviews were scheduled to take 45 minutes, with most averaging one hour with extra discussion. Participants were encouraged to provide as much detail as possible, with the researcher keeping the discussion on topic.

After all questions had been answered, the discussion was brought to a suitable close and the participant was given one more opportunity for any final thoughts before the interview concluded. Participants were thanked for their input and promised a summary of the research results. Each interview was recorded digitally, with responses also written by hand. Following each interview, the written record was reviewed to ensure that all responses to questions were obtained.

3.4.2 Use of Photo Elicitation

The use of photographs in an interview to prompt response is called photo elicitation, and is a popular approach to qualitative research (Harper 2003). This method of data

collection was used because cities are largely sensory experiences, therefore it is logical

to use a method that taps into people's senses – particularly their visual imagination

(Moore, et. al., 2008). They are also more successful at prompting meaning than strictly

verbal interviews (Clark-Ibanez, 2004). Visual techniques using photographs as a study

medium have been employed in numerous settings around the world, with some specific

objectives being to understand how residents perceive their local environment (Moore, et.

al., 2008).

To employ the photo-elicitation method, Keller et. al., (2008) recommends

assembling a select number of photographs, which Prosser (1998) suggests should be

significant in some way to the participant. Eight skylines of major international cities

were chosen, and thought to be significant to study participants due to their popular

exposure and importance. Just as Jon Wagner (1979) did with his research on urban

perception, photos of these eight skylines were not made to appear "artsy" so that focus

would be on the physical characteristics of the subject.

3.4.3 Use of Pile Sorts

Pile sorts are ranking exercises used within visually based qualitative interviews, (Weller

and Romney, 1988). This technique was used to discover how people might rank images

of skylines because of its emphasis on using pictures and allowing flexibility in the

ranking process. This research utilized what Weller and Romney refer to as a

"constrained sort" where participants were asked to sort items into three piles: Most,

Medium and Least Preferred. Participants look through a randomly shuffled series of

items then sort them into piles, with similar items piled together (Weller and Romney,

1988; Ryan and Bernard, 2000). The participant is then invited to justify their decision, which Weller and Romney suggest can help interpret the final results.

3.4.4 Use of Adjective Checklist

An adjective checklist is a listing of various adjectives that are used to describe, identify and provide information about other words, usually nouns. The usefulness of the adjectives as descriptors makes them ideal for aiding research participants in making aesthetic descriptions of an environment (Kasmar, 1970). An adjective checklist was used in this research because previous studies have found skylines to be aesthetic elements of the landscape people are not used to assessing. The adjective checklist used in this research uses the exact terms distilled by Kasmar, but was refined even further to include only those adjectives deemed relevant to skylines. Whenever necessary, participants consulted the one-page checklist, which was divided into four categories for ease of use: words pertaining to Beauty, Organization, Symbolism, and Emotion.

3.4.5 Use of Skyline Images

The skyline images were broken up into two groups: figure-ground images and colour photographs. Each group contained the same eight skylines (Toronto, Vancouver, New York City, Chicago, London, Frankfurt, Hong Kong, and Shanghai) to provide an intentional contrast between physical form and architectural detailing. Figure-ground diagrams have been "a key tool for analysing urban form," (Carmona & Tiesdell, 2007, p. 61) and show objects or buildings standing freely in space, the objective being to differentiate the figure from the background (Rajamanickam, 2007). Figure-ground has been applied to planning and architecture, and its roots in Gestalt psychology have made

it a favourite technique for analyzing spaces within cities, both from above and in profile (Ashihara, 1983).

Yoshinobu Ashihara used figure-ground to analyze the profiles of cities, but focused more on the changes between a day profile and a night profile. This study has also used the figure-ground technique to look at a city's profile, but unlike Ashihara's approach (which showed how interior lights changed a building's silhouette from day to night), this has blotted out the architecture of the buildings in favour of a completely black silhouette. This is intended to show the contrast between a skyline and the sky, to draw the eye to the shape of the city and its massing instead of its architectural details.

The colour photographs act contrary to the figure-ground images by providing a full account of the skyline with all features present. It is quite the opposite of the figure-ground in that the subject is highly complex, with many elements for the eye to focus on. It is a more visually rich approach that emphasizes the structural detailing of a building, its facades, colours, and textures. It also shows other elements of the city that do not appear in the city's silhouette, but may be prominent along the ground plane, or are not high enough to protrude into the silhouette.

All skyline images were manipulated to exclude ephemeral objects such as clouds and water, and were instead fitted with a standardized sky. Water was eliminated from the base plane of all applicable skylines. This standardization was necessary in order for the skylines to be viewed equally and objectively, since the presence of clouds or water and even the vibrancy of the sky may bias someone's perception of an image. This applied only to the colour photographs, since the figure-ground images are already

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effectively standardized due to their simplification. All skyline images were laminated for protection and to ensure longevity during the study.

3.4.6 Selection of Skylines

The skylines for the cities of Toronto, Vancouver, New York, Chicago, London, Frankfurt, Shanghai and Hong Kong were used in this research. These skylines were believed to best emulate the desired mix of qualities and criteria below:

- Skylines had to be from large cities with a population of over 1 million.

- Skylines had to be selected from various parts of the world, each with a distinct architectural tradition (i.e. American, European, Asian).

- Each skyline had to reflect a different temporal age: historic, typical 20th century, and futuristic/modern.

- Each skyline had to display a different form: relatively flat, sloping, symmetrical, rhythmic building spacing, tall, short, reliant on landmark, not reliant on landmark.

- Each skyline had to include a different mix of building forms: square, curvilinear, angular, wide, narrow, flat roofs, shaped roofs, spires, domes, and antennae.

- Each skyline had to display different uses and functions: commercial, residential, religious, and tourist.

- Two skylines had to show different respect for their mountain backdrop.

- Each skyline had to be viewed from a popular vantage point at differing distances.

Cities in the sample had to espouse each of these criteria, but each in different ways. For example, the two historic cities chosen (London and Frankfurt) had to show their historic roots in different ways: history alongside modernity and history overshadowed by modernity. The two cities relying on their landmark tower (Toronto and Shanghai) each had very different tower styles.

Essentially, each skyline needed to display or embody a different characteristic or different method of skyline form and design. No two could be the same, and for those that shared similar qualities, they had to do so in a strikingly different way. This allowed participants to see the different ways skylines could be built, and how each of those ways might create a distinct message or meaning.

3.5 Data Analysis

3.5.1 Introduction to Method of Analysis

The data collection process yielded a wealth of verbal responses to the interview questions and pile sorts. The collection process was deemed to be complete according to one of Lincoln and Guba's (1985) criteria: the emergence of regularities in the data. The interview process eventually reached a point where respondents were providing no new information and data was being repeated; this signalled the end of the collection phase, as additional data would be of little use.

The method for analyzing the qualitative data was the constant comparison method, which is a form of grounded theory (Ryan and Bernard, 2000). Grounded theory was first described by Glaser and Strauss in their 1967 publication *The Discovery of Grounded Theory: Strategies for Qualitative Research*, and involves the researcher becoming increasingly more "grounded" or familiar with the rich concepts and models they are studying.

The constant comparison method utilizes the grounded theory method of collecting interview transcripts and reading through them, proofreading, and underlining key phrases (Ryan and Bernard, 2000; Sandelowski, 1995). Potential themes are derived from the transcribed text, and they can be compared and contrasted with one another (Ryan and Bernard, 2000; Agar, 1996; Bernard, 1994; Bogdan and Biklen, 1992; Lincoln and Guba, 1985; Lofland and Lofland, 1995; Strauss and Corbin, 1990; Taylor and Bogdan, 1984). This can often result in large amounts of data, leaving the researcher struggling to make sense of it all. The researcher's objective, then, should be to reduce the data to a more manageable form, (Robson, 1993, Wolcott, 1988 in LeCompte and Schensul, 1999). To perform this reduction, the researcher must selectively discard irrelevant information (Rabiee, 2004) and decide what data to keep by discovering patterns and themes within it, (LeCompte & Schensul, 1999). Thus starts the analysis of the data, and the process used in this research is outlined in the section below.

3.5.2 Analyzing Interviews and Pile Sorts

Analysis began by transcribing the recorded interviews and inserting the transcriptions into a database. Notes taken during each interview were combined with the transcriptions

to ensure a complete representation of each discussion. The transcriptions were read over thoroughly, and upon this initial reading, some patterns began to emerge. In order to explore and identify these patterns, various key sentences and words were pulled from the transcripts in a process called coding. According to Miles and Huberman (1994), codes are "tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study," (p. 56) and are usually attached to words, phrases, sentences or full paragraphs.

The units of information were first coded with a categorical identifier, a tag identifying who the quote came from, and whether it was a positive or negative statement. This collection of coded words and phrases were reviewed in their categories, then re-sorted in an effort to further refine them. The refinement process required the coded units to be compared with one another, looking for similarities and differences, or as LeCompte and Goetz put it: "What things are like each other? What things go together and which do not?" (LeCompte and Goetz, 1984 in Miles and Huberman, 1994, p. 249). At first, many of the units looked similar, but by constantly reviewing them and refining their placement, they eventually fit within distinct categories of meaning. The codes were not numbered, as Miles and Huberman (1994) warn against; they were given unique names that related closely to the key terms and phrases they represented.

These uniquely named categories became important themes for discussion in this research, as they related to distinct elements of meaning and preference. They also provided valuable qualitative data that supported the information gained from the preference test pile sorts. The verbal data was intended to supplement the pile sort data by explaining *why* participants ranked skylines the way they did. It was essentially a

method to fill in the gap from Heath et. al.'s 2000 study – a study where the rankings existed in isolation with no rationale from the respondents to justify their decisions.

Participants' pile sorts were recorded by noting which cities were sorted into each of the three categories: Most Preferred, Medium Preferred and Least Preferred. These results were entered into a table and the number of times a city was mentioned in each category was recorded. This allowed preferences to be easily seen and cities could be compared with one another. The comparisons were important because skylines were sometimes not discussed in isolation – specific elements like massing or colour were compared from one city to another, and it became necessary to see how one city succeeded and another failed in a given respect. The groups for comparison found through the pile sort will be identified and discussed in relation to the coded verbal data in Chapter 4 of this thesis.

3.5.3 Research Evaluation and Limitations

Ensuring the quality of the results is one of the most important issues when conducting research, says Trochim (2005). For that reason, this section will explain issues relating to the validity and reliability of the data in three distinct sections, as well as a description of study limitations.

Internal Validity

Internal validity refers to the possibility that the conclusions from the research may not accurately reflect what went on in the experiment itself (Babbie, 2010). This research has guarded against possible threats to internal validity primarily by triangulating the results.

Triangulation is an acceptable means of confirming the validity of study results, and is done by showing whether independent findings agree with each other or do not contradict each other (Miles and Huberman, 1994). Miles and Huberman describe it simply as "pattern matching, using several data sources," (p. 267) and say that it can be done by comparing persons, times, interview documents, and recordings. This has been effectively accomplished by comparing the variety of notes, documents and recordings from the interviews, and the individual statements from participants themselves. If a statement from one participant closely mirrored that of at least three others, that finding is assumed to be valid.

However, in situations where contradicting results are found, this does not necessarily threaten the validity of the study – in fact it can do quite the opposite. Miles and Huberman (1994) state that inconsistent or conflicting data may help elaborate the study's findings and reduce what Mark and Shotland (1987) call "inappropriate certainty." In effect, contradictory data help prevent the researcher from becoming overconfident in their findings and reminds them that different viewpoints do exist. Alternatively, inconsistent data may point to a new finding that the researcher had never hypothesized, and "initiate a whole new line of thinking," (Rossman & Wilson, 1984 in Miles and Huberman, 1984), which is particularly important in an exploratory study.

Internal validity was also assured by making contrasts and comparisons between the participants themselves. Miles and Huberman (1984) suggest comparing the results from interview subjects who differ in some important aspect. This study utilized two different study groups – professional municipal planners and members of the public – and each of these groups was hypothesized to have varying levels of knowledge pertaining to the perception of built form, specifically skylines. Each interpreted the skylines from a different perspective and focused on different elements, based on personal interests and persuasions. Combining this validity check with triangulation led to strong internal validity, as even despite the different knowledge bases and backgrounds of participants, findings were corroborated.

External Validity

External validity – sometimes called generalizability – refers to the possibility that the conclusions drawn from the study's results may not be generalizable to the real world, (Babbie, 2010). However, it is sometimes better not to generalize to the broader population, as Firestone (1993) suggests, "the most useful generalizations in qualitative studies are analytic, not sample-to-population," (Firestone, 1993 in Miles and Huberman, 1984). Generalizing the results of the study back to a theory instead of a population is more appropriate when a researcher is working with small samples of people who are "nested in their context" – those people who are chosen for being "well-informed" rather than for their representativeness (Miles and Huberman, 1984).

In this research, theories about skylines are being explored in order to shed more light on the subject and participants were sampled purposively for just this reason.

Generalizing the results to the broader "real world" was neither appropriate nor necessary, as this research seeks to better understand existing theories and possibly build new ones about skyline perception. For Yin (1984), analytical generalizability is important because it repeatedly tests hypotheses in order to develop a theory, which can then be generalized to other cases that have yet to be studied (Smaling, 2007). Since skyline perception is still a relatively new and under-studied topic, it is important to continue developing theories of preference and meaning so that further research can benefit from a more solid and proven theoretical foundation.

Reliability

Reliability refers to "the extent to which studies can be replicated" (LeCompte & Goetz, 1982, p. 35). Some ethnographic research has been criticized for being unreliable, but it provides a depth of understanding that other investigative approaches lack, (LeCompte & Goetz, 1982). Therefore, the reliability of exploratory studies such as this one needs to be addressed in order for the results to be credible.

Reliability in this study cannot be achieved the same way as in other investigative approaches. The nature of human inquiry makes it difficult to guarantee the delivery of the same response from different participants in different locations at different times. Lincoln and Guba (1985) suggest that reliability may be better thought of in ethnographic research as consistency, dependability, stability and accuracy. According to LeCompte and Goetz (1982), the same problems that threaten validity can threaten reliability, so using some the same checks will help. Some of the suggested checks include specifying

precisely what was done methodologically to ensure dependability, and triangulating data to ensure consistency, stability and accuracy.

Limitations

There are some limitations to this research that are important to outline before presenting the findings. First is that participants likely recognized the skyline of Toronto, and their preference for it as well as descriptions of its meaning may have been influenced by their knowledge of the city. Their level of knowledge about Toronto and its skyline was likely far higher than that of any other subject city, owing to its close proximity to the study area. The experiences that participants may have had in that city and their knowledge that certain buildings existed, may have contributed to their ranking and description of it. While participants were encouraged to be objective when appraising and interpreting Toronto's skyline, they may not have truly been.

The second limitation stems from the sample group selected for the study. While it was fully intended to selectively sample participants who had some degree of knowledge about city image and form, it is important to mention that the same results may not be found should a similar study be performed with different participants.

The third limitation arises from the selected skyline vantage points. This study utilized the more popular, or important views of each city, and did not provide alternative images for cities that had multiple viewing angles. A change in vantage point will likely change the appearance of the skyline, and some skylines (such as New York's) are also too large to fit into one image while retaining an appropriate amount of detail. Consequently, these study results may change should different vantage points be chosen.

4.0 FINDINGS

4.1 Introduction

This chapter will present the findings obtained from the in-depth interviews with study participants and the two tests that were part of those interviews. Findings will be presented according to the order in which the tests were conducted, and will be directly relatable to this study's research questions, which were:

1) Do people prefer certain skylines to others?

2) Do skylines bear any meaning?

First, the findings pertaining to preference will be explored, followed by the findings pertaining to meaning. The chapter will conclude by examining the relationship between skyline meaning and preference in order to determine whether there is a correlation between the two. By the end of this chapter, it will be clearly demonstrated that people prefer certain skylines, and that these urban panoramas *do* have meaning to those who view them.

Throughout this chapter, quotations from interviews with study participants will be used to support the findings. The quotations are referenced according to a key developed by the researcher, indicating both the respondent number and title (i.e. R-4-PL). The respondent number (R-4) simply distinguishes one participant from another, while keeping their identities anonymous. The title (PL) provides a very general sense of what the participant does, in order to qualify their responses. Six titles are used, and they are as follows:

PL = Planning

UD = Urban Design

ED = Economic Development

MM = Management

NA = Neighbourhood Association

R = Resident (no neighbourhood association affiliation)

The quotations appear in two different formats in this chapter. In Section 4.2, quotations are presented in *italics* after a particular finding has been described, whereas they are integrated with the descriptions in Section 4.3.   Participants often applied only a few words of meaning to a skyline, so the short length of those quotations made it more appropriate to integrate them into the paragraphs.

4.2 Findings about Preference

Respondents sorted the eight skyline images according to preference with relative ease for both Test 1 (figure grounds) and Test 2 (photographs). They sorted the skylines into three different categories: Most Preferred, Medium Preferred and Least Preferred. This exercise demonstrated that there are skylines that are more desirable than others, and that distinct physical characteristics contribute to the outcome. These characteristics arose by organizing the responses people gave when describing a skyline into themes, and these became measures for preference. The physical characteristics are as follows:

1) Landmarks & Distinction
2) Planning & Organization
3) Massing & Architecture
4) Height & Density
5) History & Progression
6) Colour & Appearance
7) Environment & Landscape

The first 5 of these physical characteristics were applicable to both the figure-ground skylines used in Test 1 and the photographs used in Test 2, while the last two were applicable to Test 2 only (colour and the surrounding environment were not apparent in the black and white figure ground images). To determine their preference for one skyline over the other, respondents tended to base their decision on how well these physical elements had been executed by the subject cities.

4.2.1 Figure Ground Preferences

The figure ground images served to successfully focus attention on building form and the shape of the skyline as a whole. Respondents very often spoke about the first 5 of the

aforementioned physical characteristics: landmarks and distinctive features, planning and organization, massing and architecture, height and density, and history and progression. The persistence of these themes was a regularly occurring pattern throughout all eight skylines; for each city, every respondent almost always mentioned all five characteristics. This pattern of preferential indicators is best understood by viewing the Test 1 preference results along with responses obtained from study participants. Figure 4.1 below illustrates participants' level of preference for each city by showing how many times each one was ranked most, least and medium preferred.

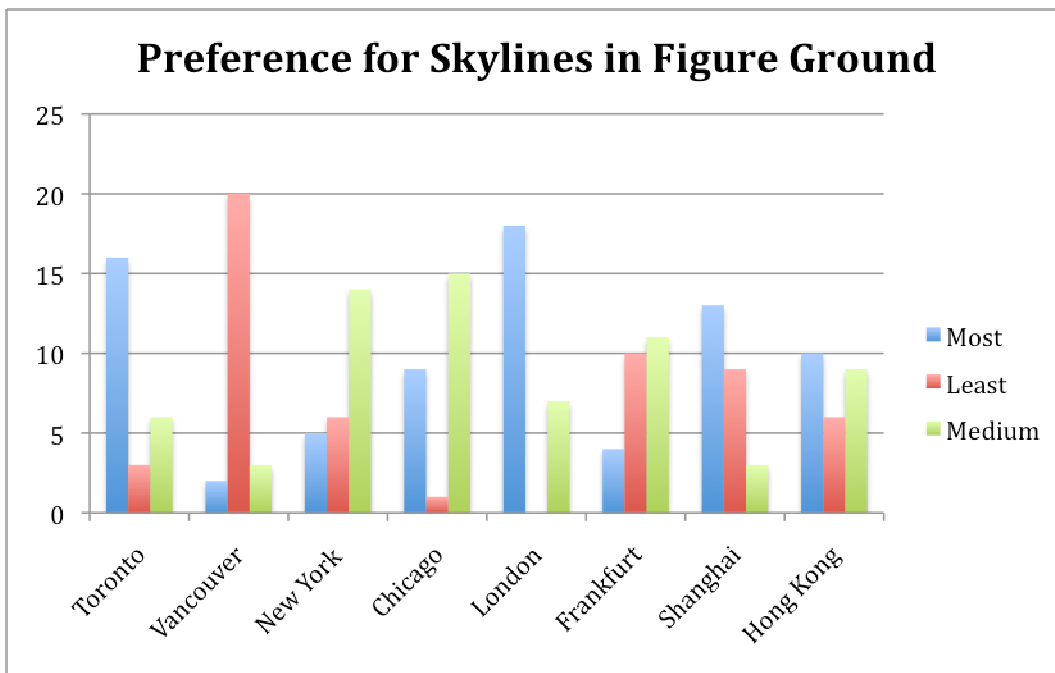**Preference for Skylines in Figure Ground**

Figure 4.1: Participants' Preference For Skylines in Figure Ground

Landmarks & Distinction

The presence of landmark features on the skyline contributed significantly to preference. When viewing the figure ground images, every study participant spoke about how cities had (or had not) incorporated landmarks, and the relative success with which they did so.

Frequently cited examples in this category were the skylines of Toronto, Shanghai, London, Vancouver, and, to a slightly lesser extent, Hong Kong.

Toronto and London were those most often given praise for their distinctive structures. While Toronto and Shanghai shared many similar qualities in the area of landmarks, Shanghai's were seen as more bizarre and Toronto's as more refined. However, one failing of Toronto's iconic CN Tower is its sheer size and consequential domination over surrounding buildings. Shanghai, on the other hand, has reduced the visual domination of the Oriental Pearl Tower by building very tall skyscrapers nearby. Overall, participants found both traditional and radically shaped landmarks to be interesting, but they were more amenable to the traditional.

"I think they want [the CN Tower] to be such an emphasis of the city that they want to have lower scaled buildings near the CN Tower, but it's just.... plunked near the middle. It would be interesting to see if it was placed over on this side, in [the central business district] because then it wouldn't be so prominent.... I would say it's similar to [Shanghai] how it stands just straight out. It's not saying that it's a bad thing to have something stand straight out, but you want it to blend in just a little bit, have more continuity. …When I look at the comparisons of the two, this [skyscraper in Shanghai], with this little window thing, it's throwing me off. It's just too modern." (R-15-PL)

"Aesthetically, the CN Tower looks much nicer than this thing [Oriental Pearl Tower]." (R-6-NA)

"This strange vertical element [Oriental Pearl Tower] that I don't recognize, and I don't know what it is, captivates me... I want to find out more about what it is." (R-3-PL)

The preference for less radical landmarks helps explain London's performance in this area. The historical (and therefore traditional) shape of its landmarks, specifically St. Paul's Cathedral, made its skyline more preferred. Especially distinctive landmarks were also said to help guide one on their travels through the city.

"To have something to draw your eyes to things, [London] does. This [St. Paul's Cathedral]... this is where my eye goes... that dome. That would be something that I would use as a reference, a landmark for way-finding." (R-16-UD)

These attempts at integrating landmarks of all shapes and sizes proved to be necessary, even if they were not always successful. Vancouver suffered because it had apparently not tried at all – its skyline was void of any kind of distinctive element, something that caught the attention of every respondent.

"This [Vancouver] looks like a pile a of rubble, it doesn't have any distinguishing features." (R-7-NA)

"The actual skyscape is very level [in Vancouver], there's really no dominant building that stands out." (R-13-NA)

"This [Vancouver] is a black, black, black stretch of blah... it doesn't hold any interest for me. …Nothing defining... I like to look out and be able to identify a building." (R-17-NA)

This study showed that despite how well landmarks were designed or integrated into the rest of the city, they were important in making a skyline preferred. Since their integration into the city was an important part of their effectiveness, it was not surprising that respondents also found the planning and organization of the skyline as a whole to be important as well.

Planning & Organization

When viewing the study skylines, participants often picked up on organizational aspects like symmetry, regularity and clutter, as well as relationships like harmony and juxtaposition. However, it seemed less important what specific form of organization a skyline had or how its buildings were related with one another so long as the overall scene was interesting. Consequently, all the subject cities performed relatively well in this category with the exception of Vancouver.

"I would say [Vancouver] is the very least preferred in my mind and it's mainly because it looks all too clumpy, too solid, not enough contrast in the size of the buildings and gaps between buildings... it seems too solid." (R-6-NA)

"[Vancouver's] continuity is not interesting enough… It seems that there's no breaks, it's a solid wall of building." (R-12-PL)

"There's no definition [in Vancouver], which is weird. It's just one solid block, it's a mass. It is solid, so there's no interruption, no place where sky can come through... like a prison wall surrounding you." (R-10-R)

Interest was developed in most of the cities due to building spacing and location of buildings of greater height. Participants noted that the movement of the eye across the landscape was an important part of preference, and it was the flow of buildings that accomplished this. Skylines flowed in two ways: they either gradually tapered or grew to a point, or they flowed up and down from one building to another. In Chicago and London, the skyline moved abruptly from short to tall, helping to create a sense of rhythm and regularity on the skylines.

"[Chicago is] not a jumble of tall here and tall over there... it may be just the pattern of how the blocks and the peaked buildings work together in this. And that they're not a large extent of the same plane – [Vancouver] looks too repetitive. I think the rhythm of [Chicago] seems to work better." (R-16-UD)

"When you're looking at the taller ones [in London], the ones that are standing above sorta the rest, you see some tall ones that are rectangular, some tall ones that are rounded, and I think that adds a nice balance. It's aesthetically pleasing." (R-20-NA)

In other cities like New York, the flow moves from left to right, as buildings gradually become larger, helping to define specific areas of town.

"This one here [New York] actually has, almost looks like a crescendo... you can see where it's sorta fluid... over a period of time, there's been some building where it started off early century, low and you know, there's some higher buildings then eventually you've got some depth and bulk." (R-7-NA)

"[New York] also has defined areas which some others don't seem to have. [Vancouver] stretches on for a long, long way with no discernible downtown or concentrated area." (R-16-UD)

This gradation of height is expressed most profoundly in Shanghai and Toronto, where buildings gradually increase in height from the base of their landmark towers toward the centre of the business district on the right. The change from smaller to larger buildings can also help an observer pinpoint the centre of town. Shanghai, though, was perceived as being less complete and connected than Toronto, because of the large gaps around the base of their landmark tower.

"You've still got that crescendo thing going [on in Shanghai] where... it starts off with what was probably historically the centre of town, and then it just slowly morphed into downtown, with more density. …[In Toronto] you can sort of see where it's downtown, and there's sort of the outskirts." (R-7-NA)

"This up and down movement [in Shanghai] is very likeable." (R-3-PL)

"You have huge gaps in [Shanghai] that doesn't provide that consistency across. And although this is an interesting shape for the skyline, it doesn't gel across the whole city." (R-16-UD)

"There's something [in Toronto] that looks like it's reaching up and beyond... it's got a bit of a profile to it. A reasoning behind it." (R-11-R)

"The skyline should direct you to the area of greatest activity, your downtown." (R-22-MM)

Frankfurt appeared to successfully combine gradation and building rhythm with a noticeable growth from small to large on the right hand side and fairly constant gaps between buildings. The building spacing also gave the impression that the streetscape was more pleasing because light was allowed in. In this sense, it might have been very successful in leading the eye across the panorama, but many participants felt that it showed too little of the city – that there was not as much to take in.

"This one [Frankfurt] probably could be the most dense or most highest, or it could just be an enlargement of a section, so I don't know how to read that, but if it was the most dense and most high, it still didn't bother me as much as some of those because of the variation and break between buildings and that space where the sun can come in and penetrate what I would assume would be... a much more pleasant streetscape." (R-3-PL)

I found [Frankfurt] more difficult, and I put it there for that reason. If you had something like that that was replicated across a larger area, that might be quite good. It's just a piece of what I would expect to be a larger whole. (R-16-UD)

While there are a variety of different organizational options for skylines to follow, the simple fact remains that movement of the eye across the landscape is important for retaining interest in a skyline. Planning the locations of towers and areas of density in relation to lower areas is important, as is the spacing between buildings. The resulting form, whether it is balanced or unbalanced, symmetrical or asymmetrical, regular or irregular, must provide visual interest in order to be preferred.

Massing & Architecture

Perhaps one of the most obvious elements to be seen in figure ground skyline images are massing and architectural forms. Study participants spoke at great length about their preference for skylines based on the variety of interesting shapes, and underlined the importance of rooftop treatments. Several cities did well in this category, including Chicago, Shanghai, Hong Kong, London and Toronto, while the massing of Vancouver, Frankfurt and New York's skylines were less preferred. The difference between these two groups is attributable to building shapes and rooftop treatments; skylines suffered for not having enough variety in these elements.

"When everything's all the same, that says this is a government-built town." (R-7-NA)

Participants were fairly split in their preference for modern or traditional shapes. Rather than choose between the two, they spoke of how they related to each other, and how they had more definition than rectangular buildings, which could threaten the skyline's appeal if over-used.

It's a neat way of combining very old shapes, like these domed elements, with a very modern landscape [in London]. ...I like the way that it goes back to that massing. It's not all horizontal and vertical rectangles or boxes or flat planes. It's the combination of these very rounded, sort of sculptural elements that marry the two together, and successfully, on a long distance view like this is, maybe less successfully on the ground plane as a person walking through it, but from this vantage point, a very intriguing city line. (R-3-PL)

"[In Toronto] I like the fact that we broke away from the very rigid squares and rectangles or flat planes to a sloped surface... that was nice, and I like that. I don't know if that's a feminine form versus a masculine form, but I like that... sorta the variation between planes." (R-3-PL)

"So... I mean [Vancouver and New York are] monotonous... there's really no definition." (R-13-NA)

"I'd love to go there [Shanghai], wherever that is, if that is a place. It's very undulating in terms of its rooflines. It's not all modulated and very similar, as in these first two [Vancouver and New York]." (R-3-PL)

"I'm seeing a nice variety in building shapes [in Hong Kong], I'm seeing some, in addition to the traditional rectangular, I'm seeing some angles and rounded, conical shapes, and some spires... there's lots of interesting things to look at, so I find that quite appealing." (R-20-NA)

If rectangular shapes incorporated unique elements to help them stand out, they became more preferred. These unique elements, more often than not, were rooftop treatments like spires, domes, and antennae. Out of these three, it was antennae that were most controversial.

"The spires that have gone up [in Chicago] have been... they provide some repetition across the city, too, for that kind of tying together of the whole skyline." (R-16-UD)

"Some of the finishes on the roofing [in Chicago]... not all flat roofs, some spires, which may or may not hold communication towers, but they look like they're an architectural element as opposed to just a physical structure ...they look like they're designed into it." (R-22-MM)

"It doesn't make a whole pile of difference if it's got these little... antennaes or whatever, it's the fact that there's a lot of variation." (R-3-PL)

"In all of them [Frankfurt, Chicago, Hong Kong] you can see the antennae, they're not very well hidden, they're obvious, and that's why I put them in medium preferred. It does, obviously identify the building, but the antennae, to me, visually dominates the skyline." (R-13-NA)

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Variations in massing and architectural elements helped increase the preference of certain skylines. Those cities that incorporated traditional shapes like domes and pyramids as well as modern variations on them faired better than those that had only rectangular forms. It was acceptable to have some rectangular buildings present, but to be dominated by them was not, unless they had suitably treated rooftops. More often than not, spires that had been integrated into the massing of the building were more preferred than antennae, which sometimes appeared to study participants as after-thoughts.

Height & Density

What was expected to be a controversial subject turned out to be a crucial aspect of preferred skyline form; height, specifically, was crucial to creating a sense of interest and variety. All buildings, however, could not be tall – almost all participants preferred skylines that had a little of both low and high areas. Height was found to be a tool for creating landmarks, for providing definition and distinction between buildings so as to avoid monotonous landscapes.

Vancouver, in particular, was singled out as being the most uninteresting because all buildings on the skyline appeared to be the same height. New York was also identified as being very monotonous and homogenous, but was always more preferred than Vancouver, due to the presence of some lower areas. The consistent heights contributed to a strong feeling of high density; where there was variation, this feeling of density subsided.

"This one [Vancouver], it's too much, there's isn't a bit of diversity, they're all of similar height, you need a little bit of variety. [Vancouver is], I would say.... can I say boring?" (R-15-PL)

"[Vancouver] is in my least preferred pile because there doesn't seem to be as much variability in the height between the buildings, which I find less appealing." (R-20-NA)

"I would say this one [Vancouver] because of the lack of variation of height. It seems a very consistent height, so in terms of interest, in lacks for me. The voids between the buildings as well don't seem as great as some of the other ones allowing visual views through. Seems to be one continuous wall." (R-18-UD)

"And this one [New York] I felt the same, especially on the right hand side... it's the same, this clumpiness... the left to me is more tolerable. The right is far too dense. And I think that's sort of what I find more appealing about some of these [most preferred cities]: there's greater diversity in the height of the buildings, and then the gaps, like you can actually see the outline of the buildings better. Although there aren't a lot of gaps all the way down to the ground in the buildings, there certainly are clear divides from one building to another. So I like that – the diversity of height." (R-6-NA)

However, Frankfurt was slightly more unusual in that it was viewed from a very close range, making the buildings very large. Participants felt that the scene was too high and too dense, regardless of the spaces that existed between the buildings, and there were some negative feelings expressed at the quality of life within.

"[Vancouver and Frankfurt] scare the hell out of me when I look at the social aspect. [They are] too dense and too high." (R-14-NA)

"There's two impressions [to Frankfurt]: if I were a tourist, you know, looking at the glittering lights, it would be quite thrilling... now, supposing night set in and I got lost... and I'm on the ground like an ant, in the middle of those buildings, I would be scared and overpowered." (R-10-R)

The remainder of the subject cities performed relatively well by comparison, thanks to their variations in height. Whether there were abrupt changes in height or gradual build-ups to a pinnacle, it was seen as providing visual interest – focal points that drew the eye.

"I like the different heights of the buildings and the way that they're dispersed in a way that not all the tall buildings are together and all the short buildings together, but they sort of go and up down across the landscape.... they're not all tall buildings... they're not

all the same heights, there are a range of heights. I like the variety of heights and the divide between buildings." (R-6-NA)

"There's more to the skyline [in Chicago], there's more height, there's more interest. [Toronto, Frankfurt and London] have the different heights. I'm looking out over the skyline, and I can place buildings. ... What impresses me is the power in the city, and reaching up... visually pleasing for me… the heights, the lows... even though they're big, it's not as crowded and cramped, but that could be because I have those variations in heights, whereas the others were all the same." (R-17-NA)

Achieving variation in height across the skyline leads to increased preference, and it is important to avoid a level skyline so that interest is maintained. Participants in this study found that buildings of the same height stretching across the landscape gave the impression of high-density areas that may suffer from poor social and living conditions. Not only does the extension of towers above surrounding buildings create more interest in a skyline, it also reduces the perception of overcrowding commonly associated with density.

History & Progression

A surprising finding in this research was that some study participants sought out elements of history in the figure ground diagrams. It was important for them to see that the city had a past and that there were stories to be told about its people, its values, how it got to where it was today, and how it was moving into the future. It was at times startling to watch respondents pick out buildings that they (sometimes correctly) thought were old, and what path they felt the city was moving in. While not one of the most popular elements people looked for in skylines, it was surprising nonetheless that history and progression were visible indicators of preference for skyline silhouettes.

Now, if I didn't sense that there were some heritage dwellings and buildings and respect for them in here, I wouldn't be that interested in it. I just don't want to see a bunch of new buildings for whatever reason... I want to see the story behind the evolution of that

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particular community or that particular city. ...I'm sort of imagining that some of these lower buildings are in fact heritage type buildings have been allowed to continue to exist. We want to maintain that story. (R-11-R)

The third one [London], looks like, you know, it's got a church, so it's old, obviously, and it's also some very new with this kind of structure here [the egg], it looks like a rocket ship. It looks interesting. Something you might want to investigate. (R-13-NA)

Over a period of time, there's been some building where it started off early century, low and you know, there's some higher buildings then eventually you've got some depth and bulk and you've got some bigger building with some smaller stuff in between, so it sort of looks like there's some history. Where things were smaller and much more, probably ornate and now you've got things that are becoming bigger. So it just looks like it's a city in progression, which is kinda neat. It looks like it would be a fun place to go... an interesting place to go. (R-7-NA)

It was expected that comments relating to history and progression would come out in Test 2, when study participants could view the full details of buildings in the skyline, but they found them in figure ground as well. These elements were not critical to a skyline being more preferred, but they helped in a unique way by showing that there was more than just physical variety; there was temporal variety as well.

4.2.2 Photograph Preferences

When viewing skylines as colour photographs, participants spoke about all 7 physical characteristics: landmarks and distinctive features, planning and organization, massing and architecture, height and density, history and progression, colour and appearance, and the environment and landscape. Like in Test 1, these themes came up regularly in Test 2 and were almost always mentioned by each respondent when justifying their preference rankings. This pattern of preferential indicators is best understood by viewing the Test 2 preference results along with responses obtained from study participants. Figure 4.2

below illustrates participants' level of preference for each city by showing how many times each one was ranked most, medium and least preferred.

Preference for Skylines in Photographs

[Bar chart showing Most (blue), Least (red), Medium (green) for each city]

- Toronto: Most 10, Least 3, Medium 12
- Vancouver: Most 4, Least 16, Medium 5
- New York: Most 9, Least 4, Medium 12
- Chicago: Most 9, Least 2, Medium 14
- London: Most 11, Least 5, Medium 9
- Frankfurt: Most 10, Least 6, Medium 9
- Shanghai: Most 8, Least 12, Medium 5
- Hong Kong: Most 8, Least 9, Medium 8
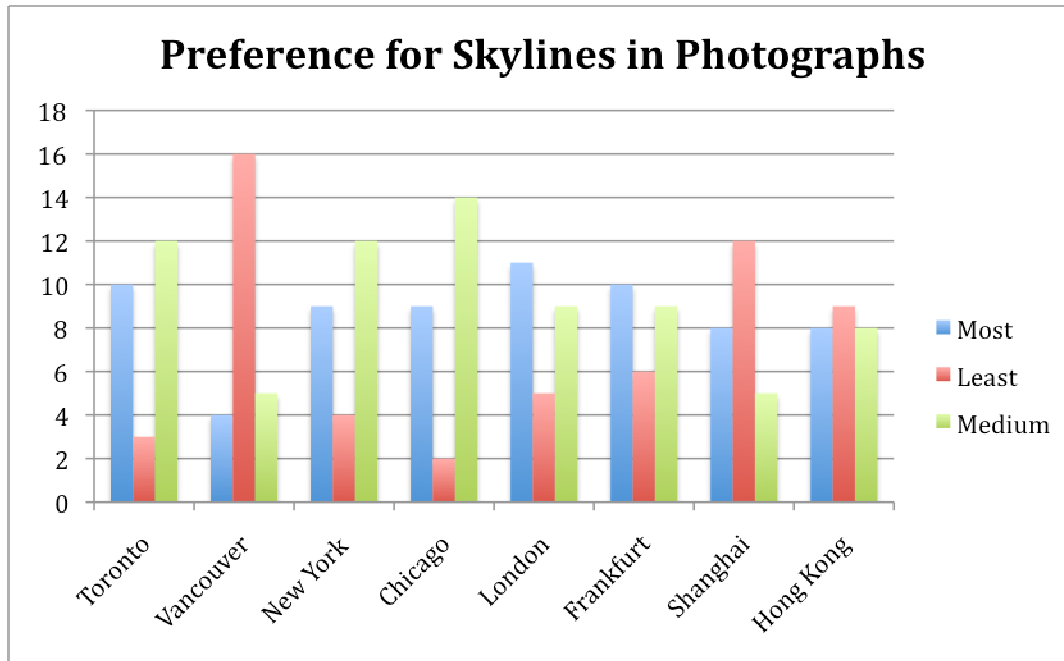
Figure 4.2: Participants' Preference for Skylines in Photographs

One result from analyzing the preferences of skylines in photographs is that the line between most and least preferred is less clearly defined than in silhouette. It is less obvious what the most appealing images are, and in fact, preference for skylines became more neutral, balanced and less one-sided than in Test 1. However, one thing remains clear: Vancouver is still un-contested as the most unappealing skyline, despite the presence of attractive natural surroundings. The seven characteristics that contributed to preference in this test are outlined below.

Landmarks & Distinction

Participants looked for landmarks and distinguishing features in Test 2 as well as in Test 1. They reiterated the importance of having a building that provided some visual interest,

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and that stood out against other buildings; a flat and homogeneous skyline was not

generally preferred.

"I like the CN Tower and Skydome [in Toronto]… they make it identifiable and memorable. You need to be able to identify a place." (R-6-NA)

"Everything in this skyline [Vancouver] looks the same, there aren't any defining features. It's all so generic… nothing says individual ownership. It's important for a building to be individualistic – at least part of it anyway." (R-18-UD)

"There doesn't appear to be any prominent structure here [in New York]." (R-12-PL)

While landmarks were preferred as tools for generating interest, one participant

noted that they should have a purpose.

"There are monuments present in all of my least preferred skylines, and I don't see that as a good thing. I question [a monument's] purpose." (R-22-MM)

There were differing opinions on the aesthetics of individual landmarks and how

well they fit into their surroundings. Participants noted that some were too bizarre and

stood out for the wrong reasons, but their perceptions were not unanimous – there were

conflicting opinions on the appeal of any given landmark and how it should be integrated.

"I like the interesting modern architecture [in Frankfurt]… this building [Commerzbank Tower] is modern, but I find it unattractive." (R-5-ED)

"The CN Tower is interesting and the Skydome is a landmark. The buildings on either side of the tower could be higher to help it blend in more, though." (R-25-PL)

"This big tower [the Oriental Pearl Tower] ruins the [Shanghai] skyline entirely. It looks so weird… I just don't get it. It doesn't fit in." (R-4-PL)

"[The Oriental Pearl Tower in Shanghai] really detracts. It looks like a Christmas ornament. …Landmark buildings should be re-positioned and re-arranged so that they're more spread out and can stand out. …I like the design of the CN Tower [in Toronto]… it's on its own away from the crowded centre so that it stands out more. Beautiful buildings should not be pushed together." (R-17-NA)

It was evident that while study participants generally preferred seeing landmarks

on a skyline, architectural appeal is still very subjective. Opinions regarding colours,

materials, architectural style, and whether they should blend into their surroundings were mixed, indicating that there is no one way to design a landmark.

Planning & Organization

When participants viewed the skylines, there was a general desire for cohesion and evidence of planning. They were not favourable to skylines that appeared haphazard or disjointed, and there were differing opinions about how much was too much when it came to the spacing between buildings.

"The downtown area [in Frankfurt] is not coherent, they're all disparate buildings with little co-ordination and relation to the foreground… buildings are unique on their own but nothing really gels. …In this skyline [Shanghai] a lot of things have been put together with no consideration of what the whole picture would look like. It's quite jarring." (R-16-UD)

"I can handle this [the London skyline]. It's comforting, interesting, manageable and beautiful. …It can probably accommodate all the new skyscrapers they have planned. It won't be ruined if new skyscrapers go in. …[Toronto is] very roomy compared to some of the others. They've done a better job of growing than this other one [Vancouver] – the concentration looks like less." (R-10-R)

"[Vancouver] looks like a lunar settlement. It's intimidating, dominated by cold, lifeless buildings with no cohesive language. …It's been built with no thought or planning. …[London is] spread out nicely and there is space between buildings… there's breathing room. …It's a liveable scale." (R-8-NA)

"[London] is sparse. There are some interesting buildings, but it's all disjointed because of the different building types – one doesn't match the other. It looks like it's missing something… it needs to have new buildings… to tie it all together. Right now there are islands of buildings, and there's no reason for me to walk between the areas because of those gaps." (R-25-PL)

"[London] looks like a gong show. Everything's really spaced out… I'm asking myself 'what is that?' It's like a grade two project gone wrong. There's six people running the planning department here and they all have different ideas. It doesn't work together at all. It's just a mess and not designed properly." (R-7-NA)

This specific attention to how buildings related to each other in the bigger picture prompted many respondents to speak about the necessity of skyline plans. Both planners

and the public felt these were important to ensuring a skyline was well crafted and would

send appropriate messages to those who view them. This will be explored further in the

concluding section of this chapter, after the findings about skyline messages have been

presented.

Massing & Architecture

There were a wealth of responses about the architecture of individual buildings in the

skyline, but participants always tended to value variety. They looked for diversity that

would set buildings apart from each other visually, so that they would not meld together

so as to form an overly homogenous landscape.

"There's good stepping up and down [in Toronto] and a variety of geometric shapes like circles and rectangles. There's not as much attention paid to variety of rooftops though, and some buildings look very similar." (R-24-PL)

"[Chicago is] an interesting skyline because you can see building details and there is variety. It's evident that physical form had attention paid to it …there are lots of different building forms… and it appears sculpted." (R-21-UD)

"[Vancouver] looks like it was all done by the same architect. Nothing is unique. …The architecture [in London] is better, there's more variety and more to peak your interest. …There are good rooftops [in New York] that peak your interest and the buildings stand out more and can be appreciated more than in Vancouver." (R-17-NA)

"There's a good variety of different buildings [in Shanghai]… there's not just rectangular buildings. All the slanted roofs and cut outs are interesting… I like it because it's not typical – it has diversity." (R-6-NA)

Respondents occasionally looked at how individual buildings related to their

neighbours or the surrounding environment. Massing was touched on to a lesser extent,

as it was more predominant in Test 1.

"The block-shaped buildings in this skyline [New York] don't detract because they're offset by other different building types." (R-16-UD)

"The urban form takes away from nature [in Vancouver]. They are not compatible, they're polar opposites. The architecture could have been made more compatible. More natural building materials are needed… wood and brick would have been better." (R-25-PL)

Architectural variety had to be balanced with compatibility so that a skyline was not so diverse as to be void of relationships. People wanted to see that buildings could be individualistic to some degree, but also remain part of a collective whole.

Height & Density

Study participants focused less on height and density in Test 2 than when they viewed the skyline silhouettes in Test 1. When they did speak about it, it was often density that received the most attention. This was because participants usually picked up on a layering effect in the skyline, where high-rises formed not just a single line, but multiple lines one in front of the other. This was most evident in Vancouver and New York, where the sprawling density was viewed negatively.

"If the goal [in Vancouver] is density, then they've achieved it." (R-8-NA)

"[Vancouver] is urban planning gone wrong. …It's expansion gone wild. They're pushing to see how much you can build and how many people you can cram in." (R-7-NA)

"[New York] looks too dense and cluttered…. There's too much similar height and not enough definition between buildings." (R-19-NA)

The other visual effect of layering was on the relationship between building layers. Participants noted that in Frankfurt, where there was a marked difference in height between the background and foreground, there was a need for a medium-density layer in-between that would reduce the domination of the skyscrapers.

"The height and density [in Frankfurt] is overpowering. The modern skyscrapers are overshadowing the foreground and there's no transition between low or high buildings. It should have had medium density in between these two areas." (R-24-PL)

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"The change between the foreground and background [in Frankfurt] is overbearing… it looks like corporations are running the show." (R-12-PL)

History & Progression

There was a great deal of interest in a skyline's historic elements and how it had built upon its past. This was more evident in Test 2 than Test 1, when people could see heritage buildings more clearly. The presence of historic structures usually led to a skyline being more preferred because it showed that the city valued its past and had a story to tell.

"There is respect for older buildings here [in New York], so it could be a European city. That draws me in to explore it. …There are also very old buildings [in Frankfurt] and they're well maintained. The tall buildings respect the older buildings." (R-11-R)

"[Frankfurt] is an improvement when viewed in colour because its story and history are now evident. There's a good contrast between old and new and it inspires you to find out more about this place." (R-8-NA)

"[Frankfurt] has a combination of old and new. You can see that the original town is still there… it has some culture. They are working with the older stuff." (R-7-NA)

"The mixture of old and new [in Frankfurt] is good… the old hasn't been obliterated. I like the contrast between the old and new. I really like this one. The streets would probably be interesting because of the blend of old and new buildings." (R-17-NA)

"The old buildings [in London] are interesting… they add character. There's probably lots of old buildings in here. It's clear that they preserve the old and build upon their history. It invites me to come and walk in here because of the mixture of old and new." (R-6-NA)

Once the historic features were seen, though, respondents scrutinized how effectively they had been preserved and how they had been incorporated into the skyline.

"I like the old buildings in the foreground [of Frankfurt's skyline]. This is done cleverly, the fact that they've preserved the buildings in the forefront." (R-6-NA)

"There's too much modern architecture [in Frankfurt] that overpowers the old areas in the foreground. [MesseTurm] isn't bad because it complements the older styles [due to its pyramid roof]. The newer buildings should have tried to be calmer." (R-15-PL)

"There's no transition between old and new [in Frankfurt]. The foreground and background are not compatible, and they haven't meshed together the old and the new." (R-24-PL)

"There's an historic prominence to [the London] skyline. New buildings don't overpower the old ones and there's contrast and respect to historic buildings." (R-21-UD)

"There's confusion in the identity of this city [London], whether it's new or modern. There's no cohesion between old and new, with nothing tying it together." (R-1-PL)

The history of a city was very important to almost all respondents, and the presence of historical structures not only gave people the impression that a city valued its history, but it also provided an added level of interest. They preferred seeing old buildings on the skyline because their colours, materials, ornamentations, and sizes provided a significant contrast to modern buildings.

Colour & Appearance

Not seen in Test 1, colours on the skyline proved to be factors in preference in Test 2. While not the largest factor for determining what made a skyline most preferred, colour had the ability to catch people's eye in a profound way. Some found that regardless how minimal the colour was across the landscape it had the ability to sway decisions. In some instances, people often struggled to get past the array of colours to look at other physical characteristics.

"I almost put this [Chicago skyline] in least preferred because of the red building. The skyline needs another focus to take your eye away from it. It's a nice skyline otherwise. …The colours [in Shanghai] are so unnatural… they ruin this skyline." (R-25-PL)

"There are lots of conflicting colours [in Shanghai], and the buildings are all very individualistic. They're trying to be expressive but on an individual basis, so the buildings don't really relate well. It's a mishmash." (R-21-UD)

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"There's no flow in the colour of the buildings [in Shanghai], it's just a bunch of different colours." (R-1-PL)

"The buildings [in Shanghai] are not appealing anymore [when viewed in full colour] because… the colours don't go together and are not consistent. …It looks cluttered because of the disparate colours." (R-19-NA)

However, like the aesthetic matters discussed in Landmarks & Distinction and Massing & Architecture, colour is also very subjective. In skylines other than Shanghai, where colours were more subdued, people had a greater tendency to be split over the successful application of colour.

"The presence of this red building here [in the Chicago skyline] is great." (R-16-UD)

"Buildings [in Toronto] look good and the colours are complementary. …There's a variety in colour and style, and the CN Tower looks better in colour. It's not as offensive because the colours match better and there's more continuity." (R-15-PL)

It is clear that people have a desire for colour to be used in a coherent and complementary fashion. It is an effective tool in bringing attention to a building, but can have adverse effects on the skyline if not thought about in context of neighbouring buildings.

Environment & Landscape

The presence of the natural environment had one of the most pronounced impacts on skyline preference of any of the major themes discussed so far. Participants responded favourably to the presence of trees and mountains, and in the case of Vancouver, mountains were the sole reason its preference levels increased from Test 1 to Test 2.

"I like the blending and balance of buildings with the landscape [in Frankfurt]. The green colour of the trees is a good contrast to the buildings. …The mountains really do it for [Vancouver]… and add a lot [to Hong Kong]. …There are trees in the foreground [of Chicago] and there's good contrast between the materials of the buildings and nature. …There is a lack of vegetation and greenery [in London] and big paved areas and buildings without vegetation is not good." (R-20-NA)

"I like the mountains in the background [of Vancouver], but they are the only redeeming feature." (R-6-NA)

"The mountains warm it up, make it green and give it life [in Vancouver and Hong Kong]… it gives you something to look at." (R-13-NA)

However, the presence of nature meant that participants also looked at how the environment had been preserved and respected by the city. In most cases, people were more favourable to a skyline that protected the environment than turned its back on it.

"This city [Hong Kong] still has views to and from the mountains – they haven't obstructed them." (R-16-UD)

"The mountains are lost in this skyline [Vancouver]. The harbour and the water are blocked off… they should have left openings. …It's a heat island filled with smog. I can't breathe here." (R-10-R)

"[Vancouver is] forced to respect the mountains. …The uniformity is good in the context of the mountains. It's very thought out and controlled. …The buildings [in Hong Kong] blend in well with the hills and the heights don't compete with the peaks." (R-21-UD)

"The mountains here [in Vancouver] are nice, I focused on them first. [Hong Kong] is more unique than Vancouver and it blends better with the mountains because the buildings complement them somehow." (R-25-PL)

"Buildings [in Vancouver] are starting to obstruct the view of the mountains. The mountains should have been preserved through view corridors. …The natural features [in Hong Kong] have been obstructed by buildings. It's ugly what this has done to the landscape. They had the potential to work with the landscape but they didn't." (R-24-PL)

There are varying opinions about how successfully a skyline protected and preserved its views of the natural surroundings. While people had different ideas about how skylines should relate to mountains in particular, they all agreed that mountains were assets that needed to be utilized, not hidden.

4.2.3 Conclusions about Preference

Participants in this study desired, very simply, a variety of forms, sizes, and styles in city skylines. Their most preferred skylines usually contained a balance between each of the

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7 major themes described above, although no skyline was considered perfect. The most preferred skylines throughout Test 1 and 2 were London and Toronto; both consistently garnered more "most preferred" ratings than any other skyline, while others varied between tests. Vancouver was the only skyline that was consistently ranked least preferred in both tests.

London's skyline incorporated a great deal of variety, showing the best juxtaposition of historic and modern structures, rhythmic building pattern, assortment of styles and materials, as well as unique skyscrapers and low areas of respite. Despite Shanghai's strong performance in Test 1, it was Toronto's less radical design that allowed it to achieve success in most of the 7 categories in both tests. The skyline showed variation in height and building style, and had memorable landmarks present, all of which were integrated fairly well into a gradually rolling cityscape that participants found pleasing to view. The only element absent from both of these cities was the natural landscape, which Vancouver had in abundance. The natural environment was not necessary in making a highly preferred skyline, though, and posed a challenge for a city's built form.

Vancouver's skyline was highly unfavoured in Test 1 because of its all-around uniformity and lack of any distinguishing features. It was only in Test 2 that it became apparent that its distinguishing feature was the mountains; this revelation did not enhance its preference significantly, though. The lack of variety and interest in the other 6 categories negated what interest the mountains provided. In fact, the mountains further complicated Vancouver's situation by setting a bar for development; buildings had to

submit to the challenge of respecting them, and could not form an interesting skyline of their own.

Showing the skylines in silhouette and colour photographs helped participants to focus on different aspects of their form. In cases like Vancouver and Hong Kong, it helped separate the man-made from the natural, allowing first the buildings to be assessed, then the relationship to their surroundings. It allowed facades and colours to be assessed independently of building massing in cities like Shanghai, aiding in highlighting the specific successes and failures of a skyline with greater ease. Separating the details of a skyline into two images was an effective way to help viewers simplify the scene in order to appraise it.

Since theories of Gestalt psychology indicate that people have a natural tendency to simplify things according to the principle of pragnanz, this is perhaps why participants yearned for variety – they were looking for departures to incite curiosity and interest. Their viewing of figure ground diagrams led participants to sometimes desire *dis*similarity as opposed to similarity, due to the perceived boringness of homogeneous cityscapes. However, extreme departures – where buildings were too strikingly dissimilar – were not preferred.

There are examples in each of the skylines where participants valued similarity and dissimilarity. Echoing the dome of St. Paul's Cathedral in the shape of the Swiss Re office tower in London shows desirable similarity. Conversely, the juxtaposition of old and new in the same skyline shows a desire for dissimilarity. The dissimilar shapes of the CN Tower and Rogers Centre improve the similarly shaped skyscraper boxes of

Toronto. The similar heights on the peripheries of the Toronto skyline concave inwards and are met at the apex by the dissimilar height of the CN Tower. The evidence of similarity and dissimilarity co-existing in the most preferred skylines shows why most participants do not favour the skyline of Vancouver.

This research on preference confirmed the work of Heath et. al. (2000): people look for complexity in a skyline – they do not want it to look boring or homogeneous. They desire variability, and this study was able to answer *why* and *how* with more depth and accuracy due to its qualitative nature. Distinct physical characteristics were found to influence preference, and they have been broken down and explained in detail.

The curiosity and interest provided by the landmarks, organization, massing, height, history, colour of and environment around a skyline translated into a greater desire to go into the city and explore it. This direct link between the skyline and the pedestrian experience is an important one, and is one of many possible messages a skyline can send to an observer. The assorted meanings study participants found in skylines will now be presented.

4.3 Findings about Meaning

Study participants were able to find meaning in most skylines that they viewed. The concept of meaning was at first difficult to grasp for some, but when asked differently or given time to think, they identified messages they felt a skyline was sending. Others found the task easy and spoke at length about the meaning in certain skylines, and it soon

became evident that some cities had more to say than others. During the interview, people were usually asked about meaning after they had explained their skyline preferences, but they occasionally tackled the subject during the preference test.

Figure ground and photograph images gave similar messages to participants, and there was considerable consistency in the meanings themselves. This made it possible to group the meanings together in the following categories:

1) Culture, Diversity & Religion
2) Excitement, Creativity & Imagination
3) Wealth, Economy, Productivity & Success
4) Welcoming, Liveable & Pleasant
5) Heritage, Preservation & Telling Stories
6) Identity, Status, Size & Showing Off
7) Vision, Direction, Planning & Progression
8) Modern, Clean & Futuristic

These categories of meaning were applicable to both Test 1 and Test 2, and contained both positive and negative messages. Meanings were often the same for each city between Test 1 and Test 2, with only occasional differences resulting from the visibility of building colour, depth and details. Therefore, results from both tests will be combined when discussing the findings for the 8 categories of meaning.

Culture, Diversity & Religion

Respondents identified cultural and religious meanings from skylines, particularly London's. Since the spires and domes of churches were still visible on the skyline, it was

said that "religion is important to this place," (R-4-PL). Three other respondents agreed,

saying that there were strong religious and spiritual connotations with this city.

The presence of these religious institutions amongst secular high-rises also gave

observers the sense that the city was a cultural place. The diversity in economic,

residential and spiritual building types led four respondents to say that London was

"cosmopolitan," (R-10-R) and "more culturally based," (R-17-NA). Building diversity

was found to contribute to one message of culture in another city as well, but others in the

sample did not elicit the same reactions. One respondent noted that Hong Kong

"probably has more culture than Vancouver… because of all the building variety," (R-17-

NA). Despite the prevalence of building diversity in other cities like Shanghai, culture

was not identified as a message. This omission may not be surprising, given that culture,

diversity and religion were the least discussed out of the 8 categories of meaning.

Excitement, Creativity & Imagination

Messages that a city was fun and exciting were found in almost every skyline, but some,

namely Toronto and Shanghai, dominated in this category of meaning. Study participants

reacted to the architectural flair and diversity of buildings in these skylines, saying that

these were "places were you can do anything because buildings of so many types are

present," (R-25-PL). The presence of entertainment buildings like observation towers

and stadiums mixed in with the ubiquitous office and residential buildings meant that

people could enjoy themselves there.

The presence of residential buildings was not a prerequisite of a stimulating and

exciting city. In the case of Vancouver, where the skyline is composed almost entirely of

such structures, it was said to be a place where you lived, and this was not synonymous with liveliness, excitement and having lots to do. Ten respondents called Vancouver boring, dull, or uninteresting, and that it likely would not have an interesting street environment, with one respondent saying "I wouldn't have any desire to walk around here," (R-25-PL).

What was synonymous with fun and excitement were creative and imaginative buildings. As found in the preference results, respondents liked uniquely designed buildings that were stimulating for the eye and showed that a city was willing to take chances. Open minded and free spirited architecture meant that a city was less risk averse and was therefore likely a more exciting place. Shanghai was described by nine participants as being expressive, adventurous and unafraid of taking chances, with one respondent summarizing the sentiment as follows: "I think the skyline talks about the life of the city and the experience you have there," (R-18-UD).

Wealth, Economy, Productivity & Success

Skylines were capable of sending strong messages about the wealth of their city, its economic drivers and overall success. Not surprisingly, skyscrapers were the primary contributor to wealth and success, but colour, age and architectural detailing were also factors. Modern skyscrapers in Frankfurt and Shanghai spoke loudly about newfound wealth, while older skyscrapers in New York showed signs of historic accomplishments.

The height and sheer size of buildings in all cities, but Frankfurt in particular, showed that economic competition and market forces were alive and well. One respondent compared London and Hong Kong, saying "I'd go on vacation in this city

[London], but I'd do business in this one [Hong Kong]," (R-7-NA). Both Frankfurt and Hong Kong were said to be major business centres, due to the domination of office buildings on the landscape. One respondent said that in Frankfurt, "corporations run the show," (R-12-PL).

Respondents had little difficulty making the same assumptions about a city in black and white, because height was easily distinguishable. They could also ascertain the uses of buildings without seeing them in colour, especially when viewed close-up as in Frankfurt: "this one is all big business and finance… because the buildings look like office towers," (R-20-NA). Other cities had similar results in Test 2, where it was easier to identify buildings. Chicago was said to have "lots of people working here… it's predominantly employment," (R-12-PL) because only office buildings were easily visible.

Greater building heights and architectural variety contributed the most to a city's perceived success. Because of its very consistent building height and design, five respondents interpreted Vancouver as being poor and struggling. Contrary to other skylines, it received particularly negative associations: "probably a bunch of housing projects in Central Mexico," (R-20-NA), "poverty-stricken because of what looks like a ghetto on the right," (R-9-NA), and "slum-like… the buildings all appear to be in a state of disrepair… it kind of looks destroyed," (R-19-NA). The parallels between rich and varied, poor and homogenous are quite apparent in this category of meaning.

Welcoming, Liveable & Pleasant

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An intriguing finding in this study was that skylines gave very strong messages about a city's liveability and whether it was a welcoming place or not. This category of meaning had variable results between Test 1 and Test 2, as places like Frankfurt became much more liveable and welcoming when observers could see that it was not made up entirely of very tall skyscrapers. Historic buildings and the presence of lower areas that provided respite away from the density of the city's core are what contributed the most to a welcoming and liveable city.

The London skyline fulfilled many of these requirements, with many participants calling it friendly, comfortable and walkable. Three respondents agreed with the message that "[London] is telling me I should come and walk around in here… because of all these interesting buildings… the mixture of old and new buildings," (R-6-NA). The preservation of its older buildings along with areas of lower density caused people to say it "makes you want to visit," (R-9-NA), which was mirrored in New York, where four participants agreed that the skyline enticed you to "come and take a look,"(R-14-NA), and gave you a "desire to wander," (R-22-MM). New York, however, exhibited signs of density, which led to negative messages about liveability.

Density of buildings was most frequently mentioned as a sign of overpopulation and cramped living conditions in both Test 1 and Test 2, with participants citing Frankfurt and Vancouver often. Frankfurt was seen as more tolerable thanks to the mixture of low and high buildings, leading three respondents to agree that density was too high in the background, and that "it's not at all inviting, but the foreground is rather inviting," (R-6-NA). Vancouver, on the other hand, offered little noticeable escape from what was perceived by 9 respondents as: "overkill… there's way too much population

density here," (R-15-PL). Two participants spoke about how living in such a situation

might feel, saying "it's depressing," (R-10-R) and "it's not a comfortable feeling, that.

…I wouldn't want to live somewhere like that… it's like living without breathing," (R-8-

NA).

Density also created an unwelcome feeling, telling four people that "you're not

welcome here [in Vancouver]… it's like you have to fight to get in," (R-14-NA). It

became apparent through this research that skylines with a great deal of density and no

tall buildings protruding above sent messages of cramped and depressing living

conditions. Solid walls of uniformly tall buildings did not appear welcoming, and the

best way to entice visitors was to have uniquely-designed or historic buildings present.

Heritage, Preservation & Telling Stories

The presence of heritage structures in a skyline told observers that a city valued its

history and had a story to tell. As seen in the preference results, it was important to study

participants for a skyline to have some visible elements of history to capture interest, but

beyond interest there is meaning in it. London in particular was said to have "probably

been around for a very long time" (R-12-PL) because heritage buildings like St. Paul's

Cathedral co-existed with modern skyscrapers. There was a feeling that the city had been

built up gradually over time. Eleven respondents identified London as being an historical

place, and said the city showed "a respect for history," (R-23-NA).

New York was also said to announce its history through its skyline, but this was

evident more in Test 2 than in Test 1, as historic buildings were more easily evident.

Twelve respondents found messages of history in its skyline, with one admitting that "the

historical character gives it meaning," (R-4-PL) and this meaning was found by many to be similar to London's: "it looks like it embraces the new but still retains the old," (R-16-UD), and "there's a story attached to it about how this city has dealt with growth" (R-11-R). Respondents often wanted to journey into the city to discover what this story was, demonstrating that heritage is one of the links between a welcoming city and an historic city.

However, even with historic buildings present, it did not automatically mean that the city sent messages about valuing its past. Frankfurt sent conflicting messages to participants, three of whom thought that "they might get rid of the stuff at the front," (R-16-UD) because the skyscrapers in the background appeared to be encroaching. This effect showed the three participants a "complete disregard for history," (R-24-PL), but this is where feelings were split. Four others felt that Frankfurt was a place where "they value their history and preserve the past," (R-13-NA) with one adding that "this is done cleverly, the fact that they've preserved the buildings at the forefront," (R-6-NA).

Historic messages can easily be positive or negative, depending on how older structures have been incorporated into the skyline. For the message to be positive, they must be of equal prominence with newer or higher structures to show that the city values its history. Heritage tells a story about a place and its people, and when visible on a skyline, can start to speak about the values of an urban collective. "Skylines tell stories about people... what sets that city apart from others. It should show respect for the past but look to the future, and people should always be mindful about how the story is being interpreted," (R-11-R).

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Identity, Status, Size & Showing Off

Study participants frequently picked up on messages of size and status in skylines. They noticed that cities seemed to be trying to seek attention through the size or design of their buildings, and could express their position on the world stage by displaying particular landmarks. Whether this was intentional or not was not the subject of participants' scrutiny; rather, they merely observed that such messages were being sent. Some inferred that cities like Toronto and Shanghai were actively attempting to send these messages, while London was more passive and did not have to try.

It was easy for a city to appear large, as the only requirement appeared to be a multitude of tall buildings. Chicago was said to be "a massive place… a big city," (R-22-MM) by 5 respondents, because of its long stretch of undulating skyscrapers. It was not seen to be trying very hard to create a distinct identity for itself, and one participant said they were "comfortable with who they are," (R-23-NA). Toronto and Shanghai, though, were not only said to be large cities, but were bold and trying hard to stand out and impress.

Toronto is "trying hard to be noticed because of the CN Tower and stand out," (R-20-NA) said one participant, with five others agreeing that it was "showing off…because of the CN Tower," (R-24-PL), and trying to show that "we can be a world city," (R-4-PL). Shanghai was very similar in the messages it sent, with five participants agreeing that the skyline was "making statements," (R-5-ED). They went on to identify some of

those messages as: "look at me, we are modern… come see what we can build!" (R-16-UD), "We're looking to the future, so come invest with us. This one's trying to pump itself up as a technology city," (R-23-NA) and "there are signs that it might have been a world expo… because of all the inventive architecture," (R-13-NA).

Some of Shanghai's messages were rather negative, though: "they are trying too hard, saying come look at me, come see us!" (R-7-NA), "it looks contrived and not really genuine… sort of like Las Vegas," (R-25-PL), "it reminds me of a theme park… you've probably had enough after 24 hours," (R-3-PL). Toronto was also criticized: "The CN Tower is compensating for the small penis. Toronto is striving to be this world class city, there is a bit of an inferiority complex," (R-23-NA). The messages sent by these cities' icons are seen to be deliberate acts of attraction, contrary to those displayed by London.

London's skyline, while not sporting the greatest number of messages in this category of meaning, exhibited a decidedly positive set of them. Instead of trying to be a world-class city, it was said to already be one: "this is probably a world city… because of this big church [St. Paul's Cathedral] and all the old and new buildings," (R-12-PL). London was thought to be a "capital city" (R-7-NA) or a "protected European place" (R-5-ED) because of the presence of St. Paul's and other historic structures.   Some participants added that the city was "dignified," (R-17-NA) and "stately" (R-2-NA) because of these buildings.

Skylines can send a variety of messages about the status and identity of a city, and they are largely dependent on the types of structures in them. It is easy for a city to broadcast itself as a large metropolis, but sending messages about its position and

prominence on the world stage is more complicated. Doing so can result in either a forced approach where it is noticeable to observers that the city is erecting monuments to announce its arrival, or a natural approach that is more respected.

Vision, Direction, Planning & Progression

Evidence of whether a city was progressing according to a plan or vision was another frequently observed message in skylines. Participants noted in every city that there were some messages to this effect, but they were most pronounced in Vancouver, New York, London, Frankfurt and Shanghai. New York was the only city where participants consistently felt as though the message was positive – that the city was progressing with thought and planning – while the others did not deliver as good a message.

Three participants agreed that New York showed signs that it was "progressing at the right pace for the long term future," (R-4-PL) and was "going in the right direction… there is evidence of a plan," (R-11-R). Development was described as: "subtle… they're not putting in anything too bold, stuff is sensitively placed and designed… they have a lot of potential to redefine their landmark buildings," (R-21-UD). Two respondents supported this careful method of planning by saying New York appeared to be "orderly and well-planned," (R-20-NA).

Vancouver's skyline painted quite a different story, and many of the preference results speak to this finding. When one respondent was quoted in section 4.2.2 as saying Vancouver was "urban planning gone wrong," (R-7-NA) those feelings were echoed by six other respondents who said the message read: "no thought was given here… development seems very haphazard," (R-24-PL). Another stated plainly that

Vancouver's approach to planning was: "we don't give a s*** about what we're doing," (R-14-NA).

Participants felt as though London, Frankfurt and Shanghai were walking a fine line, in danger of swaying into negative messaging. Opinions were sometimes split, with some saying "there is a sense of planning [in London]," (R-8-NA) and that "change is happening," (R-11-R), but that there are signs of "confusion… because there are not many tall structures, areas are sparse, and buildings are uncomplimentary," (R-20-NA). One participant was "not sure if it's going anywhere… it doesn't look like it's getting to its newer self," (R-4-PL), and another described the scene in Test 2 as though "a nuclear bomb went through and only some buildings survived," (R-7-NA).

Frankfurt and Shanghai appeared disjointed to some participants, but not for the same reasons as London. These cities appeared to lack planning and direction not because spaces needed to be filled in, but because of the way they had been filled in. In Frankfurt, one participant said that the dichotomy between old and new made it appear as if there was "no plan… what is happening?" (R-4-PL), while two others said the city was "reaching for the future, but not forgetting the past," (R-17-NA). Another participant summarized the situation, saying: "it could get better or it could get worse. They're on the edge," (R-7-NA).

Shanghai was said to be in a similar predicament, seen to be simultaneously moving forward and going awry. "This place is progressive," (R-10-R) said one participant, with which 4 others agreed, adding that it was "forward thinking and advanced," (R-18-UD), and "confident… because of the size and shape of their

buildings," (R-8-NA). Others disagreed, saying it sent messages about a city that was

"lost," (R-7-NA), and "it's moving in another direction, but it doesn't really know

where… It's trying to be something, but it just doesn't know what yet… it's gone

amuck," (R-23-NA). The skylines of Vancouver, London, Shanghai, and Frankfurt

suggest that it is possible for a skyline to paint a very different picture of a city's

approach to planning than might actually be the case.

Modern, Clean & Futuristic

Skylines portrayed the cities of Shanghai and Hong Kong as very new, modern and

futuristic places. The cities' buildings contributed exclusively to this message, which

builds upon the progressive attitudes seen in the previous category of meaning. Shanghai

– labelled as forward thinking – was called "futuristic" and "modern" in both tests by 9

study participants, owing to its unique building styles. Hong Kong's modern attributes

were noticed predominantly in Test 2, when architectural and façade details became clear

– its building massing alone was not enough to make it appear modern, unlike

Shanghai's.

The Hong Kong skyline displayed not only messages of modernity, but also of

newness. Five respondents identified it as "a new and recent city," (R-16-UD),

something not said for any other skyline in the sample group. Hong Kong's new and

contemporary image also lent a feeling of cleanliness to the city, with respondents noting

that it seemed "clean" (R-10-R) and "slick and sleek," (R-5-ED). One respondent

suggested that it was important for newly growing cities to embrace skylines as a means

of marketing themselves: "young cities should brand themselves, and they can do this

with the skyline… it'll tell people 'we are going to the future, so come invest with us',"

(R-23-NA). Participants did not comment on Hong Kong's success in branding itself, but

the idea was offered as a potential tool for competing with other cities. The concept of

branding a city based on its skyline will be explored in the final chapter of this thesis.

4.3.1 Conclusions about Meaning

Participants in this study were able to find a great deal of meaning in skylines. Some

admitted that it was difficult, and that people may not do it without first being asked, but

said that it was possible. When asked if they thought skylines had any meaning, most

responded affirmatively and sometimes with fervour.

"Oh yes, the skyline is capable of sending messages. I think there is meaning in the skyline. I don't think that most people pick up on that, and I don't know why. When people are walking along a street they could feel good or bad but they don't know why - the skyline can set the tone for a city and I think it's important that we as design professionals recognize that. Too often we get wrapped up in the minutiae of details of a project that we forget what the big picture looks like," (R-3-PL).

"Is the skyline capable of sending messages? Absolutely. I travel internationally and I often look for the big picture, coming into a city – what statement it sends and what areas I want to spend more time in," (R-8-NA).

"Does it send a message? Yes, I would say yes. It doesn't mean it'll be a deciding factor, for example, if I was to go to London, England, or let's say Chicago, and I saw that picture, I wouldn't then say 'I wouldn't go there.' It won't be the deciding factor in someone's travel plans or business plans," (R-19-NA).

The buildings in a skyline – their individual design and relationship to their

surroundings – are capable of influencing the messages that are sent about a city. In most

cases, respondents were able to analyze the physical characteristics of a skyline and

determine the kind of messages that were being sent. Messages were usually very similar

and could be grouped into one of the 8 categories of meaning, indicating that there were

common threads of thought and people's reactions were not entirely unique. Twenty-five

different study participants observed common messages about culture, excitement, wealth, liveability, heritage, status, direction and modernity that speak a great deal about the subject cities.

The physical characteristics that contributed to meaning were the same that contributed to preference, and this made it possible to see a correlation between the two. The relationship was most obvious in Test 1, where participants were looking at figure ground images. Since there were fewer features influencing preference and meaning in these images, there was a greater likelihood that they would strongly relate. The moment greater detail was added, preference became more subjective; colours and architectural styles were more likely to produce a variety of opinions, so the association between meaning and preference is weaker in Test 2. Figures 4.3 and 4.4 below illustrate the relationship between meaning and preference for both tests. The preference charts are identical to those shown earlier in this chapter, and show how many times a skyline was most, least and medium preferred. The meaning charts display a similar breakdown, showing whether a skyline broadcasted an overly positive, negative, or mixed message to each participant.
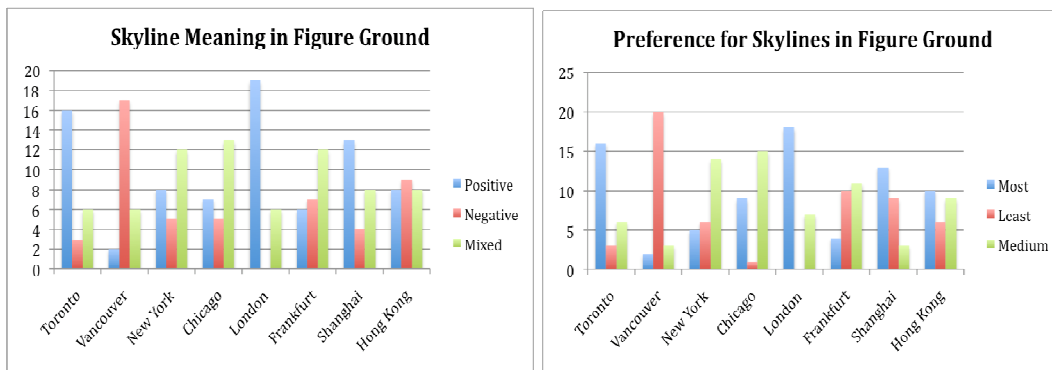

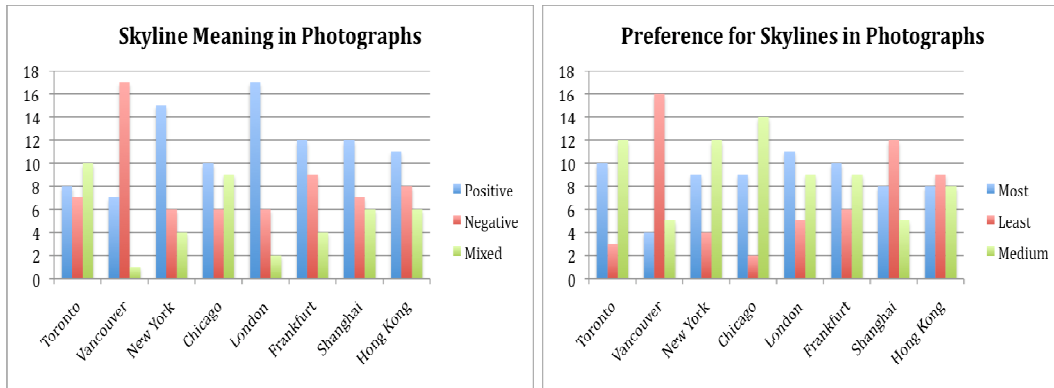**Figure 4.3: Comparing Meaning and Preference in Figure Ground**

Figure 4.4: Comparing Meaning and Preference in Photographs

In Test 1, there are few marked deviations between meaning and preference, and some skylines, namely Toronto, Vancouver and London, have nearly identical results. This is fitting, since it was these cities that were most and least preferred in the sample group. That their meanings correspond so closely with their levels of preference indicates that the messages being sent by their physical form are influencing people's preference for them.

This is evidenced through the many assertions that Toronto's fun and exciting atmosphere is due mostly to structures like the CN Tower and Roger's Centre – structures that, by their very nature, provide opportunities for entertainment. Likewise, London's preservation of its historic buildings meant that the place had interesting stories to tell about its past, and would provide an interesting experience for visitors to that city. Vancouver's unbroken mass gave impressions of high density and unliveable conditions. These physical elements influenced meaning, which in turn, influenced people's preference for the place.

Most other skylines in Test 1 had fairly close relationships, and any discrepancies that did occur were not so markedly different as to change the outcome for a city. In the

case of Chicago, the fluctuation is not enough to upset the general result that it is a city with a decidedly Mixed/Medium level of messaging and preference where positive meanings and high preference make up about half the tally. Shanghai was a skyline where Negative/Least messages and preferences jump from one test to the other, but again, its overall result does not change substantially.

This jump was made up for by a deviation in the Mixed/Medium category, which contains both good and bad participant observations. When participants identified more mixed messages in Shanghai, they were inclined to focus on the negative impressions instead of the positive ones, contributing to a lower level of preference. In Frankfurt – which also had a very high Mixed/Medium category – participants also tended to focus more on the negative messages, and ended up preferring it less. In these cases, the negative aspects of the mixed messaging were stronger than the positive ones, causing them to dominate participants' impressions of the skyline. The relationship is rather close between meaning and preference in Test 1, and it is in Test 2 that marked deviations begin to occur.

The balance between preference and meaning is upset substantially in Test 2 due to the fact that more is visible in the colour photographs. Increased subjectivity is a likely cause, since with the presence of more detail there is a greater likelihood for people to have differing opinions. Perhaps one of the greatest contributors to this imbalance, though, is the fact that while many people acknowledged a skyline was sending positive messages, some simply did not prefer its method of portraying them. Shanghai, for example, was rated several times as being least preferred by study respondents in Test 2, but in many instances they said that it was sending positive messages about being

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progressive, advanced, forward thinking, or creative; the appearance of the skyline was just not aesthetically pleasing to them.

Aesthetic subjectivity contributes greatly to the lack of association between meaning and preference in Test 2, showing that those elements within the realm of architecture cannot as easily elicit common reactions as those within the realm of urban planning. This means that the facades of buildings on the skylines may always remain subjective and produce differing results from different people, but that massing, height, setbacks, and building location elicit more unified and shared reactions. Skyline planning, then, should focus more on shapes than on façade detail, as it is this that will influence preference and meaning with more consistency.

One important conclusion is that the very same physical elements that influence preference also influence meaning – planners, therefore, have a great deal of control over both. While influencing preference is important in its own right, it is perhaps more so that urban planners have been found to exert some control over the *meaning of a place* through its *skyline*. The significance of a city's messaging will be discussed in the final chapter of this thesis.

Whether the deductions made about a skyline are accurate is not the subject of this research, rather it implies that skylines may tell a very different story of what city planners are trying to do. This may tarnish the reputation of a city and reduce the level of pride among citizens. It may not necessarily dissuade travellers, but it creates a first impression that must then be remedied upon entering the city streets. In many cases, respondents said that skylines were important, and that participating in this study had

allowed this realization. They often said that not enough emphasis was placed on the skyline by planning professionals, and that more needs to be done to raise awareness of its impacts on the image of a city.

5.0 DISCUSSION AND IMPLICATIONS

5.1 Introduction

Participants in this study suggested that skylines are very important for urban planners to consider, given their ability to send messages about a place. They were also widely said to be one of the first images of a city, because they are often visible before entering it. Since people prefer certain skylines to others, it is possible that the most preferred skylines can give their cities a competitive advantage. A highly favourable first image of a city may attract more interest from a tourist or businessman than would an unfavourable skyline, and may also bolster more civic pride among citizens.

This chapter will begin by summarizing the main findings of this study, then describing the implications of those findings on the body of theory presented in the literature review. It will continue by discussing the key implications of skyline meaning and preference for urban planners generally, using Vancouver's experience as an example, but also specifically for those practicing in Kitchener and Waterloo. As previously stated, these twin cities are experiencing high growth rates and have begun to run out of green field land on which to develop, meaning higher intensity development is expected in the form of high-rise buildings. Participants in this study offered their opinions on how skylines could be controlled, and often mentioned skyline plans as being helpful tools. They also indicated that skylines may be used as marketing tools and could help brand a city, saying planners would have an important role to play in executing this vision.

5.2 Main Study Findings

The main findings of this study are as follows:

- Participants desired a variety of building forms, sizes and styles in city skylines. Their most preferred skylines usually contained a balance between each of the 7 most commonly mentioned themes: landmarks, planning, massing, height, history, colour, and environment. This research confirmed that found people look for complexity and tend to dislike boring or homogeneous panoramas, and answered *why* and *how* with more accuracy than previous quantitative studies, due to its qualitative nature.

- Showing skylines separately in silhouette and colour photographs helped participants to focus on different aspects of their form. It helped separate the man-made from the natural, allowing first the buildings to be assessed, and then the relationship with their surroundings. It allowed facades and colours to be assessed independently of building massing, aiding in highlighting the specific successes and failures of a skyline with greater ease. Separating the details of a skyline into two images was an effective way to help viewers appraise and interpret the scene.

- The buildings in a skyline – their individual design as well as their relationship to their surroundings – are capable of influencing the messages that are sent about a city. In most cases, respondents were able to analyze the physical features of a skyline and determine the kind of messages they sent. Messages were usually very similar and could be grouped into these categories: culture, excitement,

wealth, liveability, heritage, status, vision, and modernity. This indicated that people shared common thoughts about meaning and that their reactions were not entirely unique.

- The physical characteristics that contributed to meaning were the same that contributed to preference, making it possible to identify a relationship between the two. The association was most obvious in Test 1, where participants were looking at figure ground images. Since there were fewer features influencing preference and meaning in these images, there was a greater likelihood that they would strongly relate. The moment greater detail was added, preference became more subjective; colours and architectural styles were more likely to produce a variety of opinions, so the relationship between meaning and preference was weaker in Test 2.

- The fact that aesthetic subjectivity contributes to the lack of correlation between meaning and preference in Test 2 shows that those elements within the realm of architecture cannot as easily elicit common reaction as those within the realm of urban planning. Building facades may remain subjective and produce different opinions, but massing, height, setbacks and building location elicit more common reactions. Skyline planning, then, should focus more on shapes than on façade details, since it is this that will influence preference and meaning with more consistency.

5.3 Implications of Study Findings on the Literature

The qualitative feedback gained from the interviews provided answers to the following research questions:

1) Do people prefer certain skylines to others?
2) Do skylines bear any meaning?

Much of the literature review supported an investigation centred on these questions, with authors like Kevin Lynch, Spiro Kostof and Wayne Attoe concluding in their own work that people derived an emotional delight from viewing cityscapes, and that meaning could arise from built form. This study's findings supported Rachel and Steven Kaplan's suggestions that there are signs in the environment that people use to guide their behaviour; respondents stated that landmarks helped identify a city, and guided them to areas of interest or importance. The Kaplan's further suggested that people could decipher their surroundings, and this was found to be true: the complexity of skyline images was interpreted and analyzed by study respondents, who were often able to find meaning hidden in the landscape.

Skylines provide a wealth of information to viewers, and this study showed that it was possible to determine what elements in particular were contributing to meaning and preference. It was found that the pragnanz principle of Gestalt has been employed by other researchers (namely Heath, et. al.) to test preferences for skylines, and that it also worked well in this research to do the same. Reducing skylines to figure ground images helped focus attention on certain elements of the skyline that were within the realm of

urban planning – height, massing, and location. The Gestalten theory of figure and ground remains a suitable technique for analyzing cities.

Pragnanz was the most prominent Gestalten principle of the many presented in the literature. People's assertions that some skylines were homogenous and uninteresting support the principle, which states that people have a tendency to simplify things. Despite the presence of some minute differentiation in skylines like Vancouver's, respondents tended to ignore them and view the panorama as very simple and basic. Even though people desired complexity, this finding does not necessarily challenge the principle of pragnanz. Instead, it demonstrates that the desire for complexity may perhaps be fuelled by a tendency to simplify; people yearn for uniqueness and differentiation because they are inclined to make sense of their surroundings in the most efficient and simple way possible. The finding highlighting the importance of complexity in a skyline supports the work done by Heath et. al., who showed that it increases preference for a cityscape.

Wayne Attoe also claimed that skylines could be appreciated for their aesthetic qualities, and complexity figured prominently in his examples. Skylines were not simple entities, and in fact, he showed how simple landscapes were usually altered in an attempt to lend some interest to a place. This study strongly supports many of his principles of skyline design, namely rhythmic building spacing, harmonious fit with natural surroundings, netting the sky with tapering spires and rooflines, punctuating the horizon with tall landmarks, and juxtaposing different buildings. Study participants found these to be necessary in contributing to higher levels of preference.

Attoe, Kostof and Lynch all found cityscapes to bear meaning, and said they could symbolize a place. This is also supported to a high degree by the findings of this study, which show the abundant number of messages respondents thought skylines could send. Attoe and Kostof agree that skylines are collective symbols of a city, that they can reflect social values, and can help orient and identify a place. This study found that participants agreed with each of these abilities, and that a wealth of meaning was visible.

Lynch's theory that meaning was something that should be allowed to develop naturally and without direct guidance was challenged by the study results. He said that cities are built for the enjoyment of a widely diverse populace, resting on the assumption that individual meanings would be too varied. Participants in this study, however, said that planners should influence the messages sent by a city, especially if they are negative. Lynch's assumption that many people would likely not interpret the same meaning about a place has been shown by this study to be incorrect. In fact, the meanings of a place were often found to be so similar that it is very likely cities could effectively communicate brands with their skyline.

The literature widely agreed with this finding, noting that place branding has received substantial attention recently, as cities begin to compete for human and financial capital. Study participants also felt that it was important for skylines to help set a city apart, making itself unique so that it could more easily attract tourism and investment. Since skylines were often seen as symbols of the city and its people, it is appropriate that they act as brand communicators. Many respondents said that given the important role a skyline can play, it is critical for urban planners to play an active role in crafting them. The literature agrees with this assertion, with many authors, including Attoe, saying that

planning controls have an impact on skyline form.

5.4 Skyline Plans and Controls

Urban planners typically guide city growth by developing community plans and implementing them with tools like zoning bylaws. Such plans rarely focus on views and skylines of a city, and instead focus on the ground level, utilizing maps of the city seen from above, and laying out regulations for land use. These regulations are further expanded in and implemented with the city's zoning bylaw, which takes a very site-specific approach to facilitating development. Properties and structures are dealt with on an individual basis, evaluated according to whether they fit the intent of the community plan, and whether they fit the setbacks, height limits and permitted uses for the zone. Consideration is not typically given to the 'bigger picture' or how a building impacts the image of a city, except through view corridors.

View corridors are the closest thing to skyline plans, but are not necessarily intended as one. They protect views to important buildings or natural features, and are employed by cities like Vancouver, where the North Shore Mountains are preserved from imposing downtown skyscrapers. They affect the skyline with respect to height limits and location of buildings, but do not attempt further regulation. Cities still pay most of their attention to regulating the appearance and effects of buildings at street level, which is certainly important, but not the sole consideration. If planners are going to dedicate a stream of their profession to urban design, then it should be comprehensive enough to include skyline design.

"It's very difficult to craft the image of the city," said one planner in this study. "We try, and we need to, to an extent. It's a very difficult task. You look at Vancouver, they tried to do that, to figure out what's the skyline going to look like. On the lower 5 storeys they did a good job, but on the tower portion, they're all the same. That's boring," (R-18-UD). Pointing to the skyline of Vancouver, a member of the public said, "I would hope a planner didn't create that. It's over-planned. I would like to see less regulation. But, I love Vancouver – once I'm in that city, I love it. But when I look at that [picture of the skyline], it doesn't appeal to me," (R-19-NA). Indeed, Vancouver has been praised in recent literature as "the poster child of urbanism in North America… a model of contemporary city-making," (Berelowitz, 2005, p. 1). This is evidence that its street-level planning regulations are working well, but this study suggests that it has been less successful in its regulation of skyline form.

Since Vancouver's model of urban planning and design has received widespread praise and recognition, spreading to other cities across the country and even the world, it is worthwhile to discuss the city's success in the area of skyline design. This study has shown that there are important lessons to learn from Vancouver's approach, and with so many cities modelling their future on the "Vancouver Model" urban planners should be cognisant of the effects similar practices may have on their own city's skyline.

5.4.1 Skyline Planning for Vancouver

Vancouver stands alone in this research as the most unfavoured skyline, fraught with negative messaging. Such a result is ironic, considering that the city is one of the few that places attention on its skyline when assessing development applications. In fact, the

Literature Review showed that it is one of the more progressive in this respect, because it pays attention to its image from a distance. It recently revisited its view corridors and skyline controls, asking the community what they thought of the skyline, deciding that it was time to address what had become known as a boring skyline. The results of this study mirror that public sentiment, with such descriptors applied generously by participants.

It is not particularly surprising to see how the city arrived at this juncture, with strict view corridors, height restrictions, and architectural controls limiting the variability of the skyline. The effects of each of these skyline controls will be explored, showing how planners played an important role in crafting the unfavourable image of Vancouver. Recommendations for improving the skyline will follow this brief exploration, showing what lessons may be learned by burgeoning mid-size cities that are beginning to develop their own skylines.

Vancouver's most treasured views are of the North Shore Mountains, viewed from several locations south of the downtown peninsula, including Queen Elizabeth Park, Cambie Street and the Laurel Landbridge. These views put the downtown skyline front and centre, and high development pressure has seen a great number of towers threaten the visibility of the mountains. The city's response to enact view corridors meant that skyscrapers could only rise to certain heights, and in certain locations. These view corridors blanket most of the peninsula, and do not allow much vertical punctuation, resulting in a very broad, rather flat skyline. The view corridors, or cones, are prescribed in the city's View Protection Guidelines.

Vancouver's View Protection Guidelines can effectively lower the maximum height permitted by zoning (City of Vancouver, 2010), causing the numerous view cones to typically limit whatever variability might have been allowed in the zoning bylaw. The bylaw permits exceptions to the height limits of some of the denser zones, allowing buildings to rise beyond the permissible height. However, the maximum height limits are only allowable if topography and distance from the viewing point cause a building to appear lower in the view cone. Normally, the bylaw's allowances for increased height may have caused greater variability in the skyline, but the view cones do not allow substantial enough increases to achieve this variability.

Only recently have marked increases been allowed in the downtown area, with the General Policy for Higher Buildings being amended in 2011 to permit landmark towers in designated areas (City of Vancouver, 2011). This policy document is to be used when buildings are seeking approval to exceed the height limits of the zoning bylaw, and when they protrude into the largest of the downtown view cones, the Queen Elizabeth View Corridor. It lays out specific guidelines for planners to use when approving these height increases, one of which requires all tall buildings to "establish a significant and recognizable new benchmark for architectural creativity and excellence, while making a significant contribution to the beauty and visual power of the city's skyline," (City of Vancouver, 2011). This policy reflects a desire to improve the overall image of, and generate distinctive points of interest in, the Vancouver skyline.

The emphasis being placed on new benchmarks for architectural creativity and excellence is fitting, considering how participants in this study often spoke unfavourably about the design and architecture of Vancouver's buildings. The need for more creativity

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seems to indicate that the norm has grown tiresome – that further expression is needed in a place where homogenous design has spread across the landscape. These assertions seem to indicate a failing of Vancouver's urban design strategies, and the task of improving them would likely fall to the Urban Design and Development Planning Centre, which is a division of the Planning Department (City of Vancouver, 2009).

By working with the city's Urban Design Panel – a group of professional architects, engineers and developers – Vancouver's urban designers could revisit the policies that are leading to this homogenization. Policies limiting the bulk of towers have contributed to a uniformly narrow building size, and structural setbacks are so minimal that it is difficult to discern changes in massing. The visual effect of countless narrow towers competing for views may be giving the impression of uncomfortable density – all the city's gaps provide views *outward* for residents, causing the views *inward* to be dominated by towers squeezed shoulder to shoulder, peeking over and around one another.

The multitude of regulations governing building height, shape and architectural treatments should be re-visited to assess the impact they are having on skyline images. The city's view cones identify the downtown skyline as one of the primary viewing subjects from Queen Elizabeth Park, so there is clearly a desire to have people gaze upon and appreciate Vancouver's built form. View corridors could be amended to permit taller buildings to encroach in more areas than the General Policy for Higher Buildings suggests. The city might even consider allowing buildings that are taller than the policy's stipulated 700 feet (213 metres). Allowing two buildings, one in front of the other, to reach this height in one location may not provide the necessary variation – one building

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will remain largely obstructed and it will appear as if just one building exceeds the height limit. It may appear as a mistake – a building that slipped through, rather than one that was predetermined to exist there.

More buildings should be permitted to encroach into the view corridors in a manner that suggests thought, as in a gradually flowing crescendo that peaks in a tall structure. The General Policy for Higher Buildings suggests that the downtown CBD is to be accentuated as the predominant point in the skyline, but its suggested skyscraper locations are not even within the CBD. Such accentuation requires significantly taller buildings to rise well above their surroundings, gradually inclining towards the point of prominence. The policy should favour more height within the bounds of the CBD, allowing skyscrapers there to exceed view corridor height limitations. If the city wants to balance the prominence of the skyline and the North Shore Mountains, it may consider allowing buildings to follow the mountain line, so that such a uniform height does not exist. The addition of more height, with buildings allowed to rise above one another, may also have the benefit of relieving the feeling of uncomfortable densities caused by the multitude of narrow buildings. As participants in this study suggested, it gives the feeling that people can come up for air, and are not required to stay contained down below.

Looking at skylines like Vancouver's allowed respondents to see one possible skyline scenario. Essentially, each of the large cities in the sample showed a different option for building a skyline, and participants indicated their preferences quite clearly. Each participant – currently a resident of a mid-sized city – identified skyline features

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that might be employed in quickly growing mid-sized cities like Kitchener and Waterloo – cities that may one day find themselves much larger, sporting big-city skylines.

5.4.2 Skyline Planning for Kitchener-Waterloo

The lessons learned from skyline planning in a large city like Vancouver are applicable to quickly growing mid-size cities like Kitchener and Waterloo, where taller buildings and higher densities are planned. While mid size cities can certainly learn to apply the principles and ideas from the large cities in the sample group, there are distinct differences between large metropolitan centres and Kitchener Waterloo. With their strict growth boundaries, these mid-size cities will likely not grow to be as large as their big-city counterparts, and may not achieve the same level of global importance and development interest. Therefore, the applicability of findings pertaining to big city skylines may be a research limitation, particularly with respect to applying the results to smaller cities.

However, as Kitchener and Waterloo eventually run out of buildable greenfield land, they will be faced with the same constraint as Vancouver – albeit artificially constructed: a hard edge that forces development to occur in a finite area of land. Where Vancouver has water and mountains forming its edges, Kitchener and Waterloo have a regionally mandated countryside line intended to protect surrounding farmland from encroaching urban development. This section will recommend how Kitchener and Waterloo might learn from Vancouver and prepare to plan their future skylines.

Kitchener and Waterloo already have some of the same skyline controls as the large cities used in this study, namely zoning bylaws. The bylaws regulate height,

density, setbacks, uses, and even architectural features, and are intended to make a well-designed city on street level – focused on the pedestrian – inspired by the success of Vancouver. They do not yet have any specific policies for the skyline. Some planners and residents say this is because the skyline is not yet important in Kitchener or Waterloo, that they have no need of a skyline plan. The cities have not achieved nearly the level of growth, visibility and importance of large cities, like the ones used in this study.

"I never think of the skyline of Kitchener, when I'm thinking of what the city should be. There are views and streetscapes that pop to my mind rather than a skyline, and I think that's maybe because there hasn't been that kind of iconic high point," (R-16-UD).

"I've never looked at a skyline of Kitchener... It's photography that creates a skyline. There's no vantage point. I think it's coming to have somewhat of a skyline you know, when you've got the city hall. I don't think it's got much of a skyline, but that's maybe because there's not much diversity in the height of the buildings or the shape of the buildings," (R-19-NA).

"If I think of Waterloo, it's not a skyline at this point. It's almost a, for the skyline to dominate, it would have to be a critical mass size of city. San Francisco, I would think skyline. It would have to be a big city. To get a skyline that's going to dominate your view of the city, it needs to be bigger," (R-20-NA).

Kitchener and Waterloo are getting bigger, though, and with the addition of taller buildings, will start to develop a more significant skyline. Some participants acknowledged this, but planners admitted that while the design of the skyline was important, there were more pressing planning matters to deal with.

"It almost seems bizarre to be thinking about a skyline for KW, and we don't even have any scenic objects to look at. We may see the skyline begin to develop, but I don't think we need to promote ourselves as a global city because we're promoting ourselves as a technological hub. We're not going to be a global city, so we don't need to worry about it. But if we're going to do it, let's do something that reflects the past, and not something that's futuristic. Waterloo to me is a suburb, it's not a city. If there was a skyline to be developed, it should be done in Kitchener. They can do some interesting things," (R-23-NA).

I don't think any of us have ever paid any attention to stuff like that. More attention should be paid to it in planning and design. We've never done that here. Maybe it's too big to tackle. You've got to put out the fires of a development permit first before you take on these bigger projects. It's not as easy to solve as signs or paving colours. The immediacy of other things take over. This kind of a big project needs time, and just gets put off for a year then another year," (R-3-PL).

It may be appropriate to consider the skyline as an equal part of the planning and design of cities, just as Vancouver has. Many participants in this study agree that it is important because it is a major image of the city – in some cases the first image one gets of a city. Kitchener and Waterloo are well positioned to begin investigating opportunities for a skyline plan since land has all but run out and very tall skyscrapers have yet to be proposed. While skyline plans may be more relevant to larger cities that already have a skyline, it could be said that it is too late for them – that they cannot easily go back to change what they have built.

Toronto is unlikely to subdue the monumental effect of the CN Tower anytime soon, should it even want to, and Shanghai will be hard pressed to alter its overwhelming colour palette. Ironically, it is Vancouver that is well positioned to further develop its skyline and the messages that it sends. The city has controlled growth to such an extent that a foundation of unimposing buildings exists upon which to further develop a carefully managed skyline. Suitably high development pressure exists despite this climate of control that it is feasible that planners could craft a skyline of any size or height. An important caution from planners in this sample group was that Kitchener and Waterloo might scare away development if they introduce new skyline regulations.

Vancouver experienced a boom period of what one participant called "controlled chaos," in which large-scale development was encouraged, but regulated. Indeed, its

development has already been termed chaotic by a number of study participants, so it is fitting and not entirely far-fetched. Controlled chaos, or organic growth, as another called it, seemed to be an appropriate starting point for cities when it came to developing their skyline. It was necessary for a city to have a foundation of buildings from which to start, much as Vancouver has now achieved. Kitchener and Waterloo are only now entering the stage of controlled rapid development, with large-scale building proposals in their downtowns – and perhaps it is appropriate for this development to continue without a skyline plan so that they can achieve the necessary foundation – the support structure that contains all the things planners want in the core: active street life, mix of uses, filled-in lots, etc. Once this foundation has been created, the skyline plan can be implemented.

It may take a very long time for a skyline plan to be fully developed, so during this period of controlled chaos, the skyline plan could be crafted, so that it is ready to be implemented when necessary. The reason for its prolonged development is that, like any plan, it requires in-depth consultation, background research, and political support. The consultation for a skyline plan will likely be as equally involved as a community plan, since it requires an agreed-upon vision between policy-makers, citizens and the business community, as well as buy-in from developers. It will be important for such a plan to be gradually introduced and not suddenly unveiled.

It will also be necessary for each city to revisit its zoning bylaw to consider how buildings are being massed, what heights they are permitted to, and how requests for height increases will be handled. Additionally, any architectural controls that are in place will also have to be assessed for their impact on the skyline. Planners will have to be sure that controls pertain not just to the lower levels but to the tower portion as well.

Rooftops should receive special attention because they are highly visible, with regulations pertaining to the design and make-up of the building crown. Deciding how to modify these regulations will take time, and may depend on the form or vision the community has for the city.

A skyline plan may also require something not often employed in typical plan development: an education campaign. Since this research has established that skylines are not often thought about and rarely considered in planning practice, it is likely that the concept of a skyline plan will be alien and confusing. The importance of skylines should be relayed to the community so that they understand why such a plan is being created. Only when they understand its importance will they be likely to contribute to the vision for the skyline.

It may not be a lofty goal to encourage discussion about Kitchener and Waterloo's future skyline form once this educational campaign has been completed. This study has shown how a previously unexplored topic can become meaningful to people, that they can react to skylines, pass judgement on them and make assumptions about a city. The planning profession should consider the importance of skylines and investigate opportunities for crafting and designing them. The messages a skyline can send are often pronounced and planning policies and regulations have a very real part to play in determining what that message is.

5.5 Communicating a City Brand with the Skyline

This study found that skylines could communicate messages about a place, and several participants even said they could be used to market a city. While perhaps not a surprising result, given the degree to which skylines appear in media, it was unexpected to be such a prominent topic. The idea that skylines can be used to market a city is both intriguing and important, and its implications for the marketing and urban planning professions are significant. This discussion will not attempt to address the impacts this may have on marketing, but will focus on the role of urban planners in particular.

Cities now exist in a very globalized world, and it is leading to an increase in the need or desire to brand places. "Countries, regions and cities increasingly compete for attention and influence in order to attract investments, talent, events and visitors on a global scale," (Govers and Go, 2009, p.16). Moilanen and Rainisto (2009) agree, saying that "there are more than 300 cities in the world with over a million inhabitants, and all those cities want to be the most attractive," (p. 3). It is understandably a difficult task, then, to stand out, and cities have done just as companies have and developed brands for themselves. "When brands are strategically implemented they can become the most central competitive factor. A place can be branded when the right tool, the identity, has been chosen which makes it stand out from its competitors," (Moilanen and Rainisto, 2009, p. 3).

The identity of a place may influence its attractiveness, and features that contribute to it include: "culture; environment; social development; the place's atmosphere; and the images related to its brand," (Moilanen and Rainisto, 2009, p. 10).

These factors are ones that skylines can communicate. This research has shown that participants made determinations about a city's atmosphere – whether it was fun, creative, exciting, etc. – as well as its culture and social development. The "images related to its brand" may include skylines, and preference tests found that they do impact a city's attractiveness.

Attractiveness functioned on two levels in this research: aesthetic attraction and tourist attraction. Many study respondents spoke about aesthetic preference as a critical factor in their ranking of a skyline, but notable was their assertion that the skyline also attracted them to visit that city, or do business there. These are the attractions that influence branding; it is not so much an aesthetic exercise as it is a marketing one. Cities are trying to appeal to a global market of consumers, including businesspeople, potential new residents and tourists. Each of those people perceive cities in certain ways, just as the participants in this study perceived skyline messages, so a brand is essentially "created and shaped in the consumer's mind. A brand exists when enough people belonging to the target group think the same way about the brand's personality, (Moilanen and Rainisto, 2009, p. 7). If enough people think the same way about a skyline, it is proof that it may be branding the city with the messages it is sending.

There is some recent evidence of skylines being used to communicate a brand, and it is in Dubai, where a pronounced skyline has emerged since the late 1990's, that this evidence exists. "Dubai looks at itself not as a series of skylines, but as a series of *brandscapes*, where buildings are not objects, but rather advertisements and destinations," (Klingmann, 2007 in Lee and Jain, 2009, p. 242). The new crown of the city's skyline, the Burj Khalifa, is a "colossal and shining advertisement for Dubai's

'supertall' aspirations; indeed, tangible proof of the country's central role in a growing world," (Cooper, 2007 in Lee and Jain, 2009, p. 242). Highly visible on the skyline, Cooper (2007) asserts that the tower's messages are of prosperity, dynamism and success. "Branding in architecture means the expression of identity, whether of an enterprise or a city. Indeed, New York, Bilbao and Shanghai have all used architecture to enhance their images, generate economic growth and elevate their positions in the global village," (Lee and Jain, 2009, p. 242). This research has shown that New York and Shanghai in particular have displayed their brand images through the buildings on their skyline.

These brand images are largely individual, though, reflected through the stunning architecture of landmark skyscrapers – often corporate. Moilanen and Rainisto (2009) agree that physical features can create place brands, and this certainly extends to the skyline, as the example of Dubai will attest. One of the questions surrounding place branding, though is what extent can a place's brand be based on its identity? This raises another, perhaps more crucial question: whose identity is it based on? (Moilanen and Rainisto, 2009). Participants in this study appeared to concur with the literature; that identity should be based on the pre-established culture of the place and not be invented by a few entrepreneurial individuals.

Not only should a city's brand be based on its well-engrained identity, it should be implemented with physical action. One of the seminal authors in the field of place branding, Simon Anholt, says: "I still hear with depressing regularity of national, regional and city governments putting out tenders for 'branding agencies', and funding lavish marketing campaigns of one sort or another, all in an effort to enhance their national or international images. …It is principally deeds which create public perceptions, not words

and pictures," (Anholt, 2010, p. 9). Perhaps this is evidence that actions speak louder than words, and skylines are those 'deeds' – words and ideas put into physical form – that speak about a brand.

The controls that planners may use to shape the skyline are examples of deeds that help portray a brand image. Anholt goes on to say that, "communications are no substitute for policies, and that altering the image of a country or city may require something a little more substantial than graphic design, advertising and PR," (Anholt, 2010, p. 9). By executing policies that influence the city's image, planners become directly involved in the imaging process. Anholt confirms that urban planning is one of the fields that help to build a place's competitive identity, (Anholt, 2010), but that they are not inventing it, they are simply helping to display the already-existent brand.

Other authors agree with Anholt's assertion that place brands should not necessarily be created, but managed, and that many players – not just urban planners – are responsible for this task. "Place branding is the management of place image through strategic innovation and coordinated economic, commercial, social, cultural, and government policy," (Anholt in Moilanen and Rainisto, 2009, p. 7). The skyline should not, therefore, attempt to create a brand for the city, but should work to support and manage the brand that is already in place. Vancouver's skyline does not create a new brand, nor does it support the existing city brand. It is a skyline that sends conflicting messages, and should be brought in line with the messages the city wishes to send.

Likewise, in other cities like Kitchener and Waterloo, whose identities have begun to emerge, it may be wise for the skyline to maintain pre-existing messaging,

rather than create a new one (or work against it). What this messaging might be is not for planners or government to decide, but rather for them to facilitate; participants indicated that discussions should occur with residents and stakeholders to identify what the innate brand of their city is, so that the skyline may honour and maintain it. Participants suggested that those brands might be high-tech or manufacturing, so this offers a reasonable starting place for such discussions.

One participant said Kitchener's skyline should build upon its history: "You need to have some point of reference that you work from. Kitchener has a manufacturing and industrial kind of heritage. …To have a skyline that would take parts of that… is a valid place to come from. At least it would give you a starting point," (R-16-UD). While product or corporate brands often design their own identities, this cannot happen with places, because "they have personalities already moulded and constrained by history and preconceptions. …If branding is to work, there must be a common cause and consensus among stakeholders," (Pike in Govers and Go, 2009, p. 14).

This research has shown that cities (and their skylines) may suffer because their skylines are sending a very different message from what the city is actually trying to communicate. In the case of Vancouver, planners have made great efforts to turn the city into a people-friendly place that puts importance on its physical appearance. Its skyline, though, has sent conflicting messages, as seen in the previous chapter. This is explained through the following branding concepts: "identity, image and communication. The identity of the brand is defined by the sender itself, whereas the brand image is the real image developed in the receiver's mind. Brand identity means how the owner of the brand wants it to be experienced. On the other hand, brand image refers to how a brand

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is being experienced in reality," (Moilanen and Rainisto, 2009, p. 7). Vancouver's identity has suffered because its skyline is communicating conflicting images about the place.

Communications and marketing campaigns are not what successfully brand cities – this point has been made clear by authors in the field. It falls on those in positions to influence physical development to assist in the display of a city's brand, and urban planners play a significant role in the physical development of a city. This study has shown that the physical form of a skyline speaks volumes about a city, and planners are directly responsible for those physical features. Through regulating height, massing, building location, and architectural controls, it is possible to send messages about a city.

It is an exciting prospect to consider that urban planning may have an unexplored branch of study – that its work may be so closely tied with marketing and branding in ways never before thought possible. Planners exert special influence over a city's brand and reputation, and they should work closely with other disciplines to ensure they are not harming the identity and appearance of a place. The following advice could be given to cities: "The way to achieve a better reputation is to endeavour to *be* what you desire to appear," (Socrates in Anholt, 2010, p. 6), and urban planners carry with them this responsibility.

5.6 Future Research

This research explored the idea of perceiving the city from a distance, asking people whether they preferred certain skylines to others and whether those skylines had any

meaning. Its exploratory nature yielded much to think about, but three main points arose, upon which further study could be based. These are outlined below.

- Skylines can be planned, but further research could be conducted to reveal just how this might take place. Specifically, cities that are poised to enter a stage of more intense development could form the subject of a study asking how skyline plans might be developed for them. Kitchener and Waterloo in particular could be examined, as could any other city experiencing high rates of growth and development pressure. Questions may include: how should they develop their skylines? Where are the vantage points? How should the skyline be styled? Where should the tallest buildings be? How should the buildings be designed? In the case of twin cities like Kitchener and Waterloo, how should each city skyline relate to the other? Should they each be individual and unique? Should their skylines develop in coordination with each other, given the proximity of their downtowns?

- Additional investigation could confirm the findings of this research, specifically relating to any of the categories of preference or meaning: height, landmarks, colour, history, etc. Qualitative interviews could be conducted on a much broader level to get a wider view on the issue of skyline preference and meaning. Perhaps opinions are different in other cities; Vancouverites may feel differently about skylines than residents of Kitchener or Waterloo, for example. Furthermore, asking people what the appropriate level of physical characteristics is in a skyline could help shed more light on preference. For example, what level of height is good? What height differential creates appropriate variability in a skyline?

- Further research could explore the relationship between urban planning and marketing. This may shed more light on how the disciplines can work together to coordinate brand messaging, and may help determine if skylines are the most important factor in communicating a brand. This research has shown that skylines are certainly a factor, but it did not explore other contributions buildings might have on a brand. Such research could certainly form the basis for another qualitative study in which marketing and planning professionals are asked what other (non-skyline) features contribute to brands and messages. This may be a suitable platform for studying the influences several different skylines have on their respective city brands.

- It may also be worthwhile to investigate whether businesses have actually chosen to locate in certain cities based on skyline image specifically. Research conducted in the field of place branding shows that firms base decisions to invest and locate based on the general image of a city, but to what extent does the skyline contribute to that decision? Case studies of cities that have a skyline as well as a strong brand may be an appropriate method of approach.

5.7 Conclusion

This research aimed to build upon existing literature about the perception of built form and the image of the city. Instead of focussing on the perception of the city from within, as has been standard practice in urban planning, this study broadened the scope to include perception of the city from a distance – its skyline. The research was exploratory in

nature, since few studies on skylines exist. It was necessary to combine elements from several key pieces of literature, starting with Kevin Lynch's the Image of the City, and building upon it with dedicated skyline works by Wayne Attoe and Spiro Kostof. These literary works span a period of almost 40 years, showing that little attention has been devoted to skylines in both literature and in practice.

Using a qualitative approach, this study attempted to gain a better understanding of the perception of skylines by both planners and the public by asking whether people prefer certain skylines to others, and whether they bear any meaning. Through in-depth interviews, participants analyzed images of 8 different skylines from around the world, each with distinctly different shapes and characteristics. It was found that people do indeed have skyline preferences, which are influenced by physical elements such as landmarks, organization, massing, height, history, colour and the environment. Together, these elements created a dynamic and interesting scene that not only was highly preferred, but also had a wealth of meaning. Participants confirmed that skylines sent messages about their city, both positive and negative, and that these messages actually contributed to preference. Meaning was derived from the same physical elements as preference, showing that the two research questions are closely linked.

The close relationship between preference and meaning has profound implications for urban planners, who are constantly trying to improve not only the quality of life, but also the image of a city. The field of urban design has concerned itself with the positive perception of built form, and practitioners know very well that the meaning a vista has for someone is invaluable to the success and appeal of that place. Just as a pedestrian stands at the entrance to a public square and derives meaning from the features within it, one can

view a skyline and make the same assessments about the level of enjoyment that city may bring, what it offers, and who and what it is meant for.

The level of attraction offered by a skyline as well as the messages it sends about a place may influence a person's overall image of a city. The growing need to stay relevant in a globalized world has led many cities to pursue branding strategies, and this study has shown that skylines can send very different messages than what spokespeople are trying to say. It is necessary, then, for planners to consider the 'bigger picture' when dealing with development proposals; buildings may affect the skyline, thereby affecting the image of the city. The planning profession has a significant role to play in caring for that image, and ensuring that residents and visitors alike are proud to snap a photo of the skyline and say: "this is where I live," "I've been here."

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APPENDIX 1: STUDY STIMULI

Skyline Figure Grounds

Skyline Photographs

Please note that all preceding images have been re-sized and compressed for inclusion in this thesis. They were shown at their full size and resolution in the interviews.

APPENDIX 2: ADJECTIVE CHECKLIST

BEAUTY	
Appealing	Unappealing
Beautiful	Ugly
Bright	Dull
Clean	Dirty
Elegant	Unadorned
Fashionable	Unfashionable
Colourful	Drab
Timeless	Dated
Decorated	Stark
Dignified	Undignified
Distinctive	Ordinary
Neat	Messy
Ornate	Plain
Scenic	Unscenic
Real	Phony

ORGANIZATION	
Simple	Complex
Heterogeneous	Homogeneous
Proportional	Unproportional
Rectilinear	Curvilinear
Large	Small
Orderly	Chaotic
Organized	Disorganized
Symmetrical	Asymmetrical
Rhythmic	Un-rhythmic
Shaped	Shapeless
Varied	Repetitive
Well balanced	Poorly balanced
Roomy	Cramped
Harmonious	Discordant

SYMBOLISM	
Spiritual	Non-spiritual
Rich	Poor
Expensive	Cheap
Feminine	Masculine
Cultured	Uncultured
Meaningful	Meaningless
Cozy	Monumental
Progressive	Conservative
Full	Empty
Reverent	Irreverent

EMOTION	
Calming	Upsetting
Cheerful	Gloomy
Exciting	Unexciting
Expressive	Unexpressive
Familiar	Unfamiliar
Invigorating	Fatiguing
Clear	Confused
Exhilarating	Depressing
Gentle	Brutal
Imaginative	Unimaginative
Impressive	Unimpressive
Inspiring	Discouraging
Lively	Dull
Pleasant	Unpleasant
Stimulating	Un-stimulating