Reading the Urban Form:
An Urban Morphological Evaluation of Downtown Sports Facilities in London and Hamilton, Ontario

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Abstract

Over the past few decades, the issue of downtown revitalization has been a priority for planners and civic leaders. One strategy of attracting people, jobs and investment to the downtown is by constructing a catalytic facility that facilitates further growth, of which the sports stadium is “by far” the most prevalent example (Coates and Humphreys, 2011; p.5). However, the outcome of downtown stadium development has been inconsistent in cities across North America. The purpose of this thesis is to determine whether the built urban form impacts the outcome of downtown sports arenas and whether it contributes to civic image.

An urban morphological analysis is conducted in order to evaluate the outcome of two multi-purpose sports arenas: Budweiser Gardens in London, ON and Copps Coliseum in Hamilton, ON. The analysis traces the evolution of both cities’ downtown urban form over time, identifying patterns to development by categorizing the townscape into three elements: the town plan unit (consisting of the street pattern, lot pattern and building pattern), the building fabric and land use. The urban morphological analysis was undertaken utilizing fire insurance maps, tax assessments and planning documents. In addition, a questionnaire was distributed to 200 residents of both case cities in order to gauge each facility's contribution to civic image.

The results show that Budweiser Gardens has emerged as the more successful facility, namely due to two factors: (a) the arena is sited close to the central business district, in an area where the historical townscape has been preserved to a greater extent; and (b) because the unique design of the facility (which incorporates a replica of a historic building into the contemporary development) contributes to a higher degree of civic image than Copps Coliseum, which lacks both historic and current place references. The ultimate conclusion of this thesis is that urban morphological analyses should be incorporated into urban plans, so that the siting of future projects can be improved in order for cities to accrue the maximum benefits and return-on-investment.

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 final revisions, as accepted by my supervisors.

I also understand that my thesis may be made electronically available to the public.

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“The greatest buildings in history

have always reflected the zeitgeist.

And right now, the zeitgeist is sport:

it is the global currency.”

– (Sheard, 2005; p.5)

Chapter One: Introduction

The sports industry, as well as the related entertainment, culture and leisure industries, has grown at a rapid pace throughout Ontario and across North America in recent decades. This is evidenced by the considerable amount of investment and resources put into the planning, designing, construction and marketing of sports stadia in recent years; surprising considering the precarious state of most municipal budgets. In some instances, funding for sports facilities has been prioritized ahead of investing in essential services such as civic infrastructure and public schools.

The proliferation of new sports stadia has changed the form, function and identity of cities, and nowhere is this more evident than the downtown. Downtown stadium development is but one component of a long-term strategy to intensify and revitalize the urban core after decades of disinvestment and neglect. Many cities are now starting to reap the rewards of downtown revitalization, as evidenced by recent census data that show urban population growth rates outpacing suburban areas in dozens of cities (Frey, 2012). However, such progress has not been without struggle – conflicts between developers and residents, the loss of neighbourhood identity due to gentrification and the net migration of jobs overseas continues to plague cities.

The purpose of this research is to determine whether the urban form impacts the outcome of a downtown sports stadium, and whether such projects inhibit or contribute to civic image. A case study approach is used to examine the built form surrounding two multi-purpose arenas built to revitalize each city's downtown, with the selected cases being the Ontario cities of London and Hamilton.

1.1 – Overview

The proliferation in sports stadia construction is due to two firmly established trends. The first trend refers to the increasing demands from sports fans and sports franchise owners for new facilities. Owners claim new facilities are needed in order for a team to remain viable in today's professional sports market, with older facilities (some built as recently as the 1980s) cited as being at the end of their productive life cycle, physically and technologically obsolete, and having poor accessibility despite subsequent upgrades and/or renovations. The increasing operational costs of professional sports franchises in recent years (namely due to spiraling

athlete's salaries) are also forcing many owners to exploit new revenue opportunities. New facilities allow for greater diversity in revenue sources, with some sources being excluded from league revenue sharing; examples include the sale of box/luxury suites, on-site parking and concession sales (Goodwin, 2001; Mason et al, 2007).

The second trend is the desire of civic officials to aid in downtown revitalization efforts in order to reverse declines in employment and downtown core use. Developers are typically hesitant to invest in the downtown unless there are plans for an anchor project, which can attract ancillary development in addition to people. According to Coates and Humphreys (2011), a sports stadium is the prototypical example of an anchor development and is "by far" the most popular revitalization tool used by cities (p.131). Locating a new stadium downtown is one component of a long-term strategy to not only lure suburbanites downtown, but to replicate the traditional notion of the downtown – a place where people live, work and socialize. The idea of replicating land uses found in suburban locations is a popular (albeit outdated) strategy, but nonetheless has been successful in attracting a greater diversity of uses, events and activities (Robertson, 1995). The outward manifestations of these two trends have been the physical redevelopment of the urban core and a significant contribution to civic identity.

Sports facilities have an inherent potential to attract ancillary development. Since stadia bring thousands of people to one area for events, it can create a critical mass that stimulates new building construction, adaptive re-use of existing buildings and create a new image for an urban district (Robertson, 1995). The addition of ancillary development (examples including but not limited to retail, bars, restaurants and hotels) that clusters around a stadium can create what is referred to as a sports and entertainment district. If deliberately planned, a sports and entertainment district can further promote revitalization outside the district itself (Hinch and Higham, 2004).

Although the potential to revitalize derelict urban areas exists, the results of downtown stadium development have been inconsistent in cities across the continent. The design of the facility and its impact on its surroundings is one factor; deadlines and external pressure imposed upon cities by sports franchise owners is another. However, one crucial factor that may explain inconsistent developmental outcomes is an awareness of a city's historical growth patterns (or lack thereof), research that is uncovered via a morphological analysis.

Urban morphology is an emerging field in urban planning. It is known as the study of city forms (Gauthier and Gilliland, 2006) as well as the study of the change in urban structure over time (Whitehand, 2009). The key to understanding urban morphology is to view the city as a living organism, not unlike that of a living being. The city is an object that is constantly altered, expanded and improved upon over a period of time, based on the decisions by a plethora of actors. According to Vance (1990), "Cities are culture and geography's largest artifact, the product of a very complex play of greatly varied forces" (p.3). Understanding how an urban district has evolved over the years that allow us to detect patterns that can better predict revitalization outcomes.

One way of examining urban form is to view the city through the lens of global economic forces. Massive structural changes to the urban economy due to globalization has meant cities must diversify in the number of amenities it offers – not only to improve their image, but also resident's quality-of-life in order to attract business, tourists, and an educated workforce (Boyle and Rogerson, 2001). According to Beriatos and Gospodini (2004), globalization is eroding the concept of borders (in addition to regional identity); however, one way to enhance local/regional place identity is through sports.

In the current post-industrial economy, civic boosters cite the need to transform their downtowns into a centre for entertainment, culture, tourism and consumption as an economic strategy. The belief that building a world-class sports facility that will attract (or keep) a professional sports franchise will improve a city's image, contribute to civic pride and serve as a landmark is an oft-cited claim. Sheard (2005) is one of the biggest boosters for stadia as a tool for redevelopment, writing:

> A stadium, more than any other building type in history, has the ability to shape a town or city. A stadium is able to put a community on the map, establishing an identity and providing a focal point in the landscape. Stadia are the most 'viewed' buildings in history and have the power to change people's lives: they represent a nation's pride and aspirations...the 21st century will establish sport as the world's first truly global culture. It will become the internationally recognized social currency. Consequently the stadium will become the most important building any community can own, and if it used wisely, it will be the most successful urban

planning tool a city can possess (p.5).

1.1.1 – Study Rationale

In an era of economic uncertainty and strong inter-urban competition, cities are still applying old redevelopment strategies hoping to replicate success found elsewhere, and are still grappling with applying suitable mechanisms to produce an amenity-rich environment that creates a high quality-of-life for its residents. This means stadium development projects are not critically evaluated, with civic leaders failing to recognize their multi-faceted nature and the problems posed by a one-size-fits-all approach to urban revitalization.

In many cases, the decision to build a sports stadium has been made before planners have a say in the matter, leaving them with few options on where to site the facility, or how to accommodate the facility and its related programs. Factors such as the evolving urban form, the evolution of the city-franchise owner relationship, as well as the precarious financial state of most cities obfuscates the means of how these projects are carried out, as well as its prospects for success. Rarely are complex issues such as urban morphology and civic image compared to stadium project outcomes.

An exploratory study by Buckman and Mack (2012) revealed that the successful outcome of a stadium is in some way hinged on the surrounding built form. In the end, the authors call for a more comprehensive evaluation of stadia development projects with a focus on urban morphology. This thesis will answer that call, and will analyze the urban form surrounding two multi-purpose sports arenas: Budweiser Gardens in London, Ontario and Copps Coliseum in Hamilton, Ontario.

1.2 – Research Question and Objectives

This research is a comparative case study analysis of two stadium development projects, demonstrating the importance of evaluating issues concerning urban form and image before and after each facility opened. This thesis will answer four research questions:

- What does it mean for a new development to *respect*, or *fit* into its physical surroundings?
- How does one define success in evaluating sports facilities?
- Do successful sports facilities respect the morphology of their context and how does

this factor relate to civic image?

- How can we define and measure civic image, especially in conjunction with sports facilities?

1.3 – Significance of Study

This research is significant in two ways. First, a morphological study of stadium developmental outcomes will hopefully provide a stronger link between urban morphology and downtown revitalization outcomes. The majority of planners involved with such projects overlook both the historical urban growth patterns and the urban fabric, and focus instead on land use and demographics (Moudon, 2002). Understanding these patterns will facilitate better and more predictable revitalization results, as well as provide the maximum return-on-investment for all the stakeholders involved in such projects. Another significant aspect of this research will determine whether stadia can successfully serve as a unifying element in the public realm and enhance local place identity. This will be uncovered by applying theories of place identity to the two selected sports facilities.

The ultimate objective of this research is to provide a better understanding of urban growth patterns to planners and project developers. Since sports facilities are a significant investment, it is crucial that cities be able to maximize their return-on-investment, as well as their ancillary benefits. The great variety of elements and functions of the downtown affects its physical adaptability and functional flexibility, impacting its ability to accommodate new developments. Therefore, an awareness of the core's functional diversity and spatial variations is important to assess to what extent the downtown can adjust to uncertain future changes that occur either in the downtown or in the surrounding area.

It is anticipated that this study will add to the already significant body of research in regards to stadium development, while contributing to the fields of urban planning and urban geography. This research will also validate the link between the spatial distribution of sports facilities and complementary uses. Within the framework of this research, it is argued that the vitality and degree of success of a sports facility cannot be understood without exploring the relationships with the physical elements of the urban fabric.

1.4 – Layout of Thesis

This study is divided into seven chapters. Chapter two reviews the literature related to a variety of topics including sports facilities, civic identity and urban morphology. Chapter three will develop a research methodology that will be used to answer the research questions. The following two chapters will study in-depth each case selected for this research. Chapter six will reconcile the findings of the investigation with the theories proposed in the literature review in order to answer the research questions. The final chapter will state the conclusions of this research, explain the significance of this research, and provide a list of recommendations to experts and stakeholders.

Chapter Two: Literature Review

The following literature review includes discussions on the history and role that sports facilities play in their surroundings, the economic impact of stadiums (in terms of micro-scale funding mechanisms and in global macroeconomic trends), as well as the role civic image/identity plays with such projects. The final topic is an exploration of urban morphology, with the review's conclusion stating how each topic fits the research narrative.

2.1 – Sports Stadia

A stadium is a significant element of the urban fabric: in terms of their size, function, the amount of land it occupies and the spatial relations they motivate. A stadium also requires more services and in greater quantity; examples include parking, transportation access, as well as supplementary commercial and recreational uses. In addition, the stadium has always formed some aspect of the surrounding region's identity, since people from surrounding communities are attracted to the various events it houses. To this day the interaction between the stadium, its patrons, and the events hosted in these buildings has remained consistent over time. This section will outline the history of the stadium, its role in the urban landscape, as well as outline recent trends in how a facility is planned to encourage adjacent development.

2.1.1 – Overview

Stadia have been at the center of civic life for millenia. From ancient beginnings in ancient Greece and the Roman Empire to its decline in use during the Middle Ages and resurgence in recent decades, the sports stadium has seen the rise, fall, and rebirth in terms of their role in society. Over the last few hundred years in Europe and North America, sports stadia have evolved in building quality – from temporary wooden structures to becoming grandiose, permanent buildings. While the events and the audience's role have been consistent over time, stadia have not become a commercial entity until recently (Rizzo, 2008).

Fig. 2-1: Lowry (1953).*Going to the Match*. Source: Wikimedia Commons

Throughout most of the history of urban North America, cities had little to no involvement with stadia. Beginning in the 1860s with the founding of the first professional sports franchise and lasting until the Second World War, wealthy team owners financed and built sports facilities privately. One advantage to this approach was that the owners had total control of the venue, and kept all the ticket and concession revenue it would generate. Examples of privately-built facilities include the Montreal Forum in Montreal and Maple Leaf Gardens in Toronto (Bunnage, 2011).

Sports facilities built during this era were inherently urban-friendly: they were located in high-density, mixed-use urban areas near transit corridors and were built out to the sidewalk to maximize building space. Public transit access was among the most important considerations for owners when locating a site for a stadium. It is no coincidence that many franchise owners owned rail lines; some owners even operated sports teams at a loss knowing that the increased use of trolleys/streetcars on game-days would more than offset the losses incurred from sports teams (Bunnage, 2011).

The site constraints faced by dozens of sports venues occasionally resulted in an awkward built form; this was particularly the case for ballparks. Such site constraints produced an unintentional but important design aspect – an asymmetrical playing field. Rather than detract from the game, this feature contributed to a ballpark's charming character and identity. For example, Fenway Park's most well-known feature is the left-field wall (colloquially known as *the Big Green Monster*), which is significantly closer to home plate than the right-field wall.

By being woven into the urban fabric of their respective neighbourhoods, so-called classic stadia were synonymous with each neighbourhood, and participated fully in the social and

economic activity of the neighborhood. However, not all sports facilities share these idiosyncrasies; unlike baseball, other sports such as hockey, basketball and football require fixed dimensions for playing surfaces, and are thus less affected by land constraints (Bess, 1996).

After the Second World War, cities underwent a significant decentralization in work and living arrangements. Two predominant reasons are cited: the massive growth of suburban development fueled by declining building stock and greater accessibility to new home mortgages, and the increased affordability of the automobile (Nelson, 2007; Rizzo, 2008). Whereas before this time the majority of people commuted by walking or using transit, residents now traveled by private automobile to the central city to attend sporting events. This placed ever increasing pressure on franchise owners to build more parking spaces on what little available land existed.

Civic officials knew the problems that increased traffic would bring. They recognized that it no longer made sense to build new stadia in the urban center because of the greater demand for parking and increased traffic before and after games. At the same time, team owners realized that their fanbase no longer lived in the central city, but in suburban areas. To resolve these issues, cities and team owners partnered to build multi-purpose stadia, thereby launching a new era in sports stadium design called super stadia. The first super stadium was RFK Stadium, located in suburban Washington, D.C., opening in 1961 (Nelson, 2007).

Super stadia had a similar appearance: they were oval-shaped (to accommodate both football and baseball), symmetrical, and lacked any elements of human scale. Super stadia were located outside of the central city near expressways where cheap, plentiful land existed and facilitated easier access by automobile. They were meant to convey a modernistic identity to cities, housing the latest in technology (such as artificial turf and domes that protected people from the elements) while at the same time creating a recognizable landmark for the metropolitan area. Perhaps the best known super stadium is the Astrodome in Houston. Upon its grand opening in 1965, it received international adulation and was nicknamed *the eighth wonder of the world* (Goodwin, 2001).

While super stadia were meant to save the central city, sports fans began to complain about these facilities, derisively referring to them as “concrete ashtrays” and “drab, multi-use bowls” (Nelson, 2007; p.5). Critics complained these buildings were sterile looking, lacking the

quirks and character of classic stadia from the early 20th century and earlier. The lack of human scale meant the building was so imposing it overwhelmed patrons both physically and cognitively. When describing super stadia, Coffey (2000) wrote: "...the result was a series of soulless, symmetrical bowls of concrete, covered in carpet, stuck by an interstate, suitable for a variety of sporting events and pleasant for virtually none" (p.10).

In addition, the shape of the facility made viewing unsuitable for both sports. For example, when super stadia were used for baseball, fans were seated as far as 600 feet from home plate (Rizzo, 2008). Since these structures required a reliance on the automobile for access without any planning for public transit access, severe traffic jams were caused before and after games. Venue owners realized it was nearly impossible to house different sports in one facility without compromising the integrity of either sport.

By the late 1970s, the crises in North American cities reached its zenith. While the growth rates of suburbia outpaced that of urban centres in Canada, they were nowhere near the rates of American cities. From 1950 to 1980, half of the 20 largest cities east of the Mississippi River lost 20% or more of its population. The migration of middle-class residents to the suburbs left poor and marginalized residents clustered together, with inadequate services and dilapidated infrastructure (Lewyn, 2010). This de-population of the urban core hastened the obsolescence of suburban stadia. Today, of the 14 super stadia built in the United States, ten have either been demolished or abandoned in favour of new facilities. In Canada, the most well-known super stadium, Olympic Stadium in Montreal, has no primary tenant and cost an astronomical sum of $1.61 billion (Egan, 2008).

The slow growth in the sports industry continued well into the 1980s. An economic recession during this period caused a significant increase in interest rates, making new development nearly impossible to finance. With team owners demanding new facilities in order to remain viable and civic leaders recognizing the need to dramatically re-invest in the downtown, cities began to offer incentives to franchise owners to re-locate downtown (Chapin, 2004; Rizzo, 2008).

The 1990s was the start of a new era in stadium development, with sports franchises re-establishing team identities as well as revenue growth. As Beyard (2001) wrote: "The demand for new stadiums has also come from various trends within the professional sports industry: for

one thing, the lack of lucrative luxury seats, preferential club seating, and high revenue concourse activities has rendered many stadiums obsolete...[Other factors include] the evolution of professional sports into a true entertainment industry" (p.47).

One of the trailblazers that popularized the concept of the new urban sports stadium is Orioles Park at Camden Yards in Baltimore. Since opening in 1992, it has served as a model for downtown sports facilities not only for its retro architectural design (as a homage to classic ballparks), but also in how the facility was planned to incorporate adaptive re-use of historical buildings and how it married classical features with modern technology (Chapin, 2004). It is credited with attracting millions of people to downtown Baltimore and to the nearby waterfront.

2.1.2 – Stadium Development in Urban Revitalization

Since the 1990s, great effort has been made to locate new sports facilities downtown. Austrian and Rosentraub (2002) state: "By 1995, sports venues had become the centerpiece of regeneration efforts" (p.549). Another trend in the post-industrial city is the desire to revitalize blighted and decrepit downtown districts. According to Noll and Zimbalist (1997), the presence of these two trends has created an environment where "facilities that are well integrated into an urban framework have substantial potential for both influencing development patterns and coupling attendance at a game or events with other activities" (p.183).

Urban revitalization is an important objective for cities since the downtown is the nucleus of a city and represents the identity of the metropolitan area (Robertson, 1995). Haven-Tang et al (2007) writes the downtown is the lynchpin of success in cities, and notes that government and business leaders know a healthy downtown is a requirement for a successful metropolitan area. Economists have noted that the regenerative effects of a stadium are better if the facility is located downtown, since it produces more economic spillovers and has a much stronger agglomeration effect compared to a suburban stadium (Nelson, 2001). Patrons are more likely to explore the city and linger before and after an event in a downtown stadium to shop or dine in a restaurant, for example. The head of one downtown redevelopment agency has said "...as a direct result of the decision to locate the ballpark in the heart of downtown, we got an additional $75 to $100 million worth of development" (Vorgrin, 2003; p.16).

A stadium that is better integrated with its surroundings produces more pedestrian spillover, thereby encouraging people to stay and explore the district. John et al (2007) states it is

crucial for sports facilities to be comfortable and safe, while offering enjoyable entertainment. However, many stadia fall short on architectural excellence and that "sports stadia tend to be lumpy agglomerations of elements that are out of scale with their surroundings and conflict with each other, and harshly detailed and finished" (p.1). To maximize potential benefits, John et al (2007) says that proper integration and "design excellence is achieved in stadia when structure, enclosure and finishes at all scales – from overall form right down to the smallest detail – a single concept which functions well, is rich and expressive, and avoids jarring conflict" (p.3). Otherwise, stadia will produce negative externalities such as noise, traffic and increased demands on infrastructure.

2.1.3 – Planning for a Catalyst

One of the most successful revitalization methods a city can employ is to plan for a catalyst. Catalysts (in an urban planning context) are defined as facilities that generate urban development in their immediate surroundings by its own virtues. A catalyst can refer to a physical concept (i.e. a building or streetscape project), as well as a policy (i.e. financial incentives and organizational arrangements between government and developers). The term catalyst is most often used as a synonym to describe the result of development, and is used interchangeably with terms such as anchor, multiplier, and critical mass to name a few. Specifically, a stadium should only be called a catalyst if it generates activity *and* additional redevelopment. In planning nomenclature, the term multiplier is a misnomer since it is an economic term and cannot be used to accurately measure the non-economic aspects of redevelopment (Sternberg, 2002).

A catalyst plays an important role in stimulating interrelationships in the public realm and between neighbouring establishments. The most important effect of a catalyst is to generate pedestrian activity that adds vitality to its surroundings, thereby encouraging patronage by people to visit and explore the area (Bohannon, 2004). To become successful, a catalyst must not be solely a stand-alone element, but become part of the framework that guides future development. In addition, it should not only address physical revitalization needs, but also the socio-economic needs as well as respecting the local context (Sternberg, 2002).

Several types of buildings can act as catalysts (i.e. museums, convention centres, art galleries and performing arts centres), but by far the most popular example has been the sports

stadium (Rosentraub, 2009). The evidence to support this assertion is staggering: between 1990 and 2011, 102 new stadia have been built for the "big four" sports leagues – the National Hockey League (NHL), the National Basketball Association (NBA), Major League Baseball (MLB) and the National Football League. From 1992 to 2006, 69 facilities have been built or extensively renovated (Diegnan, 2006). As well, there are scores of stadia built within the same period for minor league sports teams and international sporting competitions, in addition to renovations/upgrades to existing facilities. According to Coates and Humphreys (2011), over 79% of new stadia are located downtown or in the central core.

Even after deep cuts to fiscal transfers by federal agencies (Filion et al, 2004) and a severe global recession in 2008, it has still not diminished cities appetite for new stadia. New major-league arenas are currently planned or under construction in Markham, ON, Quebec City, Edmonton and Seattle. In addition, three Canadian Football League facilities are currently under construction in Ottawa, Hamilton and Regina, with each project valued in excess of $100 million. When faced with the evidence, it is clear that sports stadia will remain part of the urban fabric for some time. If a stadium is to be successful – that is, if a stadium acts as a catalyst for redevelopment, achieves a return-on-investment for the city and serves as a nationally renowned landmark, Chapin (2004) lists three guidelines that cities must follow:

- There needs to be a steady fan-base that will support the team and buy tickets for home games
- The area surrounding the stadium itself needs to stimulate foot traffic by serving as a destination when no games are being held
- The facility must be able to convert to, and successfully attract, other uses so the facility is used more frequently.

Not all stadia have the same effect of attracting ancillary development. Football stadia tend to be incompatible in a downtown setting. Due to the overwhelming size and scale of a football stadium, it is incompatible with the small, narrow street grid found in downtown cores, and may lack the dimensions of human scale. As well, since a regular season in professional football lasts 18 weeks, this means the facility is used nine times out of the year. Development cannot be lured to a football stadium if the facility sits empty 34 weeks out of the year. Smaller, more frequently used facilities such as ballparks are a better fit in the downtown, since an

average MLB facility hosts at least 82 home games per season (Chapin, 2004; Diegnan, 2006).

However, an arena is generally the best fit downtown out of the three types of sports facilities. Not only can an arena successfully accommodate both hockey and basketball (with professional hockey and basketball leagues hosting at least 41 home games per year respectively), an arena is smaller than a ballpark, thereby exerting a smaller building footprint downtown. This same trait also means less land has to be assembled, translating into lower capital costs for construction on average (Diegnan, 2006). As well, an arena can more easily convert to host other uses like concerts, conventions and exhibition events; this is what the management industry refers to as event days. According to experts, a facility must host approximately 200 events per year to be commercially viable (Van Alphen and Javed, 2012). For these reasons, this research will examine arenas as a case study selection.

2.1.4 – Sports and Entertainment District

According to Hinch and Higham (2004), stand-alone buildings are generally unsuccessful and contribute little to urban revitalization. In order for stadia to add vitality to the surrounding area when no games are held, planners typically encourage complementary uses to cluster around a stadium – which is generally referred to as an entertainment district. Examples of such complementary uses include: bars/nightclubs, restaurants, retail, hotels, theaters and residential units (particularly condominiums) (Diegnan, 2006). The objective of the sports and entertainment district is to encourage mixed-use development that operates at different times throughout the year so the district serves as a destination for the public 24 hours a day, 365 days per year. Such uses/amenities add richness and variety to the gameday experience, enhancing the facility's innate catalytic power.

One of the most ambitious examples of an all-of-a-piece urban entertainment district is that of LA Live, in downtown Los Angeles. This massive 27 acre development opened in 2005, at a cost of $2.5 billion (most of the project was bankrolled by the private sector). LA Live contains theaters, restaurants, two ballrooms, residential units (both apartments and condominiums) and over 1,000 hotel rooms. It is anchored by the Staples Centre (home to the LA Lakers and LA Clippers of the NBA, as well as the LA Kings of the NHL) and contains an open-air plaza that serves as a central meeting place with giant LED screens. Plans are currently in the works to develop even more office and hotels as well as a $1.2 billion, 72,000 seat football

stadium (LA Live, 2012).

Fig. 2-2: L.A. Live. Source: http://discoverlosangeles.com

Law (2002) says a symbiotic relationship exists between the number of residents living downtown and the number of entertainment options that exist. The variety of arts, sports, entertainment and other special events show a high degree of interrelatedness, and cities should plan for all four of these sectors. The physical aspects of this strategy are frequently linked to urban regeneration in the downtown core, as well as reinforcing the role of downtown as a center for entertainment.

Robertson (1995) writes that planners are attempting to redevelop downtown as a place for specialized function/activity for the metropolitan area. Large cultural and entertainment venues such as stadia are one of seven revitalization strategies for the post-industrial city Robertson (1995) calls a *Specialized Activity Generator*. The idea behind this strategy is that large concentrations of specialized activity can serve as an anchor for a district. The influx of people for such events creates a critical mass to support other businesses such as retail, restaurants and hotels; which in turn facilitate urban design and infrastructure improvements – all of which create a vibrant urban area.

Jacobs (1961) noted a similar idea, and has observed that many successful urban districts have an anchor, which bring people to a specific place and serves as the basis for a district's employment patterns, identity and character – she identifies such anchors as primary use. A district's primary use in turn is able to support secondary uses, which grow in response to the presence of the primary use. Jacobs praises the idea of primary uses because they are natural incubators of diversity and contributes to a successful, vibrant urban district.

2.1.5 – Summary

One reason new sports facilities are located downtown is to re-locate entertainment and other related activities that have been previously located in suburban areas. The downtown has traditionally been the location for leisure and entertainment in order to attract people from across the city (Filion and Gad, 2006; Coates and Humphreys, 2011); so in effect, the development of the downtown stadium and related entertainment district is an attempt to recreate the original functions of the central core. The efforts of planners and developers in new stadium projects centers on the belief that a stadium should be more than a just a destination – that it should create a sense of place.

One of the most important issues that must be addressed at the earliest planning stages is transportation. Transit hubs must be conveniently located to facilitate access to the facility, and surface parking should be discouraged since it creates barriers to movement by separating the stadium from the rest of downtown. If any parking facilities are to be built, they should be scattered throughout the downtown to decentralize the amount of parking spots, and thereby reduce the backlog of traffic that inevitably results on game days. Isolated, stand-alone venues seldom generate pedestrian activity and spillover effects, so great effort must be made to ensure the facility is properly integrated into its surroundings. In order for a stadium to become a destination, it must offer a good/service/experience that cannot be obtained elsewhere (Chapin, 2004). This thesis emphasizes that the most suitable location for an arena is downtown, due to an availability of working populations, traditional city trade and economics and a greater mixture of uses.

2.2 – Economics and Urban Amenity Development

Sports facilities are among the most common methods cities use for physical and economic development. It is no surprise then that much of the academic literature is devoted to this subject. The majority of the subject matter focuses on a sports facility's economic impacts, especially the subject of subsidies. While it is not the focus of this research, it is important nonetheless to briefly outline the subject matter of public subsidies. Ideas concerning global macroeconomics will also be brought up in this section.

2.2.1 – Sports Stadium Subsidies

According to figures from 2007-8, the sports industry is worth more than $213 billion in the United States alone, and has doubled since the mid-1980s, making the sports industry twice the size of the American automotive industry. This phenomenal growth is attributed in part to the increased value of broadcast rights, advertising, preferential seating purchasing and concession/merchandise sales. The explosion of revenue growth has facilitated league expansion in recent years (Coates, 2008). Although on the surface, sports facilities appear to be vast economic generators, the fact remains that a new stadium requires significant public funding to construct. In Canada, most of the project's costs are publicly funded, usually through multi-governmental level partnerships with the private sector, commonly known as public-private partnerships (P3s).

Coates and Humphreys (2011) estimates that 66% of the funds spent on new sports facilities built since 1990 originate from public sources, and that over $22 billion of public funds has been spent on major-league facilities alone (excluding those planned or under construction). The most common subsidies are bond issues, interest-free loans made by government, purchase rights for land below market-rate, or discounts on the operating and maintenance costs of a facility.

Anderson (2000) cites five reasons sports franchise owners demand new facilities:

- Obsolescence: it is more cost-efficient to replace an aging facility than renovate it in order to generate the revenues to survive in professional sports today.
- Edifice: a new facility can become the focal point for community development by encouraging residential and commercial interests to relocate to the downtown area
- Increasing cost: as franchise fees and values rise, owners must have new facilities to realize revenue streams that will allow them to receive an attractive profit on their investment.
- Competitive Balance: new facilities are needed to provide teams with the revenue necessary to allow them to compete successfully in leagues experiencing significantly rising player salaries and other costs
- Expanding attendance: a new facility will automatically increase attendance for a team based on the novelty and increased amenities for fans associated with the new facility

The latter point is important in today's professional sports market. Older facilities lack the

number of amenities that can be housed and are limited in the ability to create or expand new sources of revenue. One of the most lucrative revenue sources for franchise owners is the sale of luxury boxes. On average, 10% of a franchise's revenues are derived solely from the sale of luxury box suites. Underscoring this point was an announcement made in May of 2012, when the NBA's Golden State Warriors announced they were relocating from Oakland to San Francisco due to the greater number of corporate headquarters in San Francisco. In an interview, economist Andrew Zimbalist (2012) says: "When you had suburbanization, the idea was that rich people were leaving the city centre. Now the idea is to be close to the business community to get the corporate dollar, sell more corporate sponsorships and charge higher prices" (Artz, 2012).

It is important to note that sport is an industry unlike any other. Sports are an indelible part of a city's culture and identity, with athlete's activities followed by millions of people. Sports have their own section in the news and have parades dedicated to its champions. No other business is treated similarly, so it is difficult to calculate a cost-benefit analysis for sports subsidies. Supporters of subsidies point to three consistent claims: jobs are created through the construction and maintenance of the stadium, the stadium will generate revenue (primarily through property taxes), and that the stadium will attract ancillary development. However, after exhaustive research, Noll and Zimbalist (1997) have determined "no recent facility appears to have earned anything approaching a reasonable return on investment and no recent facility has been self-financing in terms of its impact on net tax revenues" (p.54).

In fact, consumer spending on sports is primarily substitutional. Local sports fans divert the portion of their discretionary incomes from sports to other leisure activities within the metropolitan area. In other words, cities do not gain any extra revenue from their own citizens from sports-related activity. Stadia projects usually rearrange, rather than increase, local economic activity (Coates and Humphreys, 2011). On average, between 5-10% of those attending sports games live elsewhere, meaning cities do not fare much better in attracting tax revenue from tourists (Noll and Zimbalist, 1997). In addition, any jobs that are created from sports or entertainment tend to be low wage, service-sector jobs (Coates, 2008). In an examination of 30 cities that recently constructed new sporting facilities dating back to 1984, 27 of these cities had no measurable economic impact for the city. In the other three cities, economic activity actually declined (DeMause, 2011).

Although a majority of economists state that sports stadia do not spur economic development, some concede it can help guide growth. Rosentraub (from Diegnan, 2006) says sports facilities can "function as focal points around which apartment buildings, stores, restaurants and bars cluster" (p.29). The consensus among experts is that a stadium master plan must be part of a long-term comprehensive plan that has a shared vision and targeted objectives for all stakeholders, including the city, franchise owners and business groups (Chapin, 2004).

2.2.2 – Urban Economics

Since the mid-1970s, the western world have radically transformed in terms of economic restructuring and governance due to globalization. The accelerating rate of change in production and consumption, aided by technological advances, has shifted the nodes of economic, social and cultural interaction towards cities at the expense of the nation-state (Shaw, 2001; Sassen, 2001). This process has also eroded hierarchies and has given rise to the concept of networks, transforming the nation-state into what Castells (2005) calls the network state.

One transformation as a result of globalization is the decline of the manufacturing sector in North America. As a result of new technological and economic challenges (and potential opportunities), cities expanded their scale and adjusted to these processes. Cities have now become economically based on knowledge and services, in what is referred to as the new urban economy (McNeil and While, 2001). Scott (2004) says the new urban economy is characterized by high levels of human capital, in addition to "organizational and technological flexibility, transactive-intensive interfirm relations, and the production of design inputs" (p.462).

The unprecedented growth in the technology and knowledge sectors has also caused what Cox (1993) calls the globalization of capital. The ability of transnational companies to operate anywhere in the world has created a truly globalized economy, with the world now becoming a single location for production outlets. In addition, the ability of individual countries to direct their internal economies and shape the interaction with external structures has declined, leading to a more dynamic and volatile capital. According to Boyle and Rogerson (2001), "[the] globalization of capital is argued to lie at the heart of contemporary urban restructuring" (p.43). Gospodini (2012) describes the function of cities as "a unified (global) network of urban settlements in competition" (p.225). With the exception of so-called "global cities" (e.g. New York City, London, etc), Sassen (2001) says cities are merely interchangeable entities and cannot

overcome capital volatility. Whereas factors such as geography and physical infrastructure traditionally determined the location of new business, globalization has virtually eliminated these requirements.

The new urban economy is more dependent on assembling a collection of flexible and creative workers from a horizontal labour pool. The dependency on place is no longer an industry requirement, but a desire of particular workers seeking lifestyle amenities and a higher quality-of-life (Florida, 2002; Beriatos and Gospodini, 2004). This characteristic of the new urban economy is breeding a new highly competitive environment that shapes not just the hierarchy of cities, but creates a change in spatial organization and morphology within each city (Beriatos and Gospodini, 2004).

Glaeser (2004, p.3) expands on this point, writing:

> ...declining transportation costs mean that few places have any innate advantages in production anymore. Proximity to the coal mines or the harbor may have mattered in 1900, but do not matter today. Instead, the productive advantage that one area has over another is driven mostly by the people. Urban success comes from being an attractive 'consumer city' for high skill people.

Smith (2002) says the redefinition of urban scale has led to a *new urbanism* led by private capital with the collusion of public powers. One example is gentrification, a process that is labeled as a natural process of urban regeneration that will provide a "social balance" to what local authorities deem rundown neighbourhoods. To Smith (2002), gentrification has become a "global urban strategy" and a "consummate expression of neoliberal urbanism" (pp. 445-6).

2.2.3 – Urban Governance

To attract globalized capital, cities have become more entrepreneurial, engaging in practices more akin to the private sector. This transformation of the role of civic governance is what Cox (1995) calls the "New Urban Politics" (p.435). According to this model, cities are seen as competing against one another to seek opportunity at various spatial scales. This has resulted in a change in civic governance from an inward-oriented managerial model that traditionally provided welfare and local services, to a more entrepreneurial governance model that is more outward-oriented and characterized by risk-taking, profit-maximization, inventiveness and image promotion/city marketing (Cox, 1995; McNeil and While, 2001).

According to the Organization for Economic Cooperation and Development (2007), inter-city competition for economic development has become the major activity of urban governance. The new role of urban governance is to create conditions attractive enough to lure firms, attract investments, and to protect and enhance the city's development prospects. This sentiment is echoed by former Baltimore mayor Martin O'Malley: "Not too long ago, big city mayors had to spend a great deal of time being social workers; now mayors also have to be entrepreneurs...a mayor's job has changed from generating government-run programs for every problem, to producing deals and partnerships that deliver measurable improvements" (Speech, 2000).

Cox (1993, p.45) lists six points on why post-industrial cities have become commodities in a highly competitive market:

- The economic space within which cities are situated is subject to change
- This change is a result of an increased foot-looseness of capital with respect to cities as possible sites
- Within cities, there are a variety of economic interests, which, as a result of immobility, are dependent upon the health of the urban economy. These include property owners, some businesses such as banks and newspapers, local governments, and local residents. Taken together, these agents constitute "cities" or "communities"
- These interests work through city governments in order to channel investment into their particular city through appropriate infrastructure, taxation and regulatory practices.
- Change in the space economy as a whole provide threats and opportunities to these economic interests
- Policies of this sort bring them into competition with corresponding "cities" or "communities"

Aside from offering incentives to developers, cities are increasingly using strategies such as investing in cultural and leisure amenities and civic image improvement strategies. This inter-urban competition increases the need for diversification in terms of taste, quality-of-life concerns and related considerations. Lloyd and Clark (2001) have advanced the idea that cities today are *entertainment machines,* and that civic leaders need to create successful, aesthetically pleasing places in order to attract people to live and work (p.26). This economic transformation can be explained to an extent by Engels Law, which states that a vast increase in consumer purchasing

power makes society prone to invest more household income into non-basic goods. Although consumer goods have always existed in cities, this increase in disposable income favours the production and consumption of such products and creates a "symbolic economy" (Scott, 2004).

Several researchers have discussed the growth of cultural and leisure amenities driving economic growth in post-industrial cities, and on new urban economies centered on consumption, place marketing and cultural attractions/settings (Boyle and Rogerson, 2001; Catungal et al, 2009). Not only does this strategy draw tourists, it also acts as a powerful magnet for companies to provide lifestyle opportunities for employees, as well as retain current residents. Since new labour and young urban professionals are more mobile than ever before, Florida (2002) describes this amenity driven growth (both economic and demographic) as rooted in the fact that these educated, middle-class professionals are attracted to cities with a greater diversity of amenities. This *creative class* workforce bring a cosmopolitan sensibility and new demands on the quality of life of the cities in which they live and work (Florida, 2002; Hutton, 2004).

Glaeser (2004) conducted a study that revealed a positive relationship between a city's growth rate and the number of amenities (i.e. sports facilities, festival marketplaces, museums, art galleries, etc). Glaeser argues that such amenities attract more skilled workers (which have higher productivity levels than non-skilled workers) in part because "the presence of skills in the metropolitan area may increase new idea production and the growth rate of city-specific productivity levels" (p.2). Other researchers have noted the frantic pace at which cities switched from an economy based on manufacturing to one based on technology and culture, with Hall (2000) noting: ''culture is now seen as the magic substitute for all the lost factories and warehouses, and as a device that will create a new urban image, making the city more attractive to mobile capital and mobile professional workers'' (p.640).

Zukin (1995) expands on this point, writing:

> With the disappearance of local manufacturing industries and periodic crises in governments and finance, culture is more and more the business of cities—the basis of their tourists attractions and their unique competitive edge. The growth of cultural consumption (of art, food, fashion, music, tourism) and the industries that cater to it, fuel the city's symbolic economy, its visible ability to produce both

symbols and space (p.2).

2.2.4 – Summary

Although the previous literature stated that public subsidies rarely, if ever, generate a return on investment, sports stadia continue to be built. This demonstrates that cities are actively investing in the creation of amenities that aspire to be something more than an economic generator, a process best described by Harvey (1994) as a "mobilization of the spectacle" (p.23). Stadia have now become part of a showcase for tourism and economic development, and are used to convey an image of prosperity and growth in an ever-increasingly competitive urban environment (Mason et al, 2007). Belanger (2009) states "Major league sports and sport mega-events are prime commodities of growing importance in this international entertainment economy. In many cases, they are central expressions of the contemporary mobilization of the spectacle as they merge with the entrepreneurial urban economy in the economic and socio-cultural regeneration of cities" (p.51).

This change in the function of municipal governance has important ramifications for residents. Civic officials have redefined the concept of social welfare, from that of providing services to enhancing economic development. They argue that sports facilities, along with other amenities, can attract business, an educated workforce and enhance civic pride. The literature reveals that, for the most part, residents are complacent with this shift in urban governance.

2.3 – Civic Image in Urban Centres

The proliferation of cultural-based amenities fueled by global interurban competition has changed the nature and concept of urban space. The transformation of urban space has become a deliberate strategy of attracting investment and growth, and has profound effects on civic image. Cities more than ever are prone to physical transformations of the urban environment, regardless of their size or geographic location. This section of the literature review will outline the issues concerning place identity/image and place attachment, as well as the human experience in perceiving space.

2.3.1 – Post-Industrial Place Marketing

The shifting nature of global economic flows and the expansion of the capitalist economy seeks new avenues to exploit, commodify, and sell to outsiders. This process relies heavily on the

use of symbols and themes to enhance place distinctiveness in order to construct new images and/or challenge negative perceptions. At the macro-scale, this process is called place-marketing (Kearns and Philo, 1993). Place marketing seeks two objectives: to change the perception of a place in the minds of its populace, and (as a means to accomplish this task) involves physical upgrades to the space's infrastructure. Place marketing is used for ulterior purposes such as urban revitalization and economic development.

Carmona et al (2010) claims there is a formula for physical regeneration; examples include the conversion of historic warehouses into residential lofts, derelict industrial areas becoming heritage parks, old canals and waterfronts transformed into upscale residential and commercial areas, plus at least one iconic building designed by a famous architect (known as a *starchitect*). The physical re-imaging of cities (also known as hard-branding), is an example of how urban design supports place marketing, and hence economic development (Evans and Hannigan, 1998; Beriatos and Gospodini, 2004).

Cities go to great lengths to define and promote an image that is marketable and easily identifiable for businesses, investors, tourists and residents. However, since place marketing involves manipulating place associations/meanings for commercial purposes, it treats urban space as if it was a commodity. This creates a number of problems, among them: mismatches between image and reality, creating a simplistic and/or sanitized space, and the appearance of elitism by specifically appealing to youth and the upper-class (Turok, 2009).

Zukin (1995) goes so far as saying place marketing legitimizes the appropriation of public space by private and commercial interests, since it is used to both frame public space and encourage the consumption of goods and services. For example, Reichl (1999) writes of the place marketing efforts at Times Square in New York: “In an effort to create a place marketable to mainstream tourists and corporate tenants, a coalition of public and private elites imposed a Disney model of controlled, themed public space... In so doing, they sacrificed the provocative, raw energy produced by the friction of different social groups” (p.16)

Evans (2003) argues why place marketing is an unstable strategy for re-imaging a place:

> City location alone is not sufficient to generate interest – symbolic association is needed to overcome the arbitrariness of the new and a novel architecture, as well as inherited cultural facilities. Where memory or the sense of a place is effectively

absent, and where a place is to be created, so to speak, from scratch, massive capital investment and revenue is likely to be required and success still cannot be guaranteed (p.433).

2.3.2 – Commodification of Space

Several authors have noted the increased role of private interests in re-imaging public space. Although numerous factors play a role in the urban experience, the economy is the main element in perceiving urban space and solidifying social processes. Debord (1998) writes: "This commodification of the latter and of life is due to the expansion of the new economic system in seeking to exploit new areas and transform everything into a profit-driven item, or in the case of identity and personal lives, into supportive items of commercial items" (p.22).

Lefebvre (1991) critiques the post-industrial city and the social spaces it produces, arguing that everyday life is disappearing as a result of capitalist commodification and bureaucratic controls that abet the powerful. Lefebvre suggests that pre-modern (i.e. pre-Second World War) urban space has been co-opted and transformed by the abstract space of capitalism; in other words, the monetary value of space distorts the actual people-driven *use* value. Lefebvre (1991) goes on to say the pre-modern city was an interconnected web of physical space in its construction, meaning and daily use, with its meaning thoroughly clear. Hence, urban space was tangible, real and supportive of everyday life. Today, Lefebvre (1991) argues that the city has been transformed into groupings of abstract mental constructions, which disguises the fragmented reality of space.

This abstraction of post-industrial space has been exploited to a great degree by city builders, with the most common example being the deliberate shaping/packaging of place and images around a particular theme (that is intended to promote consumption), called place-theming. Place-theming can start from a basis in reality, but involves distortion, significant change and a loss of authenticity (some might call deception or manipulation). Hayden (2004) describes place-theming as "designing and decorating restaurants, hotels, shopping malls, casinos and even small towns to exaggerate stereotypes and recreate lost places" (p.102).

Theme parks are the quintessential invented place, with Disneyland the primary example. Sircus (2001, p.30) describes the symbolic manipulations of Disneyland:

It creates reality out of fantasy in ways that are often symbolic and subliminal;

> digging deep into the user's psyche, connecting with cross-cultural images and multi-generational, hard-wired memories. It is successful because it adheres to certain principles of sequential experience and storytelling, creating an appropriate and meaningful sense of place in which both activities and memories are individual and shared.

Hannigan (1998) describes the urban entertainment destination as post-modern (i.e. utilizing visual virtual technology and the thrill of the spectacle), heavily involves the use of themes (i.e. from sports, pop culture or history), is open day and night, and is "aggressively branded" (p.4); meaning its value is solely derived from its ability to deliver consumer satisfaction and their potential for commercialization.

Sports facilities can be classified as both an invented place as well as an urban entertainment destination. Sports franchises carefully select a particular vision (i.e. former dynasties) and imposes this as a unifying theme, and is key in creating a collective memory that focuses on past glory. Creating a sense of place involves linking the venue with collective celebrations of local tradition and memories, thus creating a local heritage based on nostalgia – all the while involving tie-ins to sport, entertainment and multi-national corporate sponsors and media (Belanger, 2009; Mason et al, 2007).

2.3.3 – Criticisms of Place Marketing/Theming

The commodification of urban space provides revitalization and placemaking opportunities, but the practices of place marketing/theming and invented place creation raise a number of issues. Four criticisms of placemaking in urban centres are commodification of place, superficiality, simalcrum versus reality and authenticity, each of which are explained below.

(i) Commodification of place

Relph (1976) wrote that since their symbolism comes *from without* rather than *from within*, post-industrial urban spaces tend to be outside inventions rather than expressions of local culture. In such spaces, the economic space invades the "lived" space, and the life-world becomes less an end in itself and increasingly a means to the system's ends. As Dovey (1999) explains, "places of everyday life become increasingly subject to the system imperatives of the market and its distorted communications, advertising and constructions of meaning" (pp. 51-2).

The commodification of place (also known as disney-fication), is an effect of neo-liberal

policies that are often geared solely to attract tourists rather than benefit the local population. This creates what is called a tourist bubble – where simulated nostalgia and entertainment is provided for those with means in one place, while places outside of the "bubble" consists of poor, marginalized residents disconnected from the same space (Bohannon, 2004). Arefi (1999) associates Disney-fication with the notion of the non-place – the lack of connectivity of the physical landscapes with place meanings held within broader physical, cultural and emotional context.

(ii) Superficiality

Although contemporary urban development pays greater attention to placemaking, critics charge that themed places are superficial, which undermine and destroys (rather than reinforce) real place identity. Harvey (1990) suggests this superficiality involves "direct concern with surface appearances that conceal underlying meanings" (p.77). Huxtable (1997; from Carmona et al, 2010) writes: "themed parodies pass for places...even as real places with their full freight of art and memories are devalued and destroyed" (p.42)

(iii) Simulacrum vs Reality

As the level of sophistication of simulation increases, it has become more difficult to tell what is real and what is artificial (i.e. a simulation). The degree of simulation in which imitations of things that never existed is what is called simulacrum (Baudrillard, 1983). Fainstein (2007) argues that Venice is not a city, but an image (or simulacrum of itself). Since the city of Venice manipulates and improves the city in order to fit the postcard image held by outsiders, Fainstein argues that the artificial Venice on the Las Vegas strip is just as real as the Venice in Italy.

Critics are weary of the trend of eroding real places. Hedges (2009) worries that a public no longer able to "distinguish between truth and fiction" must now interpret "reality through illusion" (p.44), and how contemporary western culture has become "a culture that has been denied, or has passively given up, the linguistic and intellectual tools to cope with complexity, to separate illusion from reality" (p.51).

(iv) Authenticity

A general consensus among critics is that development that copies or draws explicit reference from historical precedent is false, or inauthentic. As early as 1976, Edward Relph noted the authenticity of place was being eroded by globalized capital and culture. Relph (1976)

described these manifestations as: the production of synthetic or pseudo-places like Disneyland, the standardization of buildings and products, formless and giant developments such as suburbs and skyscrapers and instant/non-permanent buildings. Through this process, the personal relationship with place is reduced due to these forces.

Boyer (1992) writes that recent development involves "the reiteration and recycling of already-known symbolic codes and historic forms to the point of cliché" (p.131). However, it is very difficult to define exactly what makes a place authentic or vice-versa. Fainstein (1994) notes flaws with the implied definition of authenticity, writing: "The critical literature is replete with accusations of fakery, [but] the nature of the authentic, late twentieth-century design is rarely specified" (p.230). Fainstein (1994) further points out critics are reluctant to list the attributes of an authentic place, because it would force them to point out the differences between false and genuine activities.

Florida (2002) defines authenticity as being the opposite of generic; that is, space that is distinctive or one-of-a-kind. In a focus group, interviewees equated "authentic with being 'real', as in a place that has real buildings, real people, real history. An authentic place offers unique and original experiences. Thus a place full of chain stores, chain restaurants and nightclubs is not authentic. Not only do these venues look pretty much the same everywhere, they offer the same experience you can have anywhere" (p.228).

Carmona et al (2010) says there is no one set of variables as to what makes urban space authentic. Such a place permits and enables two-way interaction, inviting and rewarding intellectual and emotional engagement. Arguably what is found in an authentic place equates to truth, art and depth, rather than (relatively effortless) entertainment and shallow/superficial beauty. Focusing on the latter may distract, distort and crowd-out the former, which ultimately diminishes and undermines the authentic experience – this, according to Carmona et al (2010), "is generally what critics mean when they refer to a lack of authenticity" (p.132).

To summarize, the authenticity of place may not be the most important concern with people. They may be fooled or mislead, but it is more important that the user *like* a place. In other words, what counts is the authenticity of experience, rather than authenticity of place. As Sircus (2001) argues: "Place is not good or bad simply because it is real versus surrogate, authentic versus pastiche. People enjoy both, whether it is a place created over centuries, or

created instantly. A successful place, like a novel or a movie, engages us actively in an emotional experience orchestrated and organized to communicate purpose and story" (p.31).

2.3.4 – Place Identity

So far in this section, a variety of terms have been brought up to describe notions of space in the post-industrial city. This section will drill deeper into describing these greater senses, a term called sense of place, or place identity.

Place identity is a somewhat obscure concept, with no clear definition. Place identity is often a synonym for genius loci, or the *spirit of a place*. A place with a strong genius loci is where people feel an attachment to it, something that external to the place's sensory or physical properties. As places change over time, there is a continuing narrative that involves the past, present and future, with some places successfully retaining their identities through various (and significant) social, cultural and technological change (Bohannon, 2004).

Montgomery (1998) states it is a straightforward task to know that a place is successful; describing *why* a place is successful and if such success can be replicated elsewhere is more difficult. This process is based on understanding people's ties to – and conceptions of – place, which is often drawn on phenomenology (the study of the description and interpretation of human experience) (Bohannon, 2004). Phenomenology argues there is no objective world external to, and separate from, ourselves. What the environment represents is a function of our own subjective construction of it – in other words, what matters is how we "come-to" a place (Carmona et al, 2010).

The physical continuity of places (i.e. street patterns and buildings) is a stable element against the forces of change, and significantly contributes to place identity. By embodying the social and public memory, the physical and material attributes of place provide a sense of place identity and a tangible record of time. As Brand (1994) says: "Old buildings embody history...we glimpse the worlds of previous generations" (p.2). Environmental psychologists such as Lozano (1974) have confirmed there is a human need for visual stimulation to provide variety and orientation – this is fulfilled by historical areas that have survived relatively unchanged, providing symbols of stability.

Conzen (1966) argues that the city's built fabric in its entirety, with its accumulation of forms should be seen as the genius loci, as well as the *objectivation of the spirit* of society.

Expanding on this idea, Conzen states that the accumulation of layers does not erase all traces of their predecessors, thereby creating a cumulative record of the societies that previously inhabited it. In this sense, the city can be seen as a palimpsest, where the objectivation is individualized in the physical arrangement of the townscape – thereby becoming the genius loci. Thus, the rate and processes that lead to change in thee townscape leads to the uniqueness of the genius loci.

Lord Clark (1969, from Larkham, 1990) suggested that civilization could be defined as a "sense of permanence" and that a civilized man "must feel that he belongs in space and time, that he consciously looks forward and looks back" (p.350). However, while the built environment contributes to place identity, the actual place identity is intangible. According to Tuan (1975), the communal past is not vividly present "unless objectified in things that can be seen and touched, that is, directly experienced" (p.164).

Concepts of place often emphasize the importance of a sense of belonging and of emotional attachment. Crang (1998) suggests that "places provide an anchor of shared experiences between people and continuity over time" (p.103). Therefore, people need to create and express a sense of belonging to some collective entity or place, and of personal or individual identity. While place meanings are rooted in physical settings and activities, it is not an intrinsic property per se, but a "property of human intentions and experiences" of those places (Relph, 1976; p.47). Stokols (1981) refers to place-based meaning as "the non-material properties of the physical milieu – the sociocultural [residual meaning] that becomes attached to places as the result of their continuous association with group activities" (p.142). This familiarity of place forms the glue that binds people to place.

By imbuing space with meaning, people (both individuals and groups) change space into a place. However, a sense of place is more than this. Lynch (1960) defines identity of place as that which provides "individuality or distinction from other places...the basis for its recognition as a separable entity" (p.6). Relph (1976) argues there are three elements of place identity: physical setting, activities, and meanings". Rather sensing place through simply residing in these elements, this feeling comes instead from human interaction with the elements (i.e. phenomenological).

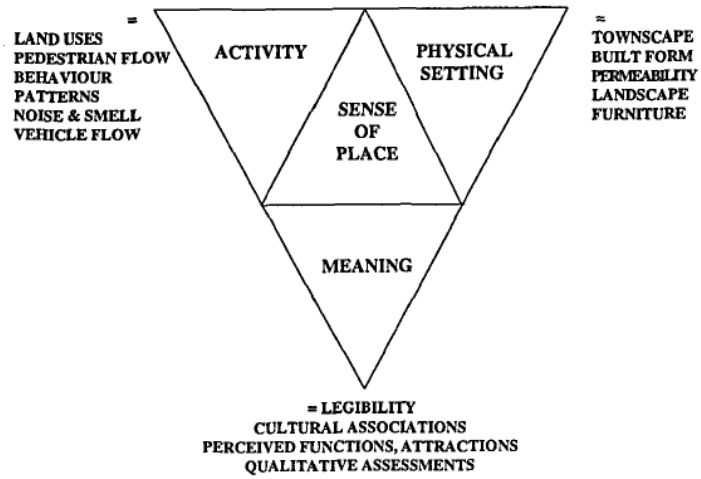


Fig. 2-3: Sense of Place (chart from Montgomery, 1998). The diagram illustrates how urban space interventions can contribute to, and enhance, sense of place. This figure is not meant to simplify or reduce the concept of place. The physical component of place may be overstated, since activities and meanings associated with places may be more important in creating sense of place.

Image and identity are two different constructs. While identity is an objective term (i.e. what a place *is*), image is a combination of identity with how a place is perceived. In this sense, the environment can be considered a mental construct. Lynch (1960) argues an environmental image is a two-way process between a person and the environment. Similarly, Montgomery (1998) distinguishes identity and image, referring to place identity as the common elements of the beholder's individual place images. In order to make sense of their surroundings, people reduce reality to a few selective impressions – such images are: partial (not covering the entire place), simplified (omitting most information); idiosyncratic (each individual's place image is unique); and distorted (based on subjective, rather than real, distance and direction).

Arguably one of the most grounded theories about urban constructs is imageability, a term coined by Lynch (1960). Imageability refers to the quality of a physical object and its ability to evoke a strong image in the observer. Lynch (1960) was concerned with legibility in the urban environment; legibility, according to Lynch (1960), was the ease with which one could mentally organize the environment into a coherent pattern/image, and one's ability to navigate through it. A clear image enables one to “move about easily and quickly”, while an ordered environment can “serve as a broad frame of reference, an organizer of activity or belief or knowledge” (p.4).

Noting that such images may vary significantly amongst people, Lynch (1960) sought to

unify a public or city image. Through mental mapping exercises, Lynch identified aspects of the environment that left a strong image in the observer's mind. From these exercises, Lynch (1960) identified five distinct elements: paths, edges, nodes, landmarks and districts. None of these elements exist in isolation however; these elements combine to form an overall image: "districts are structured with nodes, defined by edges, penetrated by paths, and sprinkled with landmarks...elements regularly overlap and pierce one another" (pp.48-9).

While Lynch (1960) wrote about the psychology of place, other researchers stress the physical markers of place (i.e. design styles, ornamentation, gateways, vistas, etc.) One of the most well-known physical place identity terms is townscape, popularized by Cullen (1961). Townscape refers to the art of the relationship, and according to Cullen (1961), it is important to "take all the elements that go to create the environment: buildings, trees, nature, water, traffic, advertisements and so on, and to weave them together in such a way that drama is released. For a city is a dramatic event in the environment" (p.9). A townscape results from weaving all these elements from the urban fabric and street scene so that visual drama is released, the point being that bringing buildings together gave a "visual pleasure which none can give separately" (p.10).

There are three aspects to a townscape analysis (Moughtin et al, 2003):

- Legibility – this concerns the quality of a place that gives it an immediate identity quickly grasped by users.
- Permeability – the degree of choice in the environment that it presents to the user.
- Visual Analysis – this includes the study of urban space, treatment of facades, pavement, roofscape, street sculpture and analysis of complexity of visual detail concerning sense of place.

Traditional urban areas contain more townscape elements and are thus more likely to invoke this *visual drama,* creating a powerful emotional experience that drives pushes the human urge to explore. A correlation exists between this drive and the number of elements in the townscape; a lack of such elements results in "cognitive apathy" on part of the individual (Smith, 2009; p.194). In his research on phenomenology, Smith (2009) classifies favourable townscape elements into two typologies: landscape elements (which include but are limited to: trees, gardens, fountains, iron fences and masonry walls), and building elements (i.e. doors, windows and balconies).

There are certainly physical elements that, combined properly, produce a strong urban quality. But the notion of quality is something that is clearly more bound in the social/psychological and cultural dimensions of place.

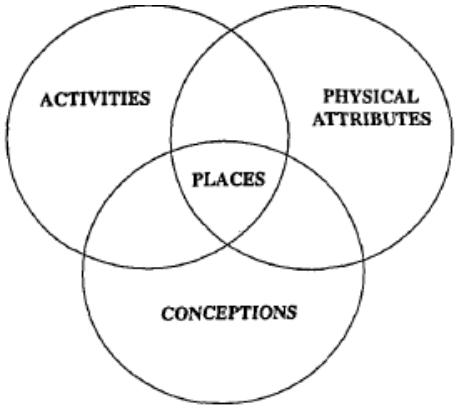


Fig. 2-4: A visual metaphor for the nature of places. Source: Canter (1977; from Montgomery, 1998)

Jacobs (1961) was among the first authors to bridge the divide between the social/psychological and physical dimension of place. Referring to urban quality, Jacobs (1961) noted that activity both produces and mirrors quality in the urban environment. In the same vein, Gehl (1989) argues that successful urban places are predominately based on street life, and the various ways in which activity occurs in and through buildings and spaces. This observation led Buchanan (1988) to remark: "Urban design is essentially about place-making, where places are not just a specific space, but all the activities which made it possible" (p.33). Therefore, an urban space with a high degree of sense of place must combine quality in three essential elements: physical space, sensory experience and activity (Montgomery, 1998).

2.3.5 – Summary

The purpose of this section is to examine how people perceive and identify public space, while contributing ideas on how stadia can contribute to place identity in the urban landscape. Most stadia already contribute to sense of place, since sports are an indelible part of a city's culture and history. Bale (1993) writes: "it is in the floodlights of the stadium, not the spire of the cathedral that more often than not act as urban landmarks and points of reference" (p.3). A stadium can come to symbolize the city itself – for example, the red brick facade and green ivy found at Fenway Park in Boston is one of the most imageable aspects of that city.

Expanding this point, Trumpbour (2007) believes the stadium has become a key moniker for cities, arguing that cities have always worked to convey a positive image to outsiders that

represent a tangible sign of prosperity and success. To Trumpbour (2007), the stadium is to the 21st century what the skyscraper was to the 20th century, and the grand, ornate train station was to the 19th century, arguing: "In recent years, the stadium has supplanted the ancient cathedral as the most visible and recognizable structure in many communities" (p.2). However, stadia can fail in this regard if developers do not create places where civic identity and emotional experiences can be successfully constructed, thereby failing in regards to place identity efforts.

2.4 – Urban Morphology

Urban morphology is an emerging field of study. According to Malfroy (1995), this is due to two different but dialectically connected fields – the history of the city and the history of ideas about the city. The following section shall define urban morphology, the predominant schools of thought on the subject, as well as compare and contrast European and North American urban form. In addition, aspects of a morphological analysis will be discussed.

2.4.1 – Overview

Urban morphology is the study of human settlement. More specifically, it is an examination of the structure, form, the physical expression of said form, and the manner in which the various physical components relate to each other in a system of form interaction (Vance, 1990). At the heart of the discipline lies the belief that "the city can be read and analyzed via the medium of its physical form" (Moudon, 1997, p.5). Although it is not a distinct field in urban planning, multiple efforts to reconcile the different theoretical formulations and inconsistent terminology across the disciplines remain ongoing (Gauthier and Gilliand, 2006).

Urban morphologists examine not only a city's street pattern, but also its urban blocks, the spaces between buildings, land uses, as well as the change in urban form over time. An assumption is that the placement of buildings in lots and along streets is one of the central, defining components of how places function and feel. Unlike architectural history, a focus of urban morphology is on the how the building fabric can create identifiable spaces over time – bridging the divide between planning, geography and architecture (Whitehand, 2009).

The temporal dimension is particularly important for morphologists, since urban form is shaped by (and evolves according to) economic, social, cultural and political forces. Because of this, any discussion of urban form should consider how the urban environment has been created

and how it evolves, in order to understand the historic concepts that have led to current outcomes and to better integrate subsequent development (Vance, 1990).

Urban morphologists recognize that urban form is a dynamic and continuously changing entity shaped by individual and group actions – this state is known as morphogenesis (Moudon, 1997). The morphogenetic approach seeks to understand the process of continuous replacement and transformation and "stress the evolutionary nature of the physical city" (Moudon, 1995). Morphologists seek to exclude randomness from morphogenesis as they identify patterns and/or theories of transformation, while considering the interdependency between buildings and the urban fabric. Thus, a particular logic is assumed to dictate the organization of urban fabric at different time periods (Levy, 1999).

Aside from the historical dimension, the morphogenetic approach seeks to understand the socio-economic aspects of urban form (Moudon, 1995). The urban fabric is shaped dialectically between the built environment and the social needs of a particular society. As Moudon (1997) says, "Urban morphologists focus on the tangible results of social and economic forces: they study the outcomes of ideas and intentions as they take shape on the ground and mould our cities" (p.3). Various theories have also been proposed to address the social dimensions of spatial patterns (see Pinho and Oliviera, 2009) as well as the influences of colonialism on New World town plans (see Vance, 1990).

Moudon (1997) argues every urban morphological analysis is based on three fundamental components:

- Form: the urban form is defined by three physical elements – buildings and related open spaces, building lots/parcels and streets
- Resolution: urban form can be understood at four distinct levels corresponding to the building/lot, street/block, city, and region
- Time: urban form can only be understood temporally because the comprised elements undergo continuous transformation and replacement

This research addresses all three components. This investigation is based on a morphological analysis conducted through the theoretical framework of the British school, which is defined in the following sub-section.

2.4.2 – Two Schools of Urban Morphology

Two predominant schools have influenced urban morphology since the mid-20th century: the Italian school and the British school. The Italian school (also known as the Muratorian perspective) was founded in the 1950s by architect Salverio Muratori. It is based on a typomorphological approach to urban form; providing theories on how the city is formed, what the ideal city form is, and in what way it is achieved. The central idea is that urban history is key in recovering the sense of continuity in architectural practice. The Italian school is more normative, with the aim of building a theory of urban design resting on historical city building traditions. After Muratori's death, Gianfranco Caniggia continued the tradition, simplifying Muratori's theory by abandoning the architectural perspective and focusing on a typological analysis of cities (Pinho and Oliveira, 2009).

The British school (also known as the Conzenian perspective) was developed in 1960 by urban geographer M.R.G. Conzen, a German immigrant to the UK. Unlike Muratori, Conzen's research focus was on the conceptualization of urban form development – this centers on what Conzen calls the *plan unit* – defined as the street, parcel/lot and building, with all three forming one area. When describing the interrelatedness of these elements, Conzen (1966) wrote: "Everywhere in the townscape these categories are closely associated, since every building and every unit of land-use is accommodated on one or other element of the town-plan, usually a land parcel or plot" (p.42).

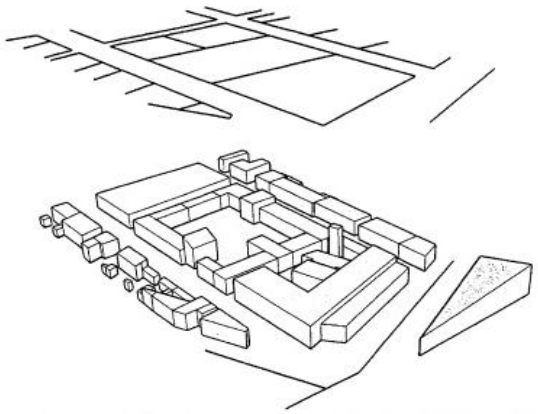


Fig. 2-5: the plan unit, broken down into parts: parcels (top), streets and buildings. The lines on the street represent streetcar tracks embedded in the public right-of-way. Source: Bliek, 2007.

In his research on the interactions of parcels in downtown cores, Conzen (1981) argued that centralizing economic pressures tend to fuse parcels together in order to provide sufficient land needed for larger structures. Conzen argues that this type of pattern change falls under two

typologies: augmentative and adaptive change. During augmentative change, the street pattern is altered to contain new building structures. Adaptive change refers to redevelopment that occurs within the framework of the existing street pattern; either in a gradual, piecemeal manner or in a swift, radical alteration of the network. By mapping these changing patterns, the impacts of urban form alterations can be identified.

Conzen (1981) states both the impact of these development pressures and the accompanying alteration of the urban fabric has significant effects on the type of place that is subsequently created. According to Conzen (1981), "This affects the building fabric of CBD's in towns widely and is a powerful agent in the obliteration of historical townscapes just where the character is most marked and calls for the most skillful management" (p.57). Conzen (1981) argues that by: (a) failing to recognize these patterns, and (b) that without concerted efforts to maintain a city's oldest plan unit (referred to as the *kernel*), we risk losing the significant "educative and regenerative influence" that historic landscapes facilitate (p.58).

Conzen was the first researcher to link urban form with its evolutionary and inherited nature. His influence has also helped other researchers develop methods for classifying urban elements, refine the relationship between micro and macro forms, and the problems of scale and hierarchy in the system (Whitehand, 1994). According to Lilley (2000), the guiding principle of "Conzen's approach is that the form of streets and [parcels] revealed on a large-scale plan of a given settlement provide in themselves clues about their origin and development" (p.7). In practice, this principle helps define the three essential plan elements crucial to Conzen's research. Whitehand (2007) has continued the work of his former protégé by adding an economic dimension to the analysis of building processes, emphasizing the relationships between the city, its residents and the development industry (Pinho and Oliveira, 2009).

While Conzen provides a strong methodological framework for uncovering morphogenesis, his focus was on medieval European towns. Conzen's framework has seldom been applied to newer, North American cities, thereby limiting the substantive conclusions that can be drawn. Moudon (1986) and her research examining land use change in the Alamo Square neighbourhood in San Francisco from 1899 to 1976 provides a North American context to the British School, and is described below.

Moudon (1986) analyzed the number of buildings and lots per block, the extent of

building coverage at the ground, as well as data points on habitation and business trends in the area over time. The research revealed that as parcel owners exploited frontage onto the surrounding streets, many grid developments began with outward-facing perimeter block development, with subsequent organic/incremental development extending into the heart of the block. Moudon (1986) reveals structural patterns of change at the building and lot level, as well as the processes that affects these changes.

According to Moudon (1986), the parcel should be seen as "the basic cell of the neighbourhood fabric that establishes the pattern of the grain of the city and determines its scale" (p.144). In other words, smaller lot sizes help produce more diverse, resilient environments. Moudon (1986) concludes: "By ensuring that property remains in many hands, small lots bring important results, many people make many decisions, thereby ensuring variety in the resulting environment" (p.188).

Moudon's (1986) central conclusion states that successful city environments are places that are able to accommodate the changing needs and desires of residents, without major change to the urban fabric (what is referred to as *resilient* forms). These resilient elements have "the ability to assume a variety of functions as well as meanings, to be opened and inhabited in a variety of ways without major disruptions to the structure of that space. Resilience balances continuity and change in space" (p.157). Other buildings will only survive (in the absence of conservation controls) if they are able to adapt to new uses or the contemporary demands of existing uses.

Taken together, the works of Conzen and Moudon present a functional and theoretical template for understanding morphogenesis. Conzen articulates a typology of morphogenesis centered on parcels and street networks that provide guidance for identifying major changes to the urban fabric. Moudon establishes a link between the broad changing morphological patterns and the specific techniques for measuring those changes at the parcel and building resolution level in a North American context. Both researchers however utilize a descriptive approach to urban form that describes evolutionary elemental processes and provides an account for cause and effect for urban form evolution.

2.4.3 – Urban Form Typology

There are numerous fundamental differences between European and North American

cities. Not only are European cities much older than North American counterparts, but differences in culture are also reflected in the urban form. Conzen (2001) states North Americans have a mechanistic worldview, hold a higher esteem for mobility/change, and have a willingness to substitute time or space and space for time. The heightened individualism in American and Canadian culture (as compared to Europeans) is expressed through space – private space is favoured over public space, and single-detached housing is far more prevalent than multifamily housing.

The most important difference, according to Conzen (2001) between European and North American cities is commercialism – specifically in the context of laissez-faire capitalism. In North America, cities are first and foremost regarded as economic growth machines to produce material abundance. Unlike European cities (which have a long history of beautification campaigns), North American cities are largely utilitarian (one notable exception however is the City Beautiful movement of the early 20th century). As well, a greater degree of social fluidity exists in North America, resulting in an aesthetic eclecticism within the urban landscape that is infinitely amendable. As a result, North American cities are looser, less organized and less centralized than European cities (Conzen, 2001).

When asked about the differences between North American and Old World cities, Rybczynski (1995) says North American cities are characterized by:

> ...high levels of mobility, a reckless speculative economics, auto dependency, over-rationalized zoning and development standards, mass production in construction, a lack of defined centres, the valorization of individualism over community, and most importantly the faustian 'creative destruction' and disposability associated with modern development and redevelopment (p.57).

Continuing with this point, Rybczynski (1995) states that the processes of city-making has evolved economically, technologically and physically. Although cities were planned much differently during the pre-industrial period from today, it is due to an evolutionary urban transformation based on modernity and capitalism, not amnesia.

Another difference between European and North American cities is the latter's widespread adoption of the street grid. Most North American cities were “planned” by surveyors, whom imposed a simple street grid on the landscape. Since most cities in North America were

created rather quickly in order to ease the settlement process, the surveyor would simply create straight parcel boundaries that met at right angles. This had a bonus effect of maximizing the market value of private parcels, as well as "reduce[ing] the costs of land demarcations and land transactions" (Ellickson, 2012; p.20).

Despite the differences in urban form between both continents, a number of commonalities exist. The fundamental purpose of the urban fabric is to preserve the necessary connections to, and to sustain the patterns of, circulation associated with these processes. Cities are a dynamic entity because they always provide a sense of orientation, awareness and potential far greater than the range of activities and localities that one is engaged with at any given point in time. Therefore, the spatial form of cities is a powerful medium for ensuring these requirements are satisfied (Peponis et al, 1997).

2.4.4 – Aspects of Morphological Analysis

Since North American cities are comparatively younger to European cities, it is not surprising to see much emphasis on the initial town plan and its underlying socio-cultural principles in a morphological analysis. Urban planning historian John Reps has written extensively on the morphology of American cities. To Reps (1965), the initial plan is what matters most in an urban morphological analysis, since almost all towns were speculative in their origins. Related to this idea is the near-universal adoption of the grid in town plans, which Reps (1965) argues facilitated a functional democracy in terms of property market participation, whereby the basic geometry of parcels innate in the grid bespoke of a simple egalitarianism that allowed easy access into the market.

Other influential morphological studies include Vance (1982) and his examination of five morphogenetic typologies of town planning traditions, including the French Bastide principle (the best example being Quebec City) and a study by Prince (1968) on the four typologies of a courthouse square as a trace element in urban morphology.

Determining the patterns associated with trace elements is a crucial step in an urban morphological analysis. To this end, Conzen (1960) broke down the townscape into three categories (what he calls *form complexes)*: the plan unit (i.e. streets, parcels/lots and buildings), the building fabric (i.e. three-dimensional form), and land/building use. Each of these form complexes are subject to temporal forces, with land/building use the most susceptible to change.

According to Kropf (1998), forms tend to be relatively stable over time, while uses/activities change much more rapidly. Although built forms and human activities are intricately linked, the relationship is not fixed.

The most resistant component to change is the block ground plan, since the street pattern is a reflection of a major capital investment. Once street plans are established, it is much harder to alter/expand streets due to the enormous amount of capital required to expropriate land, pay restitution to landowners and raze buildings. Altering the street plan also requires coordination with a plethora of public and private actors, a difficult task (Whitehand 2009). Therefore, the residues of historical periods are more pronounced in the street pattern.

The ground plan of a city "frames" the building fabric, land use patterns as well as other subsequent development. A morphological frame, according to Conzen (1969), is: "an antecedent plan feature, topographical outline, or set of outlines exerting a morphological influence on subsequent more or less conformable plan development, and often passing its features on as inherited outlines" (p.127). Examples of morphological frames include streets, hills and walls/fencelines. Similar to morphological frames, fixation lines are antecedent features that alter (i.e. fix) the geometry of subsequent development along their edge – the most common examples are railways, waterfronts and expressways.

In his study of the medieval English town of Alnwick, Conzen (1960) showed that the most stable elements of the urban fabric are cadastral (i.e. street) and block patterns. Configuring urban blocks is an effective way to shape a coherent and unified urban form. Since the block pattern is an essential part of the urban fabric, block configuration should be designed to respond to the morphological dynamics of the city. Blocks should be balanced by allowing a range of sizes determined by the local context, which will encourage a variety of uses (Bohannon, 2004).

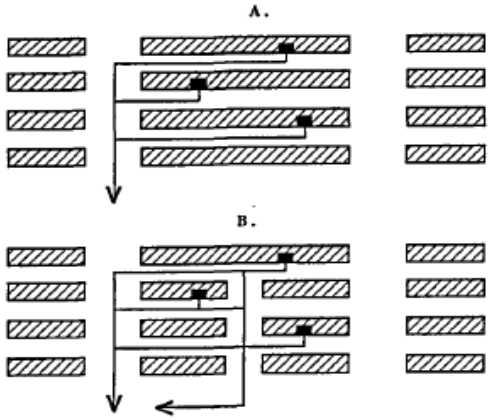


Fig. 2-6: Permeability – (A) long blocks hinders street life; (B) shorter blocks offer more flexibility. Source: Jacobs, 1961

Both urban planners and morphologists hold a preference for permeable street layouts. Small block street systems are what morphologists call *fine-grained*, while street patterns with fewer, large blocks have a *coarse* grain. Fine-grained street systems offer more choice in circulation patterns, and are correlated with higher land values since it increases the creation of corner lots (Bohannon, 2004).

Establishing the size of the ideal street block is highly subjective and ill-defined. Krier (1984) suggests urban blocks should be "as small in length and width as is typologically viable; they should form as many well defined streets and squares as possible in the form of a multi-directional horizontal pattern of urban spaces" (p.43). A highly permeable urban environment allows for greater freedom of movement, and creates greater opportunities for street frontages, paths and openings, thereby maximizing economic and socio-cultural activity – a necessity in any city (Moughtin et al, 2003). As Bentley et al. (1985) says: "Only places which are accessible to people can offer them choice. The extent to which an environment allows people a choice of access through it, from place to place, is therefore a key measure of its responsiveness" (p.27).

2.4.5 – Summary

This section has delved into the meaning, theories and applications of urban morphology, further formulating it into the narrative of this research. The works of Conzen and Moudon are applicable to understanding the morphology of London and Hamilton, Ontario, since the form complexes have greatly shaped the morphogenesis of each city. This offers an explanation into the underlying principles behind the founding of each city.

The primary objective of this research is to provide the link between urban form and

planning objectives. Moudon (2002) notes that only architects and urban designers consider aspects of urban form in their profession, with "all other allied professions replacing these elements by abstract concepts such as density and land-use mix" (p.38). Nonetheless, urban morphology is a field that has great potential in its applications to urban planning. Uncovering the logic behind the urban form (and hence "reading" the physical reality of cities) can uncover trends/patterns and assist in planning efforts, especially recent downtown sports arena developments.

2.5 – Conclusion

This chapter has attempted to demonstrate the role that sports facilities play in the 21st century North American city. It revealed that under the right circumstances, a stadium can promote physical and socio-economic regeneration, as well as becoming a catalyst that generates further redevelopment by its own virtues. The rate for success is bolstered if the facility is flexible in use, adapted to human scale and properly sited in an easily accessible area near public transit, with examples of facilities that followed these guidelines listed.

In addition, selected theories about place identity and imageability were introduced as a means of developing an evaluation framework for this research, with the field of urban morphology discussed. The section outlining theories of place identity revealed that a city's spatial structure influence's people's perceptions and actions, which in turn alter the townscape to suit contemporary needs. The final section provided a viable description of conducting a morphological analysis, by breaking down the urban form into four categories and measuring the degree of change that has occurred in an urban area. From tracing these patterns of development, a particular logic to development can be understood.

Based on the theoretical framework outlined in this chapter, chapter three will determine a methodology for conducting a morphological analysis, as well as map each case study location's physiognomical attributes that will answer the research questions posed in chapter one.

Chapter Three – Methods and Analysis Framework

3.1 – Introduction

The purpose of this chapter is to establish a methodology that will be able to answer the research questions posed in chapter one, which are the following:

- What does it mean for a new development to respect, or fit into its physical surroundings?
- How does one define success in evaluating urban sports facilities?
- Do successful urban sports facilities respect the morphology of their context and how does this factor relate to civic image?
- How can we define and measure civic image, especially in conjunction with sports facilities?

Although urban morphology is an emerging topic in the field of planning, there have been virtually no studies in its application to the planning process in Canada. The objective of this research is to create a theoretical framework that can trace patterns of urban development in order to assist planners in downtown revitalization efforts. Two cities were selected in order to evaluate the built form in a pre-defined zone surrounding each city's downtown multi-purpose arena, as well as measure the extent that each arena contributes to civic image. For each location, a set of data collection tools were utilized. The results obtained were interpreted based on the theoretical framework that was established in chapter two.

Before providing an overview of the two sports facilities selected for this research, the case study framework will be defined and justified, with a description of the case selection criteria provided. The following two sub-sections will consist of a description of this research's data collection procedures, the framework for data organization as well as the rationale for the selection of historical periods for the morphological analysis. Next, an outline of the questionnaire is provided, as well as a description of how both concepts will be operationalized. The chapter will conclude with a synopsis of the information provided in this chapter.

3.2 – Case Study

This investigation is framed upon case study research. Harling (2009) defines a case study as “a holistic inquiry that investigates contemporary phenomena within its natural setting”

(p.1). Creswell (2003) goes further, defining the case study as "a strategy of inquiry in which the researcher explores in depth a program, event, activity, process, or one or more individuals" (p.13). To Creswell, the case study is more of a research strategy instead of a methodology. The case study is used to answer the *how* and *why* a phenomenon has happened – particularly useful in cases when the researcher has no control over the outcome of events, and when the boundaries between phenomena and context are not clearly evident (Patton, 2002).

The results obtained through case study research must be generalized. This can be a difficult process, since local circumstances/context varies from place to place. While these factors need to be acknowledged, the research findings should be generalized to cover broad theoretical and practical issues (Yin, 2003). Due to the need to generalize findings across two cities, as well as the variety of data sources that were used in the process, the case study is appropriate for this research.

The ability to utilize a great many data sources to answer the research questions is the primary advantage to the case study. It allows for the integration of various sources such as maps, documents and questionnaires into the research design. Each source can complement one another, thereby providing a stronger foundation for research. This process is called triangulation, which, according to Hoggart et al (2002), "involves employing complementary methods or data sources to circumvent the potential inadequacies of single data sources" (p.312).

Another advantage of the case study "is that it tries to illuminate a decision or set of decisions: why they were taken, how they were implemented, and with what result" (Schramm, 1971; cited in Yin, 2003; p.12). In other words, the case study is appropriate in identifying cases that are rich in information, and is useful in situations where a great deal can be learned from a few examples – particularly in identifying particular patterns or themes across two cities (Patton, 2002).

The main limitation to the case study is a reliance on subjective judgments on the data collected (Yin, 2003). The comparison of the past and present built form should reflect critical changes and not the researcher's subjective impressions. This weakness is addressed by the test of validity – identifying the specific types of changes to be studied, which is then related back to the objectives of the study (Yin, 2003). Yin (2003) suggests identifying operational measures that match the changes – this is done through the urban morphological analysis, which details the changes and factors of urban development, with detailed explanations of the factors that have led

to current outcomes.

3.2.1 – Selection of Cases

This sub-section will outline the selection process for each city selected for this research: the Ontario cities of London and Hamilton. Although several cities were eligible for this research, three criteria were ultimately used for the final selection. The first requirement was that a city must contain a multi-purpose arena that is located downtown, built for the purposes of urban revitalization. Once this step was completed, the process was refined to reduce the number of cases; determining which downtowns have gone through: (a) adaptive change (in the case of London); and (b) augmentative change (in the case of Hamilton). The final criterion was that each arena must have been in operation for at least ten years. A timespan of less than ten years is not considered a suitable timeframe in terms of attracting ancillary development or investment. Therefore, this requirement ensures the downtown's physical form has adequate time to adapt to changes due to the sports facility, thereby allowing for a more detailed investigation into morphogenesis and civic image. Each of these locations are ideal for this investigation since each city has invested considerable effort and resources in combating downtown decline, and has appeared on both city's agendas since the 1950s.

The zone of analysis varies for each city, since each arena is sited in a unique context and local factors were taken into account. Another factor to consider relates to borders; whether they be legal (i.e. demarcating downtown from local neighbourhoods) or geographic (i.e. fixation lines, etc.) in form. The zone of examination for each city includes the arena, its surroundings and the kernel for each city, with the borders following fixation lines and morphological frames.

Each city is situated within 110 kilometers of Waterloo, Ontario, in one of the most populated regions of North America (as shown in fig. 3-1). An account of each city's history is provided in chapters four, five and six; but first, a brief description of each downtown sports facility is provided.

Fig. 3-1: Map of Southern Ontario. Source: travel-pix.ca

3.2.2 – Case Study Locations

(i) Budweiser Gardens: London, ON

Downtown London's multi-purpose arena is Budweiser Gardens. Opening in October of 2002 at a total cost of $52 million, it was built with the objective that it "will be one of the catalysts in the redevelopment of London's downtown" (Budweiser Gardens, 2012). Its primary tenants are the London Knights of the Ontario Hockey League and the London Lightning of the National Basketball League of Canada. The facility also serves as the primary venue for concerts, theater productions and other entertainment events in London and across Southwestern Ontario. After originally being known as the John Labatt Centre, the facility was officially re-named Budweiser Gardens after the brewery purchased its exclusive naming rights until 2022 for $6.4 million (Martin, 2012).


Fig. 3-2: Changing the name of former John Labatt Centre, with Jubilee Square in foreground. Source: tumblr.com

Budweiser Gardens has 9,090 seats, but can be expanded to over 10,000 if configured for special events. Of this total, 1,100 are premium club seats, in addition to 38 private luxury suites.

The innate flexibility in use allows the facility to host approximately 150 events a year and draws between 600-800,000 people downtown annually. In its first full year of operation, approximately 600,000 tickets were sold for events, placing Budweiser Gardens third in ticket sales for all venues in Canada, only behind major league venues Air Canada Centre in Toronto and the Bell Centre in Montreal. In 2012, it was named the number one venue in Canada and placed third on the international venue list in its category (10-15,000 capacity) by Venues Today magazine (Budweiser Gardens, 2012).

Budweiser Gardens is located on a two hectare site on Talbot St between Dundas and King St, on what was formerly the Talbot Block (more about the Talbot Block and its controversial demolition is discussed in chapter four). Its most notable feature is a replica of the former Talbot Inn into the building's facade, which stood at this location until its demolition in 2001. This architectural mélange is a proto-typical example of facadism. Budweiser Gardens hosts a number of on-site uses including a restaurant, a cafe/bar, retail stores, meeting space and a sports hall of fame. These spaces are accessible at street level and are open to the public, even when no events are held. Budweiser Gardens is owned by the London Civic Centre Corp., a P3 whose members include the City of London, Ellis Don Construction and Global Spectrum, which manages the facility (City of London, 2013).

Fig. 3-3: Budweiser Gardens, facing Dundas and Talbot Street, 2013. Source: author

A sports and entertainment facility for downtown London was first conceived in a city-commissioned report entitled: Planning Entertainment Uses for Downtown Revitalization in the City of London (1996). The report consisted of a series of proposals to amend entertainment policies in the city's official plan in order to transform downtown London into a centre for entertainment. The report also cited the possible closure of the London Ice House, the city's primary multi-purpose arena since 1963.

(ii) Copps Coliseum: Hamilton, ON

Copps Coliseum is located at the corner of York Blvd and Bay St N, and is an anchor of Lloyd D. Jackson Square (colloquially known as Jackson Square), a massive 8.8 hectare development built on an urban renewal-era superblock flanked by the Hamilton Public Library/Farmers Market, Hamilton Place and a shopping complex. Copps Coliseum opened its doors in May of 1985 at a total cost of $42.7 million (approximately $81 million in 2011 amounts). The facility is named for former Hamilton mayor Victor K. Copps, who helped champion the Jackson Square project and the new arena (Jelly, 2011).

The genesis for what would become Copps Coliseum began in 1977 when the city's turn-of-the-century arena (the Barton St arena) closed. The decision to locate a new facility at its current site was made when official plans to Civic Square (the original name of the project) were scrapped, after the buildings that occupied the site had previously been demolished. Copps Coliseum was designed to attract an NHL franchise, but has failed in this pursuit no less than five times since its opening. Today, the sole tenant of Copps Coliseum is the Hamilton Bulldogs of the American Hockey League (Jelly, 2011).

Fig. 3-4: Copps Coliseum, facing Bay St and York Blvd, 2012. Source – NHLArenas.com

Copps Coliseum has an official seating capacity of 17,383, but can be expanded to 19,000 for special events. On April 1, 2013, Global Spectrum and Live Nation (a concert promotion company) assumed control of the facility from Hamilton Entertainment and Convention Facilities Inc. (HECFI), which also runs Hamilton Place and the Hamilton Convention Centre. Due to a lack of amenities such as luxury seating and box suites (of which it has 12), Copps Coliseum currently does not meet NHL standards for hosting a franchise (City of Hamilton, 2011). Numerous plans have been brought forward to bring the facility up to specs – the most

recent attempt was in May of 2009 when Canadian billionaire Jim Balsille attempted to purchase the Phoenix Coyotes and planned a $150 million renovation to the building. However, the proposal fell through when Balsille's proposal was quashed by the NHL Board of Governors (MacIntyre, 2010).

Due to its size and location in one of Canada's largest metropolitan areas, Copps Coliseum is an important venue for events. The facility is ranked among the top 100 concert venues globally according to trade publication Pollstar. However, since it hosts so few events compared to facilities of similar size (between 80 and 90 annually) the facility's owners have run deficits in recent years. In 2010, HECFI ran a $2 million deficit, primarily due to Copps Coliseum's operating expenses (City of Hamilton, 2011).

3.2.3 – Data Collection

This research utilizes a mixed-methods approach to data collection. The approach, which consists of both qualitative and quantitative methods, was used "to confirm, cross-validate, and/or corroborate findings within a single study" (Creswell, 2003; p.217). The mixed-methods model is applicable to this research because it is a widely utilized approach taken by researchers and "can result in well-validated and substantiated findings" (Creswell, 2003; p.217).

The data collection process took approximately seven months (November 2012 to August 2013), with the three predominant research sources being maps, tax assessments and planning documents. The following will describe how each source was used in this investigation as well as list the locations for each source.

(i) Maps

An analysis of the urban form would prove impossible without maps. The use of maps enabled the researcher to locate phenomena listed in the literature and describe the built environment's characteristics, charting information from each city including streets, lots and building stock. Although maps can only show a static image at a given time, patterns of a feature/location can be revealed by comparing the change(s) to the built form using a series of maps from successive years, which can then be related back to the research questions.

By far the most important type of map used in this investigation was fire insurance maps[1] (both original and lithographic). As the name implies, these maps were created for the fire

[1] The two most important fire insurance map cartographers in Canada were the Goad Company of Montreal and the Underwriter's Survey Bureau of Toronto

insurance industry in order to assess the risk of fire to a city's building stock and determine premiums. A fire insurance map charts an area's building footprints, land uses (in some instances listing the building's occupant) as well as the materials used in building construction. Even the minute aspects of urban form were represented, including the placement of doors and windows (Dubreuil and Woods, 2002). When referring to fire insurance maps, Keister (1993) writes: "Stated simply, they survive as a guide to American urbanization that is unrivaled by other cartography and, for that matter, by few documentary sources of any kind" (p.42).

Fire insurance maps were created in Canada between the years 1875 and 1975, with new maps produced every 20-30 years on average. This detail is important; since these maps were meticulously made and expensive to create, new maps would only be produced as needed. This facet affected the process for selecting dates for the morphological analysis. An attempt was made to select the same year for both cities, but due to a lack of sources this was not possible. Some sources used in this research were issued annually (i.e. tax assessments); hence, the selected years of study were determined by the years that fire insurance maps were issued.

In the late 1990s, civic planning departments began the transition from paper-based geodetic surveys to computer-based software such as Computer Aided Design (CAD) and Geographic Information Systems (GIS) to store and manage information. Basic GIS map layers (known as shapefiles) were used to measure the contemporary urban form, the most important of which are parcel, land use and building footprints. GIS is a catch-all term that is used to describe the use of software as well as its specific structure. Goodchild (2000) defines GIS as "integrated computer tools for handling, processing and analyzing of geographic data" (p.301).

What makes GIS data unique is that it has a spatial identifier that can represent a data point anywhere on the earth's surface. GIS software can handle these spatial identifiers in two and three dimensions, and can attach descriptors that can identify each record/item – this is accomplished by giving each piece of data spatial coordinates (i.e. x,y,z or lat-long coordinates). Both raster and vector data is handled in many GIS applications, the latter dividing the system into points, lines and polygons (Burrough and McDonnell, 1998). Measuring urban form up to the contemporary period was performed using ArcMap 10.1.

Maps of lesser quality, yet equally as relevant to this investigation are maps that date prior to 1860, including the original town surveys of London and Hamilton. These early surveys, in addition to fire insurance maps, were obtained in the map library of the University of Western

Ontario and McMaster University respectively. Shapefile data was obtained through the University of Waterloo's Geospatial Centre, which has agreements to license data from each city. Additional data from London was obtained by a site visit to the city of London's department of Planning and Development office.

(ii) Documents

Two nominal sources of information that describe characteristics of the city not recorded on cartographic sources are also used in this investigation: tax assessments and planning documents. Each source is described below.

Although fire insurance maps were meticulous in their description of the urban form, one of its limitations was that official property boundaries were not recorded. Although some boundaries were demarcated (i.e. with fences), these boundaries were unofficial; in the case of CBDs, fences were non-existent in most areas. To track and measure the changes to lot boundaries before 1999, tax assessments (or assessment rolls) were used. Compiled by municipalities, tax assessments are used to assess a given property's value; variables recorded on a tax assessment include the value of the lot, the lot's frontage (in dollars per foot), the number of buildings on a lot as well as the lot's owner.

Tax assessments are useful for their information for determining a lot's official dimensions and the lot frontage. Tax assessments could have been used to compute the value of property surrounding each arena before and after it opened; however, due to the time constraints of this thesis, this approach was not used.

Planning documents are also a valuable source of information. Documents that are relevance to this research include: official plans, secondary plans, urban renewal plans and historical plans, in addition to reports concerning each city's arena. These documents also contained census data as well as historical context regarding the development of each case study location.

The advantage of the document analysis, in the words of Creswell (2003), is that it "enables the researcher to obtain [the] language and words" of the city (p.180), and provides an overview of local planning concepts. In addition, documents are one source of information that is unobtrusive towards eligible participants in this research. There are two primary limitations to the document analysis: first, the background context in each document might be missing. The second limitation is that the level of analysis depends on the researcher's abilities. Since the data

that was collected is triangulated, both of these risks are reduced.

3.2.4 – Framework for Data Organization

This research examines changes to the built form through the theoretical lens of the British school of urban morphology. The school views the city as an evolving entity that is constantly altered in order to accommodate new forms. Conzen (1960) categorizes the urban fabric into three elements (what he called *form complexes*): the plan unit (consisting of streets, lots/parcels and buildings), building fabric, and land use. This thesis is organized according to these form complexes. For both case study locations, a written historical account of each city is provided in order to provide background context. Next, the morphological analysis is broken down into four sub-sections: streets, lots, land uses and building/building stock (the latter sub-section combines building and building stock since they are similar in many respects).

Once all this data has been collected, it was decided to split the analysis into two periods: the first is from each city's founding until 1945, and the second from 1945 to the present. This was done in order to more easily trace the factors as to how each of the townscape elements has evolved. According to the literature, 1945 was an important year: not only did the Second World War conclude, it marked the beginning of an era of mass automobile ownership. This single factor lead to one of the most important paradigm shifts in terms of how cities were viewed, planned and built.

Following the theoretical framework that was described in chapter two, an overview of the analysis' findings for all three cities is provided in chapter seven. More about how the collected data was interpreted in listed in section 3.5.

3.3 – Questionnaire

The final step of this thesis is the issuance of a questionnaire. A questionnaire is an effective and widely-utilized method to collect data, and is versatile in measuring a sample population's behaviour, characteristics, attitudes/opinions/beliefs, expectations, self-classification and knowledge (Newman, 2004). The questions posed in the questionnaire were close-ended to allow for efficient completion times and ease of inputting data. However, two questions were open-ended, which allowed respondents to expand their thoughts if they so chose to.

According to Willem and Irmtraud (2007), the advantages of the questionnaire include:

- Time and cost-effectiveness

- Less intrusiveness
- Ease of data entry/tabulation
- The standardized format makes the collection of responses objective
- Allows for quick collection of information
- Information can be collected from large sample size with relative ease

Like all methods, there are limitations to a questionnaire that need to be taken into account. One limitation is that the standardized questions may make it difficult for the researcher to explain the questions. If this occurs, participants may be unwilling to answer the question or answer superficially. The questions posed were crafted carefully to avoid this potential problem.

3.3.1 – Question Development Process

The purpose of the questionnaire was to measure the degree to which the perception(s) of each arena contributes to civic image and place identity in each city. A sample of respondents in each city was chosen in order to gauge their attitudes/thoughts/opinions on the arena in both cities (see Appendix 1). Two aspects of civic image were measured – imageability and place identity.

Imageability and urban morphology are intricately linked – imageability can be defined as the arrangement of society in space, whereas urban morphology is the arrangement of space by society. Lynch (1960) suggested that an environmental image can be broken down into three components: identity, structure, and meaning. An object must be (i) identifiable, which implies its distinction from other things; (ii) an object must be related to other objects (either spatially or through patterns), and (iii) the object must have some practical or emotional meaning to the observer (Lynch, 1960). Imageability is a suitable concept for this investigation, since Lynch (1960) is among the most cited authors in the fields of urban geography and social psychology, and the concept of imageability is well-grounded in research literature.

Place identity is also relevant since it is used as a marker for sense of place. Place identity refers to the degree of uniqueness of each facility, especially in terms of its architectural distinction (from other arenas, its surroundings, etc.) and spatial form. Place identity also refers to how each building contributes to sense of place, whether it is a landmark or an iconic building for the city. An arena with a strong place identity successfully contributes to local place meanings within the broader physical, cultural and emotional context, and does not just serve as a vehicle for commodification and/or entertainment.

Fairness and neutrality were predominant concerns in designing the questionnaire. Willem and Irmtraud (2007) suggests using three to five rank ordinal scales for close ended questions, with the mid-rank representing the "unsure" option. For example, section two of the questionnaire consists of a five rank scale of "strongly agree", "agree", "unsure", "disagree," or "strongly disagree." In total there were 21 questions, and took respondents approximately five to eight minutes on average to complete the questionnaire.

Before the questionnaire was sent to respondents, a pilot survey was conducted in order to gauge the relevance and usefulness of the questions. Three people (whom were personal friends of the researcher) tested the questionnaire, and found that the questions were useful and easy to answer. The pilot survey also revealed that using both the ordinal scale and the likert scale increased the speed with which the respondent could complete the questionnaire, while both open-ended questions took longer to complete.

3.3.2 – Sampling Method

There are three main methods of administering questionnaires to a sample population: self-administered questionnaires (in which the respondents are asked to complete the questionnaire themselves); questionnaires administered face-to-race by an interviewer; and questionnaires administered by telephone (Newman, 2004). For this study, it was decided to use a self-administered questionnaire, due to the constraints of this research (i.e. time and costs).

Respondents were selected via convenience sampling (also known as haphazard or accidental sampling). Convenience sampling can be defined as a study in which the participants are available for the study but have not been randomly selected, meaning that the situation in which the probability of a respondent being selected is unknown. Convenience sampling is an example of a non-probability sampling procedure; as opposed to probability sampling, a non-probability sampling procedure is when the researcher does not know the likelihood that any possible respondent will be selected. In such cases, there is often no sampling frame nor any practical way to define one. Examples of respondents include volunteers, people in a public space (i.e. a street corner) and people who are geographically proximate to the researcher's place of employment (Mogambo, 2011).

The convenience sampling method was selected due to the constraints of this research. In general, probability sampling is considered to be more accurate and rigorous than non-probability sampling, but in cases such as this it is not always feasible to perform. Non-

probability sampling is often used in pilot or exploratory studies to determine whether future research is warranted (Mogambo, 2011). Since this portion of the research is considered exploratory, convenience sampling was justified in order to provide a rough sample that can be systematically tested at a future date using probability sampling techniques.

The sample population selected in convenience sampling generally assumes a homogenous population. But while people are known to be different, this difference is assumed to be probabilistic. Although it is possible for researchers to determine that the respondents are demographically similar to the larger population, any non-probability samples should not be used to make inferences about the population because they may introduce bias and researchers are limited in their ability to determine the accuracy of non-probability estimates (Salant & Dillman, 1994).

An adequate sample size is determined by two aspects: the anticipated response rate, and the amount of data necessary to reach valid conclusions. The amount of completed responses necessary to achieve validity is dependent on the confidence interval and degree of error deemed acceptable (Triola et al, 1999). For this investigation, approximately 100 respondents for each case city was deemed adequate.

In order to solicit participation for this questionnaire, a sandwich board was made by the researcher with a statement about the nature and purpose of the questionnaire, with the researcher standing in prominent locations in London and Hamilton in order to attract attention. Once the respondents understood the purpose of the questionnaire and that their anonymity would be protected, respondents completed the questionnaire sheet. Once the questionnaires were completed, space was left at the bottom of each sheet asking respondents if they would like a copy of the results. If requested, the results were sent along with a feedback letter sent to each respondent thanking them for their participation. Data was inputted, analyzed and presented in graphical form using Excel 2010.

3.4 – Analytical Framework

This section of chapter three outlines the analytical framework for this research. The framework is largely based on the literature review that was conducted in chapter two. The purpose of the literature review was to obtain background knowledge pertinent to this investigation – of concern to this research are sports facilities, urban economics, civic image and

urban morphology. Sources such as scholarly articles and monographs were used to provide in-depth knowledge on relevant theories, while other nominal data sources such as photographs and newspaper articles provided the proper context for each case study location. The following two sub-sections will explain how data was used to answer the research questions.

3.4.1 – Urban Morphology

As mentioned in section 3.2.5, this research analyzes the urban form within a pre-defined zone surrounding each city's downtown arena, utilizing the theories of the British school of urban morphology. Conzen (1960), the father of the British school, broke down the urban form into three form complexes, the most important of which is the plan unit. The plan unit is crucial in understanding patterns of urban development, since at the macro-scale of analysis, the plan unit provides clues about a city's origins and development. Hence, analyzing the plan unit unearths a trialectic that can uncover a particular logic behind the evolution of urban form, allowing morphologists to trace patterns of development.

Conzen, together with the work of Moudon (1986) also researched the role of the parcel in the preservation of physical form. Conzen (1981) argued that centralizing economic pressures tend to fuse parcels together in order to provide sufficient land needed for larger structures. In the same vein, Moudon (1986) argues that the lot is an important element in a morphological analysis, writing that the parcel should be seen as "the basic cell of the neighbourhood fabric that establishes the pattern of the grain of the city and determines its scale" (p.144). Moudon (1986) hypothesized that the urban fabric is more easily preserved (or resilient) if lots are small and diversely-owned.

The British school is applicable for this research since this field views the city as an evolving habitat that is constantly altered, yet structured by its inherited forms – a theoretical lens applicable in the evaluation of urban revitalization outcomes. Large-scale redevelopment projects such as sports stadia are built for several reasons, chief among them to bring people, jobs and investment back to the central core. Whether or not the long-term success of a sports facility is due to the preservation of the historical townscape, or if a sports facility assists in the preservation of historical forms, will be revealed in this investigation.

The first half of the morphological analysis began with an historical overview of each city, explained by a map of the first town survey. Next, development of the town throughout the 19th and most of the 20th century is broken down into four categories: streets, lots,

building/building stock, and land use. Fire insurance maps were used to measure the changes to streets, land use and buildings, while tax assessments were used to chart changes to the city's lot pattern and land value. The second half of the analysis tracks the changes to the townscape post-1945, with geodetic surveys replacing fire insurance maps. The analysis concludes with measuring the contemporary built form according to these four factors, using shapefile data mapped on GIS software.

3.4.2 – Civic Image

The research methodology links two theoretical concepts: urban morphology and civic image. The first attempt to construct a theoretical construct of these two fields was done by Conzen (1966), who wrote that the whole urban fabric should be seen as a genius loci and an *objectivation of the spirit* of the previous societies that inhabited it. According to Conzen (1966), the urban form is a palimpsest, in which forms are subsequently added to the city, yet does not erase all traces of its predecessors. Conzen (1966) used this concept to characterize the geographical variations of all three form complexes, but did not delve deeper into this assertion. However, it was central to his conceptualization of how people create and/or alter places.

To Conzen (1966), the three factors that make up a townscape's uniqueness in the genius loci is the plan unit, building fabric and land use, with the quality of historical townscapes resting upon the conservation of the plan unit and building fabric, since these two factors are the most stable elements against change, creating a morphological frame that constrains future development to some degree.

Place identity and imageability are two concepts that are measured in the questionnaire in order to determine each sports facility's contribution to civic image. In order to use the data to answer the research questions, such questions were asked:

1. The (arena) and the arena square is a pleasurable place to be when no events are held

This question was asked in order to gauge if the arena and its immediate area makes a positive contribution to the urban realm. If respondents do go to the arena when no games were held, it is evidence that the arena and its immediate surroundings positively contributes to placemaking efforts.

2. Most of your circle of family and friends would recognize (arena) if they were shown a picture of it

The purpose of this question is to measure the degree of uniqueness of the arena. If a non-

resident were to recognize the arena then it most likely contributes to place identity.

3. In your opinion, (arena) is an iconic landmark of (case city)?

This question was asked if the arena is a successful marker of place identity, by determining whether it is recognizable to non-residents of each city.

4. The facility and arena square successfully contributes to local culture as well as a "brand" for (case city)

This question gauges respondents' views into whether the arena is (a) identifiable, and (b) an imageable element in each city. Its purpose is to determine if the facility is something more than a place of entertainment, whether the respondent feels a memorable and/or emotional attachment to the building and its surroundings. The word *brand* is used since it best conveys the idea for a local culture, and is generalizable for a greater cross-section of the population.

The information gathered provided key information about resident's perceptions towards their community and its various attributes.

3.5 – Ethics Review

The component of this research that warranted an ethics review was the questionnaire. For this method, it was important to protect the confidentiality of participant's responses, as well as ensure that recruitment of participants would be done in a responsible and appropriate manner. The questionnaire received full ethics clearance from the University of Waterloo's Office of Research Ethics on June 12, 2013.

3.6 – Summary

This chapter has outlined the methodology that was employed to gather the data necessary to examine the morphology of London and Hamilton, Ontario. The nature of this study provided enough flexibility to allow the researcher to utilize multiple methods. While the bulk of the study is concerned with tracking and measuring morphogenetic change, the conclusions drawn are broadened with a review of civic image in the context of catalytic urban revitalization, with the conclusions providing a platform for a more comprehensive evaluation of urban morphology. As will be revealed in the following chapters, this multi-faceted approach proved effective in answering the research questions.

Chapter Four

Case Study One – London, Ontario

Fig. 4-1: London skyline, 2011, with Budweiser Gardens at center-right. Source: Wikimedia Commons

London is a mid-sized city located on the Windsor-Quebec City corridor, halfway between Toronto and Detroit. It is the largest city in Southwestern Ontario and the 13th largest city in Canada, with a population of 366,000 according to the 2011 census. Due to its size and location, London is the regional centre for communities throughout Southwestern Ontario. London is the primary seat of Middlesex County, with its southern boundary bordering Elgin County (City of London, 2013).

Downtown London has dramatically improved its fortunes over the past 15 years, with increased development activity and a larger residential population. Although some projects are new, much of this redevelopment is in the form of adaptive re-use and the preservation of the historic building stock, much of it from the late-19th century. After providing a brief history of the city, this chapter will examine the form complexes of downtown London from two periods: 1826 to 1945, and 1945 to the present. Next, the results of the questionnaire will be revealed, followed by a discussion of how the results affects the successful outcome of Budweiser Gardens.

4.1 – About London

The site of present-day London was first settled by Europeans in 1802 and was named after the English capital by Lt. Gov. John Graves Simcoe. Simcoe previously selected the area to be the capital of Upper Canada in 1793, but was overruled by his superiors. At the time, London

was a sparsely populated area surrounded by bogs and thick Carolinian forest. After the Upper Canada Assembly ordered a survey to be completed for a new capital for the London district in 1824, the assembly selected a site at the Forks of the Thames River to build a district courthouse (completed in 1829) that would serve as a administrative and judicial centre for the reserve (City of London, 2013).

Simcoe's choice for a settlement location was strategic since its relative isolation from the American border would provide a buffer in case of invasion. The settlement was also sited at a junction of important trade routes from nearby Lake Erie to newly opened-up lands to the north. In 1838, three British regiments established a 50 acre garrison at present-day Victoria Park in order to shore up reserves in response to the failed Mackenzie rebellion of 1837. This surge in population pushed the settlement to over 1,000 persons, reinforcing London's role as a regional centre (Whebell, 1992).

London's early economy was largely based on light industry and on commerce that supplied the agricultural sector. On April 15, 1845, a massive fire destroyed approximately 75% of the town's building stock. After an intense period of rebuilding, growth began to shift eastwards after the city's farmers market, Covent Garden Market, was founded in October of that year. Since the market was the only legal location to sell meat, produce and field crops, it would become the downtown's prime institution. Richmond Street would be reinforced as the town's commercial axis when the Great Western Railway (currently operated by CN) was completed in 1853, with a passenger rail station opening one year later at the corner of Richmond and York street (City of London, 2011).

Fig. 4-2: Panoramic portrait of London overlooking the Forks, 1854. Source: Tausky, 1993.

In 1855, London was incorporated as a city, reaching a population of 10,000. To mark the occasion, a larger city hall was built as an addition to a building on Richmond near the market

(demolished in 1968). London continued to grow though the 1870s when two institutions were established: the London Street Railway Co. (now the London Transit Commission) in 1873, and what would eventually become the University of Western Ontario (UWO) in 1878 (Tausky, 1993).

By 1880 London was a prosperous and burgeoning city primarily due to two effects: a massive increase in immigration and a boom in the manufacturing sector which resulted from the Canadian government's imposition of tariffs. Due to the need to expand production capacity, factories that had once dotted the downtown landscape were forced to move their operations to the periphery. To supplement growth, the city began the first wave of annexations of the towns of London East in 1885, London South in 1890 and London West in 1898. By this time, the largest sectors of London's economy were manufacturing, banking and wholesaling, its growth surpassing the rates of the agricultural sector (City of London, 2011).

London experienced another dramatic economic boom in the 1920s, but by this time the downtown core was almost fully developed. Enterprises looking to expand either moved their operations or demolished neighbouring buildings. Concurrently, the rise in automobile ownership rates dramatically changed the form and function of the downtown, with increased demand for parking and service stations. So pressing was the need for parking that in 1956 a parking garage was built on Market Square, housing the market on the ground floor. Two additional stories were added to the parking structure soon after. The parking garage was so successful that the profits it generated pressured civic officials to consider re-locating the market (City of London, 2011).

In 1958, the city ordered its first urban renewal study, the purpose of which was to seek ways to accommodate the automobile and reduce conflicts with pedestrians. With funding from the Federal Urban Renewal Program, the city declared certain sections of the city substandard and these areas were subsequently razed. Another milestone during this era was the opening of Wellington Square Mall (now Citi Plaza) in 1960, Canada's first downtown shopping centre. Less than two months after its opening, London annexed the neighbouring communities of Byron and Masonville, increasing the city's population by 60,000 instantaneously (Pleva, 1992).

The downtown core slid into irrelevancy and decline in the 1970s and did not reverse its fortunes until the late 1990s. This decline reached its crescendo in May of 1992, when the Talbot Block, home to several mid-19th century buildings, was demolished by its owner when plans to

redevelop the historical block fell through (more about the Talbot Block is discussed in section 4.3). In 1993, the city completed another large annexation, this time the township of Westminster to the south. By this time, London had a population of over 350,000, with growth almost solely due to annexation of suburban and neighbouring communities (City of London, 2013).

Downtown London has reversed its downward spiral after city council passed a number of initiatives to prioritize physical and economic development, beginning in the mid-1990s. In the State of the Downtown Report (2011), it concluded that between 2002 and 2011, over 1,000 building permits worth $335 million have been issued for downtown London. The downtown's residential population increased 36.7% from 1998 to 2006, and the downtown vacancy rate has plummeted. The establishment of two institutions – Budweiser Gardens and Covent Garden Market (which underwent a $17 million renovation in 1999) is cited as the primary reason for this turnaround (City of London, 2009).

4.1.1 – Case Study Area

The case study area surrounding Budweiser Gardens almost completely covers the official borders of downtown London as described by the City of London. The western border is the Thames River, with the southern border demarcated by the CN railway parallel to York St. The eastern boundary is Wellington Blvd, extending north to Dufferin St at Victoria Park. Between Richmond and Ridout St, the northern border follows Kent St, excluding Harris Park. The river and railway represent fixation lines, while Wellington is a morphological frame that has shaped development downtown.

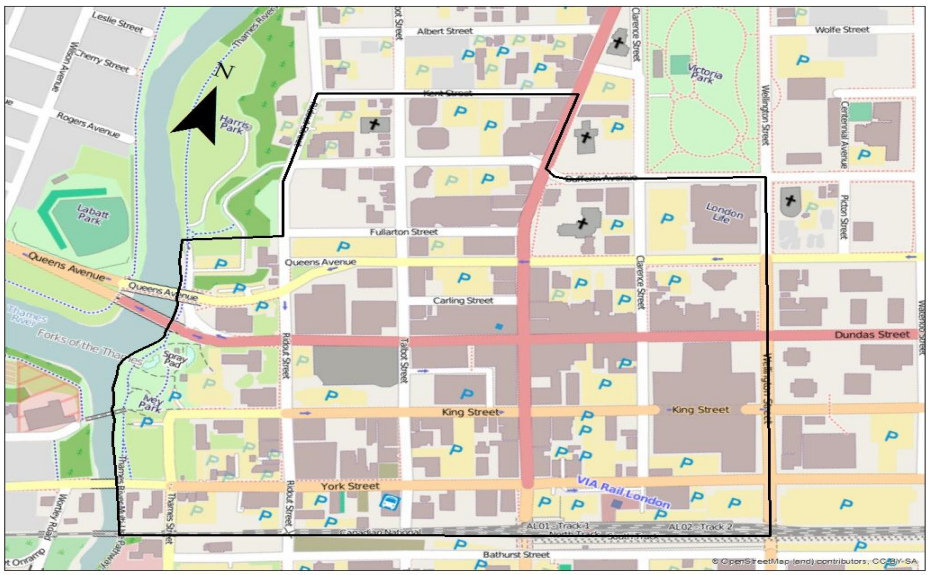


Fig 4-3: Case study boundary.

4.2 – London's Ground Plan: 1826-1945

The town survey of 1826 has been the single most influential element of London's townscape. The street grid has profoundly influenced the evolution of the parcel and building stock, and continues to do so today. The survey, conducted in 1826 by Col. Mahlon Burwell, was a tool to create a new organized settlement carte blanche in the Canadian wilderness. Burwell ultimately surveyed 240 acres of land, bounded by the present-day streets of Wellington to the east, Carling and Queens (then called North St) to the north, and the Thames River to the south and west (Desbarats, 1992).

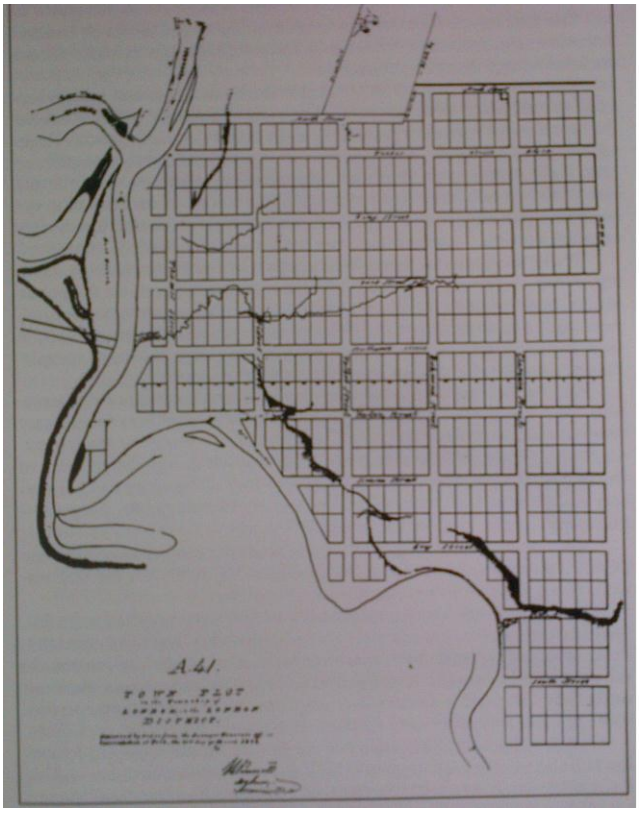


Fig. 4-4: Burwell's Survey, 1826. Source: Miller, 1992.

Burwell based his survey on the basic rectilinear grid system, which was common for British North American town plans. The plan is at a slight deviation from true north towards the northeast, perpendicular to the Forks. As with most grid systems, Burwell's survey was indifferent to local topography, with streets running over hills, marshes and brooks. However, there were exceptions to the grid: four acres of land was reserved at the Forks for the district courthouse, which is situated atop of a hill in order to provide a view of the building from the river. Another exception was a jog on Queens west of Richmond – this is due to the Kent estate, whom wished to keep their farm excluded from the survey area (Whebell, 1992).

4.2.1 – Streets

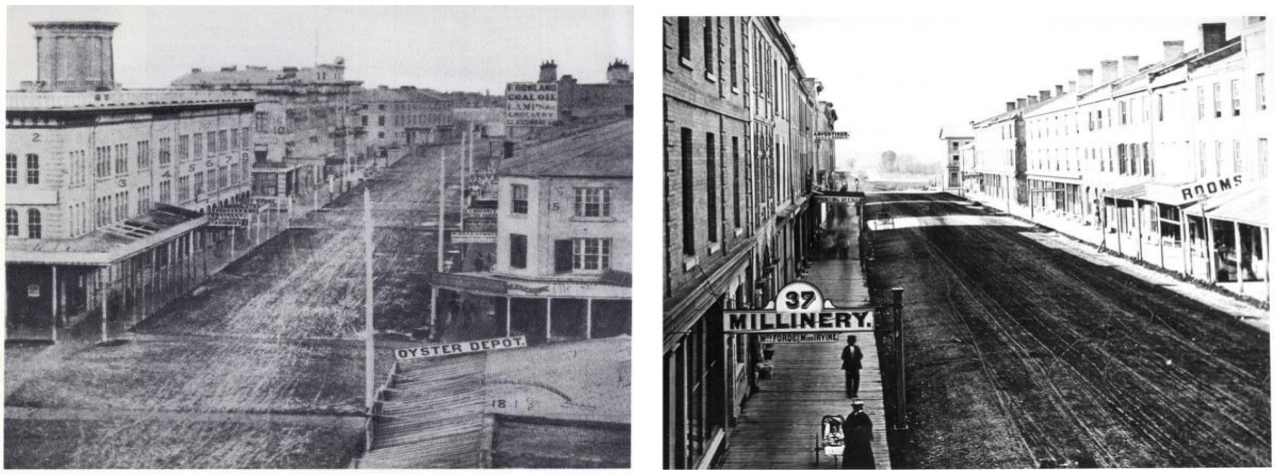
London's street system has successfully supported several different modes of transportation throughout its history. Created as a system for circulation, it has been able to adjust to changes in culture and technology after innovations to transportation were applied in central London. Besides serving as a functional space, the street system has always facilitated the congregation of people; thereby serving as an area of public space.

Before 1826, Dundas and Ridout streets formed the primary access to the London district.

Dundas was first cleared in the late 18th century under the instruction of Lt. Gov. Simcoe, which linked the London district to Sandwich (Windsor) and to Lake Ontario via the port of Dundas (since amalgamated with the city of Hamilton) (Whebell, 1992). Burwell incorporated both roads into his survey, measuring every street a uniform one surveyor's chain (66 feet) across. The survey formed blocks 500feet long in the east-west orientation and 360 feet long in the north-south direction. As a result, more intersections were formed in the north-south orientation, thereby reducing the permeability of east-west streets.

This uniform pattern was superimposed across London, making the CBD undifferentiated from the rest of the settlement in terms of its street network, block size and lot configuration. There were no principal streets in the original survey nor were there attempts to designate fashionable districts. However, when London outgrew its survey boundaries in 1840, surveyor William Hawken planned wider streets at 132 feet across, the genesis for a possible boulevard or a major avenue for London. For reasons unknown Hawken's survey was not utilized, but Wellington Street was subsequently widened to form a boulevard, measuring 136 feet wide (Pleva, 1992).

For much of the 19th century, London's streets were dirt-surfaced. This caused frequent problems for its residents – especially after periods of rainfall, as the streets would be caked with a layer of mud. Not only did this slow travel times, it also caused wheel ruts to be carved into the ground by wagons and buggies, creating hazards for hoofed horses and thin wagon wheels. Manure would have also certainly been prevalent since horses were a primary mode of transportation.



Fig, 4-5: (a) Richmond looking north from Dundas, c.1866 and (b) Dundas looking west from Talbot, 1875. Note the severity of wheel ruts in the dirt roads, necessitating the installation of wooden sidewalks. Source:

Archives and Research Collections Centre, UWO.

Upgrades to the street system occurred throughout London's history. One of the most important was the installation of streetcar lines along Dundas and Richmond in 1875, after the formation of the London Street Railway Co. Although streetcars vastly increased mobility (and was further improved with electrification in 1895), the steel tracks were cumbersome to horses that crossed them. Gravel surfacing was applied to several downtown streets during the 1880s, while cedar blocks and asphalt pavers were laid in 1895, further improving traffic flow. In 1903 the city launched a street paving program, with Dundas, Richmond, Queens and King being paved over by 1905 (Miller, 1992).

Central London's first sidewalks were installed beginning in the 1870s. Made of wooden planks resembling boardwalks, sidewalks were first installed on Dundas and Richmond, protecting pedestrians from the dirtiness and unevenness of the street. The sidewalks would be upgraded to asphalt by the end of the century (Miller, 1992).

The first major perturbation to the grid was created as a result of Covent Garden Market. The market was founded when commercial landowners on the south side of Dundas donated land to replace the old market originally held on the courthouse square. This was less an act of generosity than a shrewd business decision, since the retailers knew a central market would increase business on their properties. Not wanting to give up their valuable frontage on Dundas, the landowners compromised and offered frontage for the market onto Dundas midway between Talbot and Richmond, now known as Market Lane (Desbarats, 1992). The single biggest alteration to the street system was the routing of the Great Western Railway south of York in 1856. The railway created several dead-end streets, necessitating the construction of underpasses.

Over the years the street grid remained functional yet flexible, allowing untold amounts of developmental activity to occur. The grid has also remained largely intact to this day. However, technological improvements continued to advance, with the horse giving way to the "horseless carriage," which grew in popularity over each passing year. This rise in automobile ownership, beginning in the 1920s, was an influx the downtown could not accommodate. More about the changes to the townscape post-1945 period is discussed in section 4.3.

4.2.2 – Lots/Parcels

The street grid has been an enduring influence on downtown London's parcel pattern As opposed to the street pattern (which is regular and static), the parcel pattern is irregular and prone

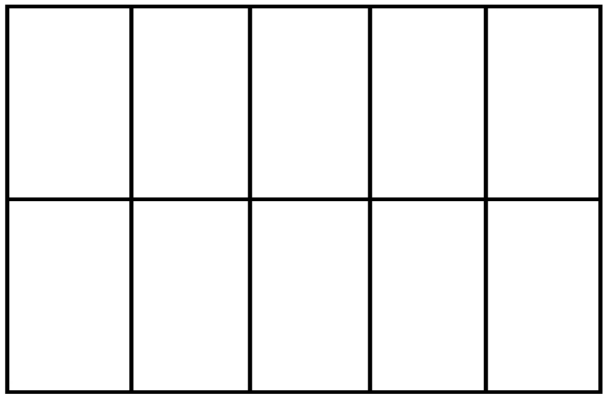
to change. How variable the degree of change is, is an objective of a morphological analysis. In the case of central London during this era, the increasing demand for space was limited by the availability of land; hence, lot sizes were constantly drawn and re-drawn to maximize the efficiency of available land. Although lot sizes throughout the CBD were of different sizes, subsequent lot creation follows a certain pattern, as will be revealed.

In Burwell's survey, ten lots were surveyed for each block – five to the north and five facing the south side of each block. Each lot was one half-acre in size – 1.5 chains (99 feet) wide and three chains (198 feet) deep. The lot size enabled settlers to live comfortably – enough land to raise some livestock, tend a garden and construct a latrine at a suitable distance away from one's living quarters. Settlers were awarded lots who agreed to pay a $32 patent and promised to build an 18x24 foot shanty (Desbarats, 1992).

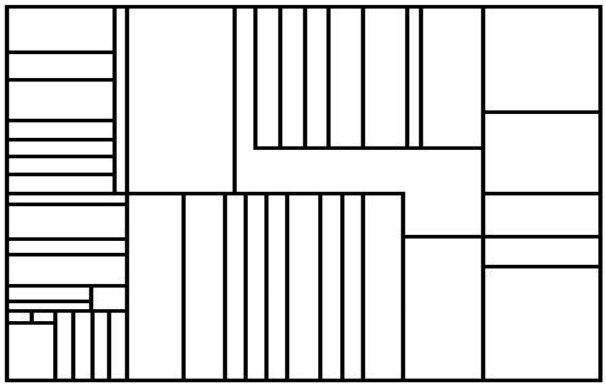
The settlement process was largely uncontrolled. Affluent residents took possession of the more valuable lots in the area near the courthouse, and invested the absolute minimum in the property. Several of these residents were de facto land speculators, who sat on the land knowing that it would be appraised at a higher value on a future date, turning a hefty profit in the process. While speculators operated throughout southern Ontario during this period, it occurred to a lesser degree in London compared to other communities. An 1839 map (fig. 4-6) made by a British military officer shows continuous rows of buildings along both sides of Dundas street adjacent to the district courthouse, indicating that in the 13 years since Burwell's survey, the lot fabric had already been subdivided. Outside this area, London was generally sparse, with two to eight structures per block.

Fig. 4-6: Map of early settlement of London, 1839. The genesis of a CBD can be seen clearly along Dundas between Ridout and Talbot. Source: London Room, London Public Library

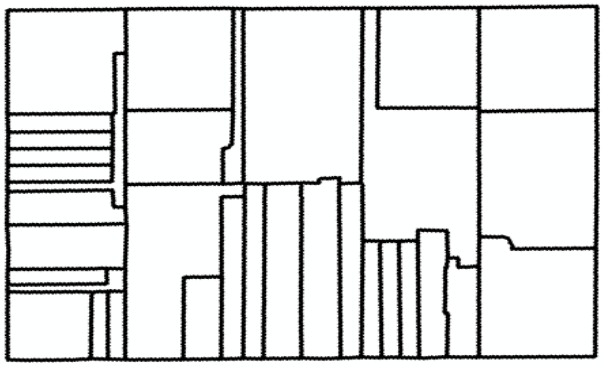
According to the 1844 assessment roll, 56 lots existed along these two blockfaces, compared to the ten surveyed in 1826. In the same assessment roll, one lot in particular – lot 16 on the north side of Dundas – lists seven owners, indicating that the lot was split six times in less than 20 years.



(a) 1826



(b) 1916



(c) 2012

Fig. 4-7: The lot fabric for the block bordering Dundas, Richmond, Clarence and Queens, London. Sources: Miller (1992); City of London tax assessment abstracts (1916); City of London GIS parcel layer (2012).

The lot splitting process continued well into the 20th century. According to the 1916 assessment roll, 154 lot frontages existed along Dundas between the Thames River and Wellington. As there were 50 lots created along Dundas from the 1826 survey, it meant the average lot had been split three times in less than 100 years, creating four lots out of the one original lot in the process. This process did not occur in an equal fashion throughout the core, however. Along the central corridors such as Dundas, the mean lot frontage was approximately

36 feet. On the south side of York, the mean street frontage was over 78 feet, indicating that the demand for frontage was less than the former.

In central London, lot splitting almost exclusively produced long, narrow lots severed perpendicular to the street. Even along York, lots still had a roughly rectangular shape. Seldom were lots severed at the rear parallel to street; this is evidence that demand for visibility along the street was inherently valuable and that property owners could not afford to assemble land parallel to the street. As recorded in the city's assessment rolls, the lots in 1916 varied in size, with the narrowest measuring 10 feet wide, the shallowest lot measuring 29 feet, 5 inches and the widest measuring 440 feet. The maximum lot depth that existed in downtown London is 198 feet, a common depth that still exists for several lots even today. This is a legacy of the Burwell survey, since this distance marked the original bisection point halfway through each block (see fig. 4-7c).

Lots were narrower along the central corridors of Dundas and Richmond, with mean frontage increasing with further distance from these locations. Some lots (i.e. along the river) were not even assessed a value, indicating that demand for space at these locations was non-existent. Lots were seldom split at the rear, nor did they amalgamate with lots abutting their backs. If lots were severed in the rear it was usually done so in order to construct a stable/livery. For example, one lot behind 61-73 Dundas exists on the 1915 fire insurance plan as a stable, presumably built for the owners and customers for those businesses.

Corner lots were created in a different fashion. Along most streets, lots were long and narrow. However, corner lots could be split in other ways, since they had access to two streets instead of one. Corner lots were usually much shallower than their midblock counterparts and were split in order to take advantage of access to the primary street, allowing additional lots to be created with access to the secondary street. This pattern of narrow and shallow lots taking advantage of the higher assessed land values on the principal street and others filling in the lot rears on the secondary street can be observed throughout the downtown.

One important exception to this pattern is Smallman and Ingram's, London's primary department store. The store's location at the southeastern corner of Dundas and Richmond, London's two primary corridors (often called the peak value intersection, or PVI) and higher profit margins meant it could afford to assemble a large and wide lot. According to the 1916 assessment roll, it was the highest appraised property in London, with the lot and building assessed at $160,000.

Two blocks on both sides of Dundas exist where the lots extend through the entire length of the block. This is a result due to deviations from the street grid – Carling to the north and Market Square to the south. Since lots in both locations extend entirely through the block, these lots have two frontages instead of one, and is one factor that explains its higher assessed property values. The lots facing Market Square were especially valuable due to its location across from Covent Garden Market.

These two examples perfectly illustrate the interrelatedness of the townscape elements: the street network and the resultant block shapes impact upon the lot fabric, which in turn shapes the buildings that are built on them. Although many of these lots have had their internal configurations evolve (due to subdivision and/or amalgamations) the remnants of Burwell's plan has remained largely intact over the years, proving that the original survey frames future development.

4.2.3 – Buildings and Building Fabric

For most of its history, downtown London commanded the highest demand for space in the entire city. Developers were attracted to the core's centrality and convergence of transportation routes. As a result, central London had the highest overall building density and a higher percentage of ground coverage – maximizing the amount of space on a limited supply of land. Although demand for building space was high throughout most of the downtown, space was more valuable in certain areas.

The pattern of building coverage that existed during London's first century of existence is a result of the intense demand for land. Since land along the Dundas strip has been among the most valuable in London, landowners constructed buildings up to the sidewalk to provide maximum visibility, and built structures laterally to the property line on both sides. This pattern is visible as early as 1839 (see fig. 4-4) and remains so today to a great extent. Building developers left space at the rear undeveloped; which provided sufficient space for either a stable, a wood-framed shed or a future addition. In contrast to the uniform appearance of the streetscape, the building rears contained an assorted jumble of smaller structures (see fig. 4-6).

The demand for space created varied ground coverage throughout the core. According to the 1915 fire insurance plan, the blocks surrounding the PVI had the highest level of ground coverage at over 90%, with coverage lowering with increasing distance from this intersection. Most blocks in the downtown had at least 50% ground coverage, while some parts of central

London had coverage between 20-30% – this was the case for land between Ridout and the Thames River. This indicates that this area had limited demand for development, in part due to its location and the steep riverbanks which limited development.

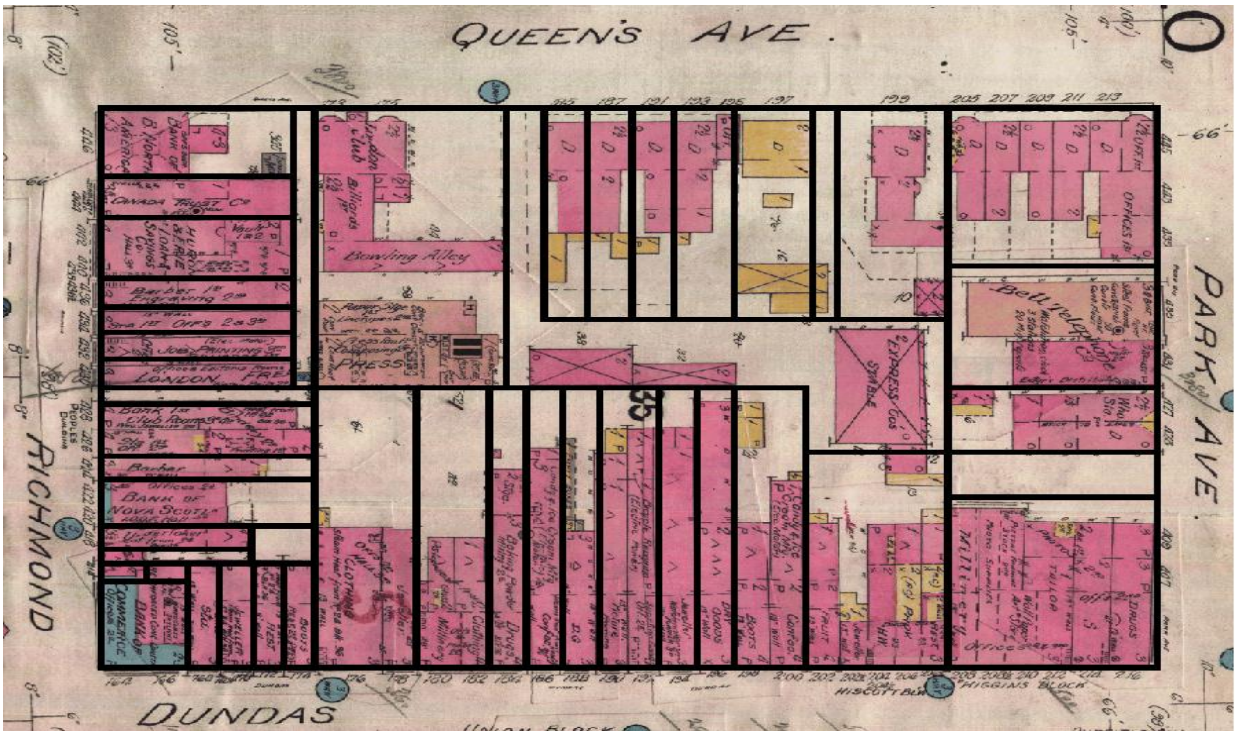


Fig. 4-8: urban lot boundaries of 1916 superimposed on the 1915 fire insurance plan. The above shows demand for street frontage on Dundas St was much more valuable compared to Queens Ave. Sources: Goad (1915) Fire Insurance Plan for the City of London and 1916 City of London Tax Assessment Abstract.

This pattern of ground coverage and building development had been the case for approximately 30 years, since similar levels of ground coverage appears on the 1888 fire insurance plan. Between 1888 and 1915, areas in and around the fringe of the downtown grew the most dramatically, since there was more developable space to expand. Some buildings along Dundas did expand, mostly in the form of additions to the building rears. However, the block housing Covent Garden Market and Market Square actually declined in total built area, since the market consolidated in fewer buildings, razing a number of sheds in the process.

During this period, the intense demand for space near the PVI had the effect of increasing the size of the CBD, with greater growth in building footprints seen along Talbot, King and Carling. In 1906 for example, the last gap in the Talbot Block was filled in. The Darsh building (381-397 Talbot St), as it was known, became London's first skyscraper with a height of six stories. This one block section of Talbot became more valuable (in terms of frontage) not just due

to its location across from the market. The buildings that made up the Talbot Block were owner occupied, and hence had a lower degree of building turnover compared to the buildings compared to the building stock facing Dundas between Talbot and Ridout (Mayer, 1992).

Most of the building footprints in central London match the shape of their underlying lots, resulting in roughly rectangular building dimensions. In most cases, buildings abut each other and are fully built out to the sidewalk and adjacent property lines, creating a continuous streetscape with a constant rhythm of buildings of similar height and frontage. The streetscape was occasionally broken up with gaps created by service lanes that cut through the blocks in order to access the building rears. Since the amount of land in the CBD was limited, and demand great, every square foot of space had to be utilized.

In the CBD, buildings were five times as deep as they were narrow; however, two blocks (one on the north side of Dundas in the block extending to Carling and the other on the south side of Dundas extending to Market Square) are eight to ten times as deep as they are wide, respectively. Buildings located on corner lots were necessarily shallower as a result of the lot splitting process described in the previous sub-section.

In most cases, one building was on one lot, with one or two smaller structures at the rear. In some parts of the downtown however, multiple buildings fronting the street are on the same lot. One example is the Hiscott Block at 200-206½ Dundas. The 1915 fire insurance plan shows that this block has what appears to be multiple structures, with thick masonry walls separating each structure. Furthermore, the rear of the block is jagged, indicating that the structure was built in stages.

It is difficult to calculate the mean building footprint area for the entire downtown, since several buildings are unclear in terms of where the structure ends and ownership begins. However, some clearly delineated building footprints can be measured to provide an overview of the average building size. In the CBD, the typical building footprint was between 1,500-2,000 square feet in area, while individual building footprints in the wholesaling/industrial sector between King and the railway typically did not exceed 4,000 square feet in area.

Although building footprints show signs of the development process in central London, the three-dimensional qualities of buildings must also be evaluated in order to thoroughly examine the townscape. The building stock that existed during this period varied by the era in which they were built – the outcome of developmental pressures, changes to construction

technology and the architectural styles of the day.

Until c.1900, central London's building stock was the tallest in the region, at between one and four stories in height. Since developers were limited in the amount of street frontage they could purchase, building heights had to be maximized. However, since steel had not come into use by this time, building foundations were made of masonry, which restricted the height of buildings. Building additions at the rear were typically only one to two stories high, shorter than the buildings facing the street. One possible explanation is that since the ground floor was in higher demand compared to the upper floors, the addition(s) provided extra space.

A comparison of the years 1888 and 1915 reveals the changes to the CBD's building heights. During this period, every one storey structure along Dundas between Ridout and Wellington was razed and replaced. For example, the one and a half storey building at 227 Dundas was replaced by a three storey structure. This reveals the pressures for densification along one of London's central arteries.

According to the 1915 fire insurance plan, the vast majority of building facades in the downtown were made of brick; this is a result of London's mid-19th century building codes, which banned the construction of wood buildings and restricted facade materials to brick or stone. A few wood-framed buildings were still standing in 1915, but many had since been replaced since 1888. One example is London's original town hall, located at the northwest corner of King and Talbot. One of the few buildings to survive the fire of 1845, it is shown on the 1915 fire insurance plan as wooden-framed but bricked over. The same plan shows that most of the city's stone building stock, principally limestone, are located on corner sites, indicating that stone was a more expensive building material compared to brick or concrete.

Much of the roofscape is defined by flat roofs. However, a few isolated examples of mansard roofs, dormers and chimneys exist, punctuating the roofscape. Buildings along Dundas and Richmond had the most varied roofs; architectural elements such as cupolas, parapets and cornices were installed to create the illusion of increased height.

A well-defined and largely continuous streetscape emerged in much of the downtown core. The building stock was of a similar height, and were built out to the sidewalk with few gaps between neighbouring buildings. In addition, the cornices and windows of these buildings were also aligned, helping to spatially define the streetscape. Signs were a common fixture on buildings in the CBD, either taking the form of protruding signs hanging over the sidewalk or

were painted on the blank side of walls. The few gaps existed along streets in the CBD – the most prominent being Market Lane.

Industrial/wholesale buildings also made similar contributions to the streetscape, which had similar setbacks from the sidewalk and built contiguously to neighbouring structures. Most wholesale buildings had carriageways constructed through the ground floor with access to the street for the purposes of deliveries.

Buildings in the CBD were highly ornamented and had more decorative facades, as evidenced by patterns in the brickwork, and the architectural extensions to the roofs listed previously. Since the CBD was a commercial area, greater investment in drawing the attention of pedestrians/customers in order to increase patronage in shops. In general, building facades in more valuable locations were made of higher quality materials. Buildings located in industrial/wholesale areas did not engage in this type of festooning.

During the first century of London's existence, a wide variety of building types and architectural styles existed, including: Italianate, Romanesque, Georgian, Beaux-Arts, Victorian and Art Deco. These buildings (many of which still exists today), with their juxtaposition of sizes and styles further contributed to a varied streetscape. Up until the 1940s it was possible to take a "walk through time" by walking east along Dundas. Starting from Ridout street near the courthouse, the building stock is of a Georgian style (dating from the mid-19th century), and from Talbot to Richmond much of the building stock is Italianate (dating from the 1870s). Further east towards Clarence and Wellington, much of the building stock is of a Romanesque Revival design (dating from the 1880s).

Fig. 4-9: North block of Dundas street, date unknown. Newer architectural styles exist as the eye is drawn to the right. The awnings are also among the most notable features of the buildings. Source: Archives and Research

Collections Centre, UWO.

4.2.4 – Land Uses

Like most other Ontario cities, central London has been the site for a wide mixture of uses for most of its history. Commercial, industrial and civic institutions were sited in close proximity to one another along London's main corridors. Other types of land use were situated in different sections of the core, remnants of an earlier era when people valued proximity to other uses and access to transportation routes such as streets and railways.

In the first three decades of London's existence, the CBD was centered on the London District courthouse square. Various commercial entities were established along Dundas and Ridout streets, while residences were concentrated primarily to the south between Dundas and the Thames River. Once Covent Garden Market was founded in 1845, development spread to the east, shifting the CBD in the process. The market would be among the strongest influences on downtown development; not only directing growth as a result of three major economic booms by 1900, but by anchoring the intersection of Dundas and Richmond as the PVI.

By the mid-19th century, distinct land use clusters occupied different parts of the core. Along the major corridors of Richmond and Dundas (between Talbot and Wellington) were commercial uses, primarily retail. Although Richmond did contain some retail firms, it was primarily the location for professional services/institutions such as lawyers' offices, taverns and banks. The west side of Richmond south of Dundas was especially concentrated with institutions, the largest of which were Royal Bank and Dominion Services, which leased additional space to offices. Dominion Services in particular was 14,300 square feet in size and had 17 distinct addresses. Banks were typically located on corner lots, along with hotels and druggists since corner lots commanded the highest land values.

Commercial uses were located at street level, since they needed direct access to customers off the street to more easily attract patronage. The upper floors/rear additions typically contained apartments, storage space, offices or industrial uses – industrial firms located here were usually cleaner and smaller in scale, and did not need the large amount of space (one of the most predominant examples of small-scale industry in London during this era was cigar manufacturing). Not being located on the ground floor was not an issue since they did not need to attract patronage from pedestrians.

Many of the factors behind the locations of land use clusters can be explained by land/building value. In the 1890s, the most valuable lot frontage was along Dundas. On average,

lot frontage along this street was assessed 2.6 times higher than the same frontage along King St, 3.4 times the amount on Talbot and almost five times higher than Ridout. In real estate, it is assumed that commercial units will always outbid other uses for the same prime location (Mayer, 1992).

By the 1880s, much of the residential population shifted north of Dundas. Much of the residential building stock was in the form of apartment buildings, sited in close proximity with commercial/wholesale firms. Between Richmond and Wellington to the south of Victoria Park was a cluster of offices, the largest of which is insurance firm London Life.

King St served as an informal boundary between the CBD and the industrial/wholesaling sector. After 1860, industrial uses began to cluster around King and York area after the Grand Trunk Railway was completed, facilitating trade between cities throughout Ontario and to the United States. Industrial manufacturing was primarily concentrated west of Richmond, while wholesaling was concentrated to the east of Richmond. The southeastern corner of Richmond and York was the location of the Great Western passenger rail station, with London's primary luxury hotel (the Tecumseh) immediately across Richmond.

In this area of the core, lot sizes and building footprints were larger, with land assessed a much lower value than the CBD. Such firms did not need to be located in the CBD, since building visibility served no purpose, and firms did not need to draw attention for pedestrians off the street. Such firms made a trade-off between building space and land value. New industrial firms were established outside the core altogether by 1880, due to ample space. Remnants of London's earliest wholesaling district remained along the west side of Ridout street south of Dundas, formed when Dundas was the only link across the river. Since the Thames River is prone to flooding, development along the riverbanks was a risky proposition.

4.3 – Preservation of Townscape: 1945 to Present

Fig. 4-10: aerial view of downtown London and the Forks, c.1931. Source: Miller, 1992.

This section shall chart the changes to downtown London's form complexes since the end of the Second World War, an era marking the beginning of the urban renewal period throughout North America. Although several factors played a role in altering the downtown's urban form, the mass-production of the automobile was by far the single most important agent in this change. As a greater proportion of the citizenry purchased automobiles, more space was demanded for parking, maneuvering and servicing. This, coupled with the relative frequency of intersections, hindered traffic flow. Over time, the fine-grained, pedestrian-friendly downtown became obsolete for the modern age. For the next few decades, civic officials would devote great efforts to separate automobiles from pedestrians, as well as work with building owners in tandem to accommodate the influx of private automobiles.

One of the first tasks in the transition to an auto-centric downtown was to rip-up all of London's streetcar tracks, while converting the city's entire public transit stock to buses in 1945. One year later, the city allowed on-street parking, completing the installation of 500 parking meters on downtown streets in December of 1946. Over the next decade, a number of streets, including Queens and King, were converted to one-way flow in an effort to alleviate traffic (Miller, 1992).

Fig. 4-11: Parking on Market Square, with the Talbot Block in background, 1921. Source: D.B. Wheldon Library, UWO

The efforts of civic officials to convert the downtown's land and building stock to auto-centric uses was facilitated by the migration of industry to suburban locations. As mentioned previously, the downtown core became fully built-up by the 1880s; this, together with the adoption of Euclidean zoning codes (which among other things mandated separation of hazardous land uses) made expansion virtually impossible for industrial and wholesale firms. Several firms either closed or re-located elsewhere, while others demolished substandard building stock that was subsequently converted into surface parking lots or service stations. Several service stations appear on the 1958 fire insurance plan, most of which are sited on corner lots with wide and deep setbacks.

Some former industrial plants were converted to other uses. For example, the McClary's Tin Ware factory at the southeast corner of King and Clarence (which was the largest factory in downtown London) was converted into a diesel locomotive plant in 1946. The plant did not last long however – in 1960, the plant was shuttered and converted into the Wellington Square Mall. The conversion and subsequent expansion across King St led to the demolition of several buildings on the east side of Clarence; among them, a former lithographic and printing plant.

Other buildings were demolished after it was felt buildings had no value. For example, the original London Central Library (the city's first free public library), located on the southwest corner of Queens and Wellington, was replaced by a YMCA in 1955. Several former industrial

buildings north of Dundas between Ridout and the river, including the former Public Utilities building, was razed in 1965. As well, half a square block along the east side of Clarence immediately east of Victoria Park was cleared and replaced by the new City Hall and Civic Square complex in 1968, opening three years later with a total price tag of $2.5 million (Miller, 1992).

Fig. 4-12: Smallman and Ingram's, Dundas and Richmond St, looking west, 1941. Source: Miller, 1992.

The influx of new automobiles in downtown London continued to accelerate. By 1961, over 45,000 cars were registered in London, more than double than the previous decade. Sensing a lack of suitable parking facilities in the CBD, civic officials seized Market Square and constructed a parking garage in 1957, with two additional stories added soon after. Originally intended to replace the market entirely, it was later agreed to keep the vendors on the ground floor (City of London, 2011).

In reaction to the outcry by the public and business owners (whose customers now came by car), civic planning officials ordered the completion of urban renewal studies; the two most prominent are the Margison Report (1960) and the Murray V. Jones urban renewal background study (1967). The Margison Report proved to be the most controversial, calling for the construction of almost 22 kilometers of expressways, with five expressways/arterial roads converging at the Forks. The report also called for converting Ridout into a six lane arterial street.

After no progress was made on the plan's implementation, a second report was commissioned in 1966, which proposed even more expressways totaling 39 kilometers in length; the main component of which was an expressway built along the east side of the Thames. While

city council at the time was unanimous in favour of the plan, a change in administration and intra-governmental squabbles over funding (which was backed by federal urban renewal funds), most of the proposals in the report were not built (Cook, 1992).

However, the largest single demolition of building stock in downtown London was a two block section to the northwest, bordering Dundas, Dufferin, Talbot and Ridout. The area, which was home to a large Italian community, was declared substandard according to the Jones urban renewal background study. By 1971, Carling was closed between Ridout and Talbot. The only buildings that replaced this area was a federal office building, the Bell building and the provincial courthouse, which opened in 1974. Queens was extended over the river, with a new bridge opening in 1973, one of the few schemes proposed in the Margison Report (1966) (City of London, 2011).

By this time, concerns about the wide-scale destruction associated with urban renewal lead to a greater public interest in heritage conservation. One of the first major battles over heritage was the proposed demolition of Bankers Row, a group of Georgian-era housing and bank buildings, some of which date back to 1835. A public outcry occurred in 1974 after a proposal to widen Dundas, which was eventually resolved when brewing company Labatt agreed to purchase Bankers Row and convert the buildings to other uses. A similar battle over what is arguably London's greatest historical asset, the London District Courthouse, when the city proposed razing the structure. Another heated battle between the city and heritage groups, Middlesex County agreed to move a portion of their administrative workforce and renovate the structure for $2.5 million in 1977 (Miller, 1992).

While some buildings were saved, some new construction occurred. The Art Gallery of London (now Museum London) was completed in 1980, filling-in a gap in the urban fabric created after the extension of Queens Avenue. Another important construction project is One London Place, London's tallest skyscraper. Replacing the former YMCA building at the corner of Queens and Wellington, it was completed in 1992, topping off at 42 stories. Concurrently, the city began converting formerly idle land along the river into parkland.

However, during the early 1990s, downtown London had serious problems and appeared to be in a state of perpetual decline. From 1991-1993, the value of construction in the downtown fell from $87 million to just $4 million. Previous annexations that enabled vast increases in sprawl was certainly a factor in the downtown's decline; however, the single-largest destruction

of London's historical townscape was the demolition of the Talbot Block, the end result of what Tausky (1993) calls "one of the longest and most bitter battles for heritage fought in Ontario's history" (p.64).

Fig. 4-13: The Talbot Block, 1986. Source: City of London, 1986

The Talbot Block had been previously the home to a variety of low impact uses, primarily warehousing, light industrial and retail. Beginning in 1979, development company Cambridge Shopping Centres Ltd. began assembling land nearby on the same block (along Ridout and Dundas), and razed the few remaining buildings. By 1987, Cambridge owned the entire Talbot Block. The original proposal by Cambridge was to demolish the structures, but after a fierce backlash, the company's proposal was revised to build a combined office/shopping centre, but preserve the facades along Talbot St.

However, Cambridge's plans were revised yet again when the Eaton's department store (the occupant of the former Smallman and Ingram's building), was converted into the Market Galleria shopping plaza. Knowing that downtown London could not support three downtown malls, Cambridge sought a demolition permit for the remaining buildings on Talbot. In April of 1992, city council voted to allow Cambridge Developers to obtain their demolition permit, without any preconditions for site redevelopment, despite the fact every building was designated under part IV of the Ontario Heritage Act (OHA). Demolition was carried out one month later, leaving only the Talbot Inn standing.

Central London continued to suffer for the next few years. In 1994, a consultant's report stated that Covent Garden Market had become so dilapidated that the building had less than five years of life left. Making things worse, an investigation of a nine block area (consisting of 33%

of the downtown) revealed that property values declined over $60 million between 1992 and 1996 (Cobban, 2003).

Fig. 4-14: Covent Garden Market, Talbot and King St, 1995. Source: skyscraperforum.com

Facing the sense of urgency of how the downtown was important to the city's fortunes, city council passed the Millennium Plan (1998), London's new official plan, and a number of new initiatives to preserve the city's remaining building stock and attract new investment. In March 1999, city council approved a plan to build a new arena on the site of the former Talbot Block. In October of that year, Covent Garden Market was re-opened after a multi-million dollar reconstruction project, including the construction an underground parking garage.

Since Budweiser Gardens opened in 2002, a number of new projects have been completed or under construction, including the re-location of the Central Library downtown (attached to Citi Plaza), the creation of Ivey park at the Forks, and the re-location of Fanshawe College's School of Applied and Performance Arts (at Dundas and Market Lane). Developers have converted some of the city's historic building stock into housing and/or commercial space. One of the largest private-sector development projects in the downtown since 2002 is the Renaissance towers, located on Ridout between King and York. The project consists of 477 housing units, with phase I completed in 2009 and phase II completed in 2012 (both towers topping off at 28 and 20 stories respectively) (Daniszewski, 2012).

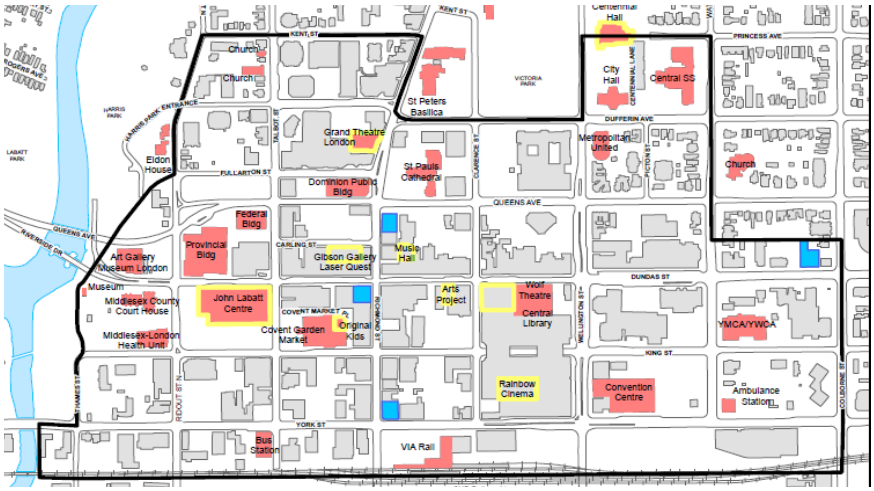


Fig. 4-15: Map of existing institutions, downtown London. Source: Downtown Master Plan Background Study, 2010.

At the present time, a large proportion of the downtown's historic building stock has remained – this is especially true in the area east of Talbot. Overall, much of the building stock is in fair to good condition. Much credit belongs to the city of London, which has a loan program for downtown building owners to repair/upkeep facades. Some buildings remain in poor condition however (i.e. one blockface on the north side of Dundas between Talbot and Richmond), as massing has deteriorated due to second floor removal of identified retail facades on the street face. In addition, a number of facades have been altered and/or covered-up.

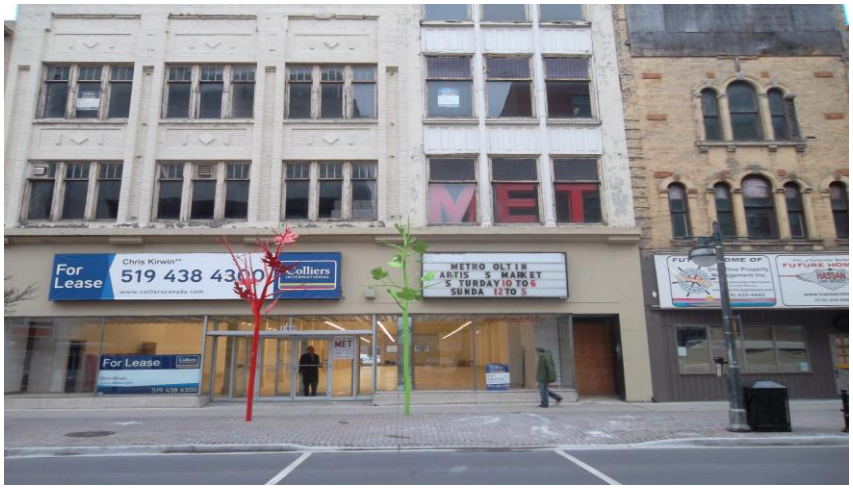


Fig. 4-16: Dundas Street. A number of buildings remain vacant, thereby further delaying much needed maintenance. Source: Author

The lot pattern further enhances the reasons for heritage preservation. In 2012 along the south side of Dundas, the mean lot frontage was 68 feet 8 inches, the north mean was 57 feet 3 inches, meaning the mean frontage doubled since 1916. However, this can be explained by alterations to the building fabric west of Talbot. East of Talbot, the mean lot frontage remains the

same as it was in 1915, at 37 feet 6 inches on the south side and 40 feet to the north side. On Talbot, the mean lot frontage on the west side was 152 feet, 3 inches while the east side measures 112 feet, 2 inches. The greatest change to the lot pattern can be measured along York, due to the migration of industry and the conversion of much of the areas building stock to parking. In 2012, the mean lot frontage between the river and Wellington is 90 feet while the south side measured 127 feet 8 inches.

Beginning in the mid-20th century, the process of lot splitting waned, with lot amalgamations becoming the norm. For example, the number of lots along Queens Avenue between Richmond and Clarence was reduced to a third of its peak between 1915 and 2012. However, the number of lots along Dundas between Richmond and Clarence remains at 16 to this date. This is evidence that the built capital invested in buildings along Dundas was significant, and that public and private capital were unable to acquire the resources to amalgamate these lots.

Asides from the migration of industrial firms, the distribution of land uses has remained largely unchanged. The PVI remains at Dundas and Richmond, with the core being home to commercial uses. Along the Dundas strip, a majority of ground floor units are retail, while many of the upper floor remain vacant. A large cluster of offices is near Victoria Park near Queens and Wellington. A large proportion of the downtown is home to parking, especially south of King, where up to 40% of the land between the Thames and Wellington consists of surface parking lots.

Finally, dozens of minor improvements to the street system have occurred since the mid-1940s. Beginning in the 1960's, upgrades to the street sidewalks include the installation of benches, kiosks, bicycle rings, in addition to functional improvements include the widening of sidewalks, the upgrade of physical infrastructure (i.e. electrical, gas, sewer and cable lines). An additional “upgrade” to the street system is a street beautification campaign launched by ReThink London in 2007, featuring the installation of 10 foot tall metal trees across the downtown. To date, over two dozen trees have been installed, with more planned in the future.

Fig. 4-17: Budweiser Gardens: a) looking west at King and Talbot; and b) a mural of the former Talbot Block along the Talbot streetscape. Sources: Author.

4.4 – Questionnaire

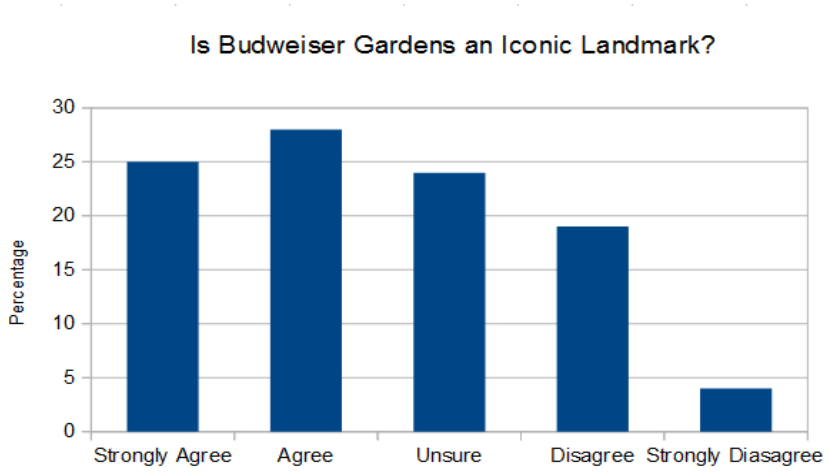
The questionnaire was distributed on August 9, 2013 and was completed by 98 people. Selected locations for distribution were at Market Square and at the intersection of Dundas and Richmond. According to the responses, 89% were London residents; of this total, 59% have lived in London since October of 2002 (the date Budweiser Gardens opened). 54% of the respondents were female, 43% of the sample population were under the age of 30, while 30% were between 30-40 years of age. Finally, 62% of the sample population had obtained a bachelor's degree, while 57% of the population had an average annual income of between $30-60,000.

The results of the questionnaire indicated that the vast majority of respondents (86%) had been to Budweiser Gardens at least once, with 44% indicating they had been to 1-5 events since the facility opened. Over the last 12 months since the questionnaire was distributed, 47% had been to 5-10 events, with most attending a combination of sports, concerts and theatrical events. Of the individual categories, 62% had been to a sporting event[2].

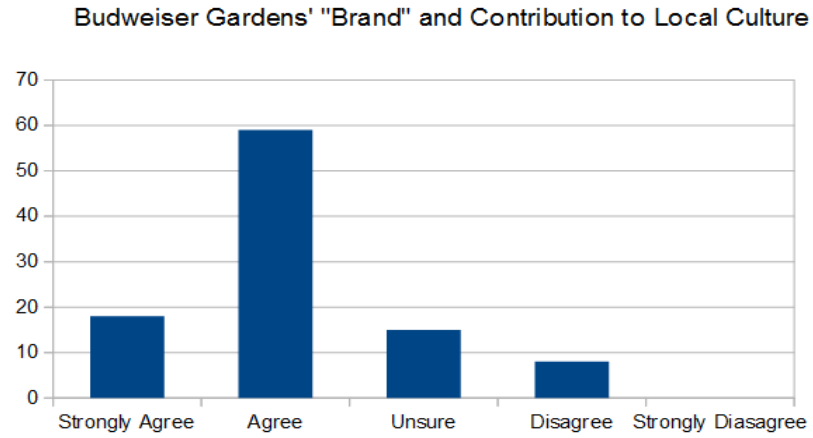
Section two of the questionnaire gauged opinions on the facility's contribution to place identity and imageability. A majority of respondents (51%) either agreed or strongly agreed that the facility and arena square is a pleasurable place to be when no games are held. 64% strongly agreed or agreed the facility provided a strong contribution to the streetscape, while 58% indicated that most of their social circle would recognize Budweiser Gardens if they were shown a picture of it. When asked whether the facility is an iconic landmark, respondents indicated the

[2] Note – in the 2012-13 year, Budweiser Gardens hosted the 2013 World Figure Skating Championships; in addition, the London Knights won the OHL championship, possibly accounting for a higher attendance record

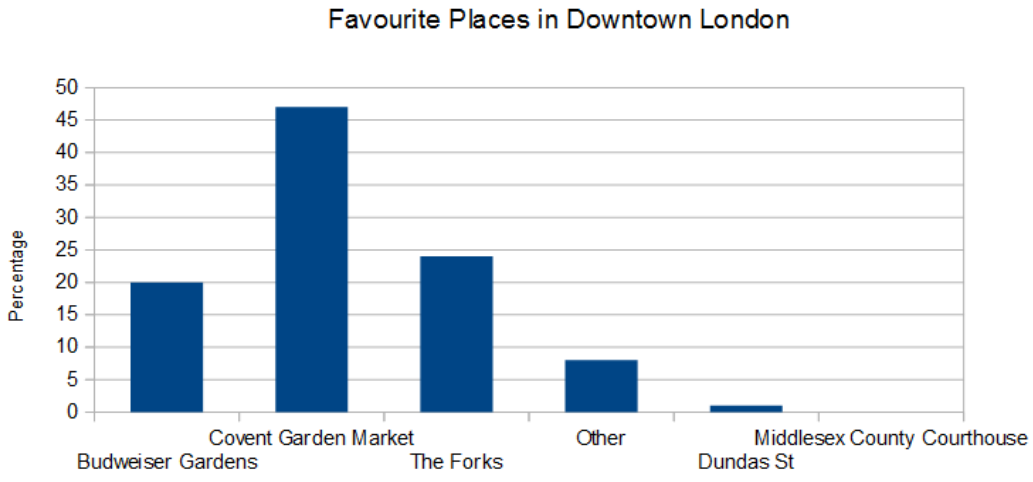
following:



When asked whether the facility exuded a “brand” for downtown London and positively contributes to local culture, respondents indicated the following:



One question asked people's opinions on their favourite places in downtown London, with the results below:



The final section of the questionnaire gauged opinions concerning the effects of Budweiser Gardens. 92% felt Budweiser Gardens was a net benefit for London, with 59% strongly agreeing or agreeing with the statement that Budweiser Gardens has been the single largest factor behind downtown revitalization. When asked whether the downtown would change in terms of quality-of-life, 53% felt it would improve, while 42% felt it would stay the same.

The results of the questionnaire indicate that Budweiser Gardens is a major attraction in downtown London and is the largest single factor that has contributed to the perception of downtown revitalization. In addition, it has significantly contributed to local place identity and placemaking efforts since the facility opened.

4.5 – Discussion

The research that has been presented in this chapter indicates that downtown London's plan units have been preserved to a great degree since its founding in 1826. This is due to a *trialectic* between the street pattern, lot pattern and the buildings constructed on these lots, with each element being simultaneously shaped – and is shaped by – the other two elements.

The morphological frame has been preserved, with the street pattern unchanged since the city's founding – this has also preserved the city's lot pattern (and hence building fabric). Despite the intense demand for land downtown, the central core did not expand, and much of the building fabric has remained the same for over a hundred years, with the only major difference coming from the change in land uses. The residues of the past are felt on contemporary development. As evidenced in section 4.2.2, the lot pattern can be traced back to Col. Burwell's initial survey, remarkable despite the downtown's intense developmental pressures, even after almost 200 years after the fact.

As evidenced by the morphological analysis and the questionnaire results, Budweiser Gardens has been able to attract development and preserve much of the downtown's historical townscape. More evidence is the number of new construction and adaptive re-use of buildings at the main entrance off Talbot and King streets, as well as the higher number of vacancies along Dundas.

Chapter Five

Case Study Two: Hamilton, ON

Fig. 5-1: Copps Coliseum with Hamilton skyline in background. Source: dineonsite.ca

Hamilton is a city that is situated at the southwestern edge of Lake Ontario, at the geographic center of the Greater Golden Horseshoe region. Hamilton is one of the most densely populated cities in Canada, with a population of 520,000 and a metropolitan population of over 702,000 – making Hamilton the 9th largest city in Canada according to the 2011 census (City of Hamilton, 2012). Hamilton is Canada's steel manufacturing hub and is an important heavy industrial centre. In addition, the port of Hamilton is among the busiest on the St. Lawrence Seaway. Hamilton is classified as a megacity and is Ontario's third largest city geographically, covering 1,100 square kilometers in area (Maoh and Kanaroglou, 2010).

The urbanization process in Hamilton is the result of a tension between two settlement forms – the traditional compact urban core that predominated until the mid-1950s, and large scale urban renewal meant to replace "obsolete" forms. This chapter will outline the alterations to downtown Hamilton's form complexes, subdividing it into two eras: 1816 to 1945, and 1945 to the present. The latter section will also outline Canada's largest urban renewal project – Civic Square, which lead to the creation of Copps Coliseum. First, a brief history of Hamilton is presented in order to provide context for this chapter.

5.1 – About Hamilton

European settlers first reached the site of present-day Hamilton in 1784. Most incoming settlers were United Empire Loyalists who were offered land by the British Crown for their

loyalty during the American Revolutionary War. The majority of settlers located to what is now Ancaster (a suburb southwest of downtown), along a formal grid of lots and concessions. The Hamilton area would later become an important turning point during the War of 1812. British regulars and Canadian militiamen defeated invading American soldiers at the Battle of Stoney Creek, east of Hamilton. Burlington Heights (to the northwest of downtown) was a strategic asset for the British during the war, which guarded the entrance to Burlington Bay (Kosydar, 1999).

In 1815, local lawyer and politician George Hamilton purchased 104 hectares of property from settler James Durand. Hamilton surveyed and established a townsite in the Barton Township, between Burlington Bay (since re-named Hamilton Harbour) and the Niagara escarpment (colloquially known as the "mountain"). One year later, the Crown declared the settlement the judicial centre of the newly-created Gore District, and Hamilton donated land for a courthouse, jail and public market. The settlement was incorporated as a town in 1833; its boundaries being Hamilton Harbour to the north, and the streets of Wellington to the east, Queen to the West and Aberdeen to the south (Freeman, 2001).

Due to its location at the head of Lake Ontario and at the convergence of access routes over the mountain, Hamilton was a suitable location for mercantile and manufacturing operations. These aspects, together with cheap electricity generated at Decew Falls in nearby St. Catherines, attracted industrialist migrants from the UK. In 1826, the Burlington Canal was completed, allowing Hamilton waterfront to be opened up to shipping and industrial development. Although development slowed periodically during the 1830s, the growth in the manufacturing sector fueled population growth throughout the area, with Hamilton reaching incorporation status as a city in 1846, overtaking the rival port town of Dundas (Kosydar, 1999).

During this period, Hamilton sought to compete for growth with the emerging city of Toronto. Civic leaders decided to launch railway subsidization schemes to divert rail traffic from Toronto – leading to the development of the Great Western railway in 1854 and the Hamilton & Lake Erie railroad in 1857 (Freeman, 2001). Although these schemes did attract numerous foundries to Hamilton, the costs later proved to be astronomical. After the scheme collapsed in 1857, the city went through a series of economic crises, with Hamilton losing an estimated 20-25% of its population, contributing to the city's bankruptcy in 1862 (Slote, 2010).

In order to reverse the city's fortunes of declining population and higher taxes, the city began another round of subsidization to attract industrial growth. By 1875, Hamilton surrendered

its waterfront to investors and offered virtually zero industrial taxes. These policies attracted a group of American investors, which struck a deal with the city in 1893 in which they received free land and a $75,000 bonus on the condition they build a blast furnace and an open hearth mill. This deal, together with the completion of the Toronto Hamilton & Buffalo (TH&B) railway in 1894, was the catalyst for the growth of the steel industry in Hamilton (Kosydar, 1999).

Fig. 5-2: Birds-eye view illustration of Hamilton, 1893. Source: Kosydar, 1999.

Hamilton's growth due to the steel boom is astounding – between 1900 and 1916, the city's population doubled to more than 104,000, fueled by a wave of immigration from the United States and Western Europe (Peace, 2011). Several steel manufacturers were founded or consolidated with other firms during this period, leading to the creation of Canada's two largest steel mills – Stelco and Dofasco (in 1910 and 1912 respectively). Other industries operating in Hamilton include factories of American firms Westinghouse and Procter & Gamble, in addition to numerous textile plants (Kosydar, 1999).

The city passed its first zoning by-laws in 1913, the purpose of which was to separate negative externalities caused by industrial polluters. As a result, the remaining industrial plants located in the central core relocated to undeveloped land in eastern Hamilton, thereby freeing up land for commercial and residential development. A significant milestone was the completion of Hamilton's first skyscraper (the Pigott Building) in 1929, as well as the relocation of McMaster University from Toronto one year later (Freeman, 2001).

De-industrialization during the post-war era hit Hamilton particularly hard. After several manufacturing plants shut down, Hamilton's economy became increasingly tied to steel. At its

peak in the mid-1960s, over 20,000 people were directly employed in the steel industry. The net loss in employment in the central core led to increased suburban development on the mountain and in neighbouring communities such as Dundas and Ancaster. Facilitating this movement was the completion of several mountain access routes and the construction of numerous limited-access highways such as the Chedoke Expressway, connecting HWY 403 to the QEW (Freeman, 2001).

The mass exodus of jobs and residents from the core resulted in a number of buildings left vacant and blighted. Facing such dramatic losses, civic officials decided to take drastic measures. During the 1950s, officials took great pains to downplay its heritage and focused on creating a "modern" identity for the downtown, a process which involved ridding the core of old buildings and other perceived eyesores. Among the first tasks in this transformation was the conversion of several downtown streets to one-way traffic flow in 1957 and the replacement of its Victorian-era City Hall with a new building designed in the Internationalist style, opening in 1960 (Freeman, 2001).

The centerpiece of these efforts was Civic Square. Originally destined to be a "modern" edifice for the new downtown Hamilton, the project was controversial due to the scale of destruction of 19th century building stock as well as the chronic lack of funds throughout its development. After numerous fits and starts (in addition to several revisions to the original plan), the project was finally completed in 1985, the same year Copps Coliseum opened (more about Civic Square is discussed in section 5.3.1).

Since Civic Square was completed, Hamilton has continued to adapt to changes in the post-industrial economy and diversify its economic base. From 1981 to 1996, the number of manufacturing jobs decreased by almost 50% (Freeman, 2001). In 2001, the Ontario government mandated the "old" city of Hamilton to amalgamate with the neighbouring communities of Ancaster, Dundas, Flanborough, Glanbrook and Stoney Creek, creating the megacity of Hamilton. Today, the three largest economic sectors in Hamilton are healthcare, education and manufacturing (Maoh and Kanaroglou, 2010).

5.1.1 – Case Study Area

The case study area covers approximately five hectares of the downtown. The Western boundary is Caroline St, extending south to the former TH&B railway adjacent to Hunter St, all the way to Catherine St to the east. The northern boundary is jagged, taking into account the

extreme changes to the street pattern in this area. At Wilson St, the boundary veers west to John, then north again terminating at Cannon St, then west to Hess St, terminating at York. Although Copps Coliseum is not the center of the area, a buffer area of at least one block was selected to measure the degree of morphological change in the immediate vicinity of the facility.

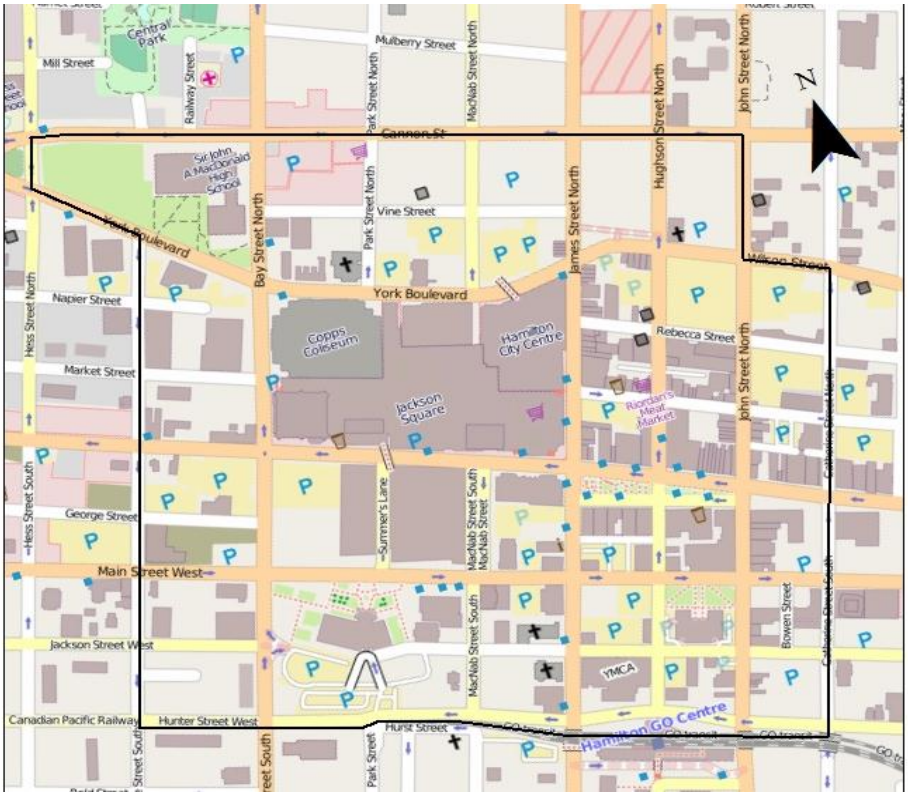


Fig. 5-3: Case Study Boundary

5.2 – Hamilton's Ground Plan: 1816-1945

Hamilton is a unique settlement, considering the fact it was created solely due to land speculation. After the Crown signed treaties with the Six Nations aboriginal confederacy, waves of settlers began purchasing land on the newly-opened frontier, making property increasingly valuable. George Hamilton knew the area south of Lake Ontario was growing in population and realized the region would soon need a capital. Hamilton chose a site east of Ancaster and Dundas, close to the head of the lake, predicting that the waterfront would become a valuable asset. Hamilton also used his political influence over the Upper Canada assembly to make his lands the regional centre, in part for his personal enrichment (Kosydar, 1999).

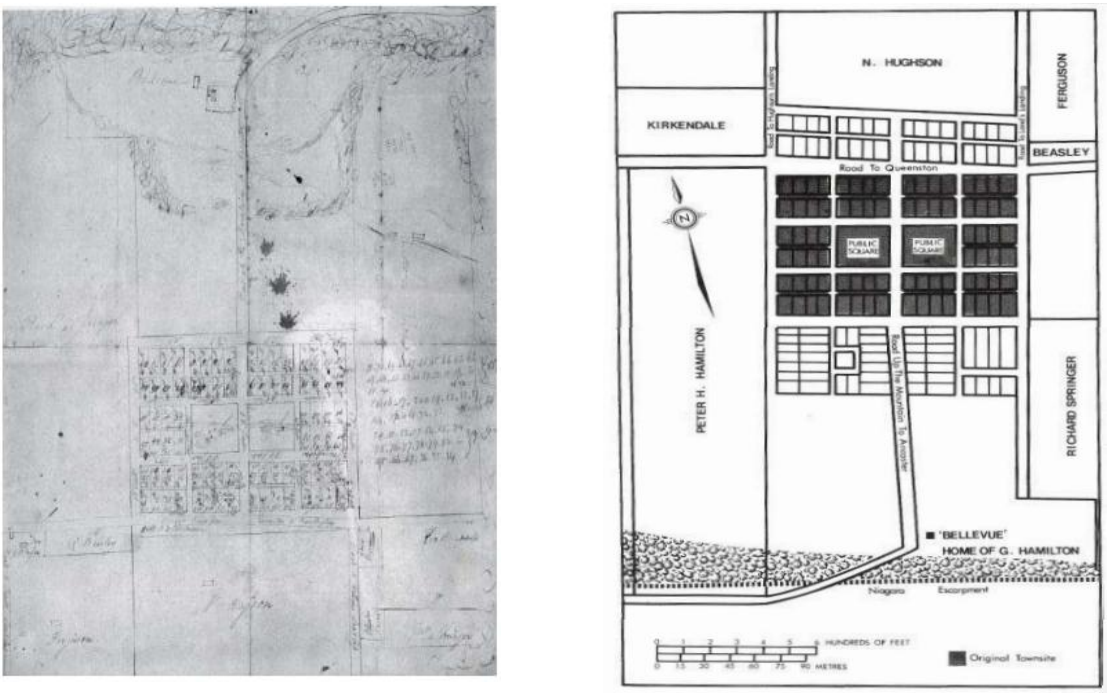


Fig. 5-4: Town plan of Hamilton, District of Gore, 1816. (a) is original survey, with bogs mapped immediately north of King; (b) is map of survey area demarcating land ownership, 1816-29. Source: Peace, 2011.

Hamilton's survey of 1816 demarcated a townsite bounded by the streets of Burlington (now King) to the north, Hunter to the south, Mary to the east, and Lake Rd (now James) to the west. King St served as the boundary between the land holdings of Hamilton and loyalist settler Nathaniel Hughson. Mary (named after Hughson's daughter) was originally a concession side-line created in the 1791 Barton Township survey. Hamilton utilized the rectilinear grid in his survey, with its efficacy and ease of use its primary advantages.

As Col. Burwell would accomplish ten years later in London, George Hamilton would draw roads across bogs, hills and creeks. However, development was limited by flood-prone land to the north, interspersed with ravines. Two square blocks two acres in size each were reserved for public use, with one block reserved for the district courthouse. Another parcel of public space is a wedge-shaped strip of land along King that traversed Hamilton's property, now known as Gore Park (Houghton, 2002).

5.2.1 – Streets

As with London, the streets created in the Hamilton survey were the first marks of a new settlement. Most streets were first cleared and laid out according to the survey; however, some routes were created before 1816. A few streets were originally aboriginal trails – James and John were mountain access trails, while King was part of an important trading route that extended into

present-day New York state. Other streets were created by British forces; for example, York was originally created as a route to connect strategic assets across Upper Canada, stretching around Lake Ontario and terminating at Kingston (City of Hamilton, 2010a).

The streets of the original survey were of different widths, but roughly measured one surveyor's chain (66 feet) wide. Important routes such as James, King and Merrick remain 66 feet wide. York and Main were originally 66 feet wide but both were widened during the 1970s (more about the changes to the street system is in section 5.6.2). All other streets created in the original survey (i.e. King William, Catherine, and Hughson) were slightly narrower at 40 feet in width, meaning these streets were originally intended as through routes. One section of King at the intersection of Hughson was the widest street in the downtown, measuring 185 feet across, narrowing to 115 feet east of Catherine St. For decades, this area was unofficially demarcated as an extension of Gore Park, but is marked as King St E on the 1898 fire insurance plan.

In 1833, the townsite expanded again, following a survey completed by George's half-brother, Peter H. Hamilton. The new survey simply replicated the initial street pattern, keeping the existing street widths and rectangular lots to ease the subdivision process (City of Hamilton, 2005). This would reinforce King as a primary east-west thoroughfare, after originally serving as the settlement's northern boundary. Travelling west, it widens at Catherine for one block until Hughson, where it splits into two streets at Gore Park, with the southern portion of King terminating at James.

John bisected the centre of the original town survey since it was for years the only accessible route by wagon/buggy over the mountain. It was also originally the settlement's main corridor, since it connected Hamilton to the larger community of Ancaster. James was initially constrained by bogs to the south at Hunter St and to the north of the settlement. After the Hunter St bog was drained and infilled, a mountain access was completed in 1844, extending James street south all the way to Lake Erie via Port Dover.

Although the settlement's physical frame is composed of a grid, with symbolic associations neither created nor intended, exceptions to the street grid remain. The main exception is York; cutting through the grid at a diagonal, it originally terminated at the city's geographic and symbolic centre – City Hall and Market Square. York was an important street since it was the primary route to Toronto, and served as the primary entrance to the downtown from the northwest.

Another exception to the street pattern is the unusual-shaped Gore Park, which is the result of a property dispute between George Hamilton and Nathaniel Hughson, both of whom owned identically-shaped lands. After the settlement was officially founded, Hughson reneged on a deal he made with Hamilton and sold his lands, which were subsequently developed. When town council proposed to open-up the Gore for development in 1833, Hamilton sued to prevent this, and won – thereby preserving what little public space remained in the core (Houghton, 2002).

Fig 5-5: Gore Park and King St E, picture taken after the street was macadamized in 1862. Source: Weaver, 1982

That same year, the first sidewalk in Hamilton was installed. Consisting of wooden planks, it was laid along the east side of James between Main and Wilson. Over time, sidewalks were installed on other streets to protect pedestrians from the dirty, uneven streets, with sidewalks upgraded to asphalt surfacing in 1883. Soon after, a civic works program would re-surface many streets with aggregate, beginning with King and James in 1848. Further upgrades to the downtown street system occurred in 1874 when streetcar tracks were laid on James and King, with electrification of the streetcar system completed in 1892 (Freeman, 2001).

Few alterations to the street grid were made within the first one hundred years of settlement. The earliest alteration occurred after 1828, when George Hamilton re-purchased the one acre block opposite the courthouse square (renamed Prince's Square in 1860) in order to develop what had been public space. A new lane (named Bowen St) was subsequently created, running vertically midway through the block. Bowen appears as early as 1850 on the Smith map and remains to this day.

The other primary exception to the grid was the routing of the TH&B railway along Hunter St. The railway created numerous dead-end streets and necessitated the creation of

underpasses on select streets. The routing of the railway was initially controversial, since the line ran through Durand, one of Hamilton's wealthiest residential neighbourhoods. In order to placate concerns about noise and pollution, the railway company constructed a tunnel, which still exists today.

Due to a series of unrelated events, city council and the public demanded changes to the downtown street system. Although the grid remained accommodable by-and-large to the needs of residents for most of its history, congestion (especially in and around Market Square) gradually worsened into the mid-20th century. In addition, the lack of regular maintenance to the city's streets contributed to problems both real and perceived (more about these changes will be outlined in section 5.3).

Fig. 5-6: congestion at Hamilton Farmers Market, spilling onto Market Square, 1895. Source: Freeman, 2001.

5.2.2 – Lots/Parcels

Like the 1826 survey of London, Hamilton's 1816 survey produced identical lot arrangements, which was constrained by the street pattern. In Hamilton's survey, 80 lots were created with 50 foot frontages, with each lot backing onto a 12 foot wide lane. Four lots were created in the east-west orientation and two lots in the north-south direction, with each block measuring 200x312 feet in area. It took more than ten years for Hamilton to sell all of the lots in his settlement, but increased demand for land occurred after the opening of the Burlington Canal and the new district courthouse, with new blocks created west of James St by 1829 (Weaver, 2000).

In 1833, Hamilton offered a newly-created parcel of land (which he owned) in order to construct a public market, a maneuver that would attract ancillary development and increase the

value of his land holdings. After a public outcry, Hamilton revised his proposal and moved the future market to a site on the west side of James, between Merrick and York streets (Weaver, 2000). The market would help draw growth north and west of the original townsite, shifting the CBD in the process.

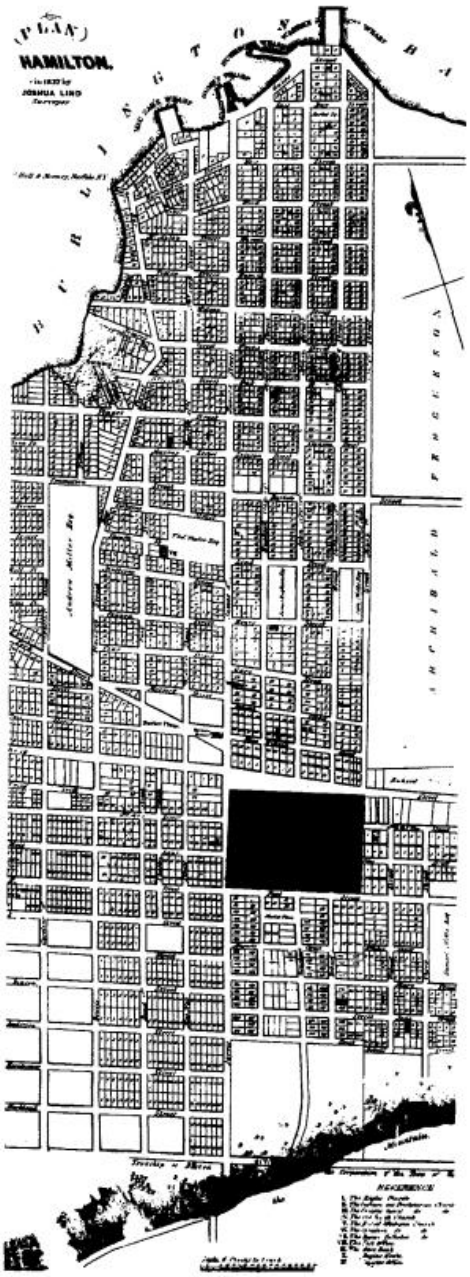


Fig. 5-7: Town of Hamilton lot pattern, with the original townsite blacked out, 1837. Source: City of Hamilton, 2005.

Land speculators drove Hamilton's settlement patterns in its early history; the decades after 1816 especially reveals the near monopolistic powers assumed by landowners. Until 1829, 55% of all lands that would constitute the town's boundaries by mid-century were owned by just nine individuals (see fig. 5-3b); chief among them was George Hamilton. Hamilton continually sought public support for projects to be built for his private benefit, as evidenced by his lobbying efforts to declare his settlement a primary seat, in addition to his attempt to host the public market (Hamilton eventually wrung council approval for the town's hay market on his lands on Hughson St). Not everyone profited from land speculation however, since there was always a surplus of vacant lots. By 1852, 40% of the town's lots were owned by non-residents, making profits for land speculators a much more difficult proposition (Doucet, 1982).

An 1837 map (fig. 5-7) shows that lot creation had already occurred as far south as the base of the mountain. However, much of the newly-created subdivisions had no buildings constructed on them, indicating that landowners were more interested in speculating on the potential higher lot appraisals that would soon come from settlement.

Development also primarily occurred on areas of higher and drier land. Since Hamilton is built on a flood plain, topography strongly influenced early settlement patterns. For example, poor draining land in an area east of

John and south of Main became a poor residential neighbourhood populated with recently-landed immigrants (predominately Irish Catholics), eventually becoming known as Corktown (City of Hamilton, 2010a).

As evidenced by fig. 5-8, lot splitting occurred in a concentrated area on James and King and in the immediate vicinity of the public market. According to the 1847 assessment roll (the earliest record available), one lot opposite the market on the west side of James between Market and King (lot 14) lists seven owners, indicating that the lot had been split eight times in a 19 year period. Proving that location is an important factor in settlement, the value of the corner lot on James and King was assessed for $2,400, while one property located midblock was assessed half this value, at $1,250.

To reiterate, the main reason lots were split were to enable the landowner to obtain capital from their property; either as private profit or to raise money for their own objectives. Lot splitting did not occur as extensively in the area surrounding the courthouse square, the original town centre. Although the square was designated as public space, no public market was held on the grounds, unlike in London. Once the market was established at James and York in 1837, the courthouse would no longer be the focal point of the settlement.

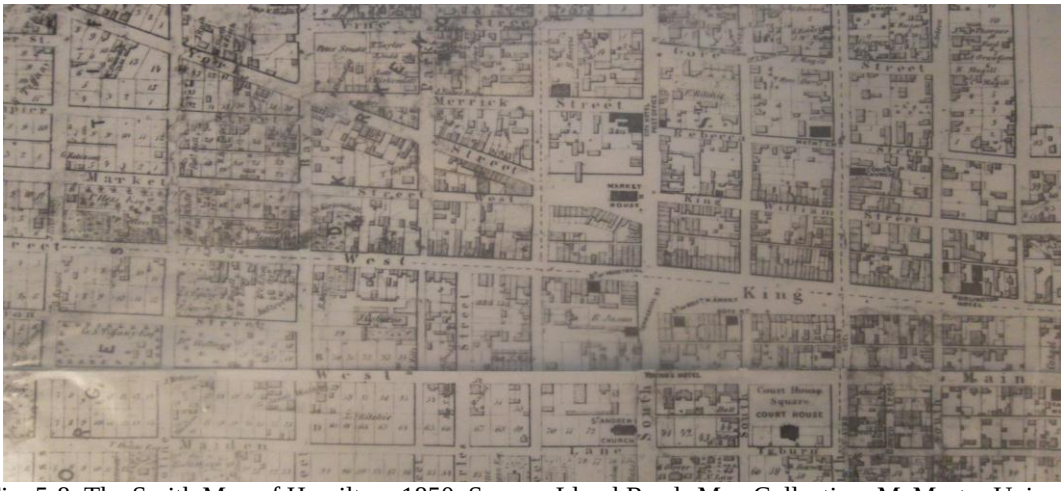
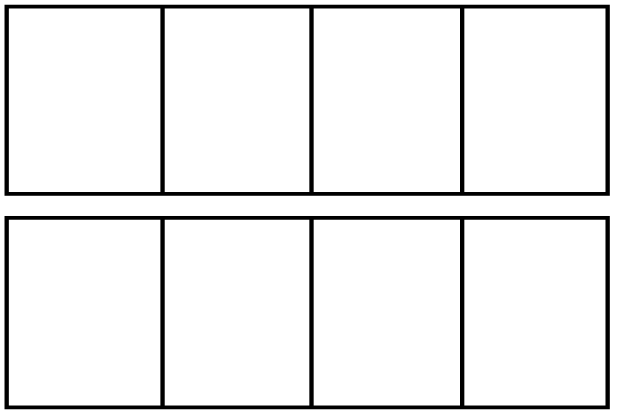


Fig. 5-8: The Smith Map of Hamilton, 1850. Source: Lloyd Reeds Map Collection, McMaster University.

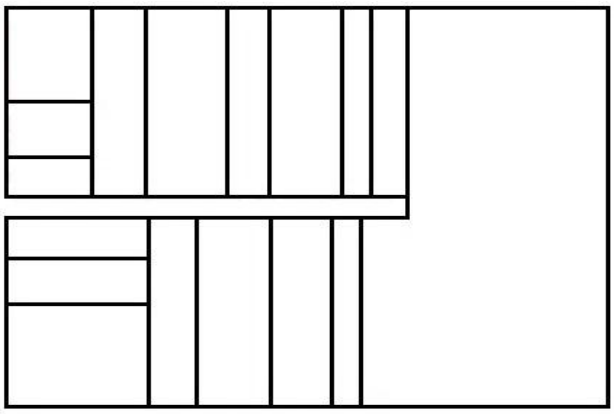
The lot splitting process occurred throughout the 19th century and into the 20th century. According to the 1898 assessment roll, 124 landowners are listed along James between Cannon and Hunter. The same document lists 95 landowners along King between Caroline and Catherine. However, the assessment rolls from Hamilton do not list lot boundaries, so it is nearly impossible to decipher lot dimensions and lot frontage from this era. Therefore, fire insurance plans are used to determine lot dimensions.

The 1898 fire insurance plan reveals that there were 107 buildings fronting James St between Cannon and Hunter, with a mean frontage of approximately 43 feet. The mean building frontage on a one block section between Cannon and Rebecca is even narrower, at 28 feet. Fewer buildings were built on James south of Main; for example, the 1898 assessment roll lists the TH&B railway as the sole landowner on a block on the east side of James between Jackson and Hunter. Along King, 85 buildings fronted the street, with the mean frontage measuring approximately 24 feet, 3 inches.

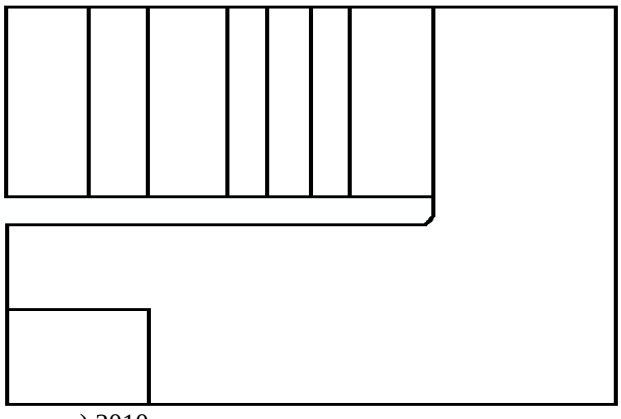
Since these measurements are unofficial, it is difficult to glean as much information about lot dimensions from fire insurance plans; however, general patterns about lot splitting/amalgamations can still be traced from these sources. The lot splitting process almost exclusively created long, narrow lots, severed perpendicularly to the street. As in London, not all areas followed this pattern. Lots along James across from Market Square were the narrowest, with the mean frontage being 26 feet, 3 inches. Along York St, buildings are both triangular and polygonal in shape, with few lots having the same shape.



a.) 1816



b.) 1933



c.) 2010

Fig. 5-9: lot pattern on the block bounded by King, John, Main and Hughson. The 1933 lot pattern is unofficial, outlining both building footprints and vacant lots. Note how the building on the right facing John (the Dominion Public Building) has been erected over the alleyway. Sources: Peace, 2011; City of Hamilton Fire Insurance Plan, 1933; City of Hamilton parcel data, 2010

As demand for space intensified in the downtown, lots would be split to accommodate development. Lot splitting almost exclusively produced narrow lots, severed perpendicular to the street. Corner lots were split the same fashion as in London; since corner lots had access to two

streets instead of one, buildings sited on these lots were more visible (and hence more valuable). As a result, shallow lots were created fronting the primary corridors, with access to the secondary streets.

By 1933, lot amalgamations began to occur, in part to accommodate the automobile. This process did not occur in an equal fashion in the downtown. The earliest definite record of lot amalgamation occurred in 1927, when Eaton's built a department store at the northwest corner of James and Merrick (across from City Hall), and in the process razed buildings in order to construct a parking lot. Another department store, Zellers (located on James and King William) also built a surface parking lot for its customers, replacing four buildings in the process. In both of these examples, lot amalgamation was the work of private actors; however, government-funded projects accelerated this process, beginning in the 1950s with the practice of urban renewal.

5.2.3 – Buildings and Building Fabric

The pattern of building development in downtown Hamilton for most of its history was no different from other cities in Ontario or elsewhere. The core commanded the highest demand for space in the city due to its centrality, and was reinforced by the convergence of transit routes. Along most streets, buildings are built up to the sidewalk and about each other laterally, creating a continuous streetscape. Space was left at the rear of the building in order to provide space for a stable, shed/addition or was left as open space. This pattern appear as early as the 1842 Gore County Map and remains to a certain extent today. Exceptions to this pattern exist – the most common example are churches, which were built as stand-alone structures on landscaped grounds, with setbacks on all sides.

By the 1860s, Hamilton's PVI was established at James and King, with three to four storey buildings completely surrounding the Gore. The 1898 fire insurance plan shows that the area within a one block radius of this intersection (excluding Gore Park) had a block coverage level at over 90% – the highest in the city. Block coverage decreased with further distance from this intersection, with some areas two blocks away from James and King having a block coverage of approximately 75%

The former block bounded by the streets of Bay, Market, Merrick and Park (currently occupied by Copps Coliseum) had a block coverage of 60% on the same map, while areas at the fringe of the case study area had a block coverage level of between 40-50% Buildings containing

light industry (i.e. principally along Hunter and Cannon) fronted the street, but left most of the block undeveloped as open space, with sheds dotting the block's interior.

When comparing the change in block coverage between 1898 and 1933, some sections of the core had a significant decline. Two examples of such decline include the northwest corner of James and Merrick (immediately north of the public market) and the block on the southwest corner of James and King William – in both cases, the decline was due to the creation of surface parking lots. In the first example, the location was previously the site of the Royal Hotel, which was lost due to fire and was subsequently torn down. Another example of block coverage decline is the southeast corner of King William and Hughson – the site of the former daily newspaper The Times. After its demolition in 1931, 40% of the block was vacant and is unlabeled on the 1933 fire insurance plan (Houghton, 2013).

Development activity caused by densification pressures did not occur in Hamilton to the extent in London. Throughout this period, several vacant lots are recorded on both the 1898 and 1933 fire insurance plans. This could be due to a number of reasons, among them: buildings were destroyed (i.e. by fire), buildings were torn down for more profitable uses (i.e. to convert into surface parking lots) or were simply left vacant by landowners. It is nearly impossible to determine whether these landowners were purposefully delaying development in order to speculate on their land's future value, since this information cannot be gleaned from Hamilton's assessment rolls.

In part due to the existence of these vacant lots, there is almost no relationship between the width of a building's frontage and its distance from the PVI during this era. Buildings along King, and sections of James north of Rebecca and adjacent to Market Square had the narrowest frontages in the core. Buildings along every other major corridor had varied levels of density, height and frontage width, which indicates that downtown Hamilton did not have as intense a central focus as the case in London.

Most of the blocks in downtown Hamilton (including all of the original blocks created in the 1816 survey) had alleyways that cut through the block horizontally. Most of these lanes were in use throughout the 19th century, but by the late 19th century, some alleyways began to be infilled. On the 1898 fire insurance plan for example, two blocks along the east side of James (north of King) had buildings constructed over these alleys, evidence that this section of James had intense development pressures. By 1933, nearly half of all alleyways were infilled, in part or

completely (see fig. 5-9b). Asides from alleys, most blocks also contained a number of service lanes, created in order to access the building rears. Both types of lanes broke up what was otherwise a relatively continuous streetscape.

One exception to this pattern of building development was the block bounded by James, King, McNab and Market. On this block, buildings fronting James, King and Market wrap around four buildings, which were erected in the block's interior. These buildings included a printing company, a bakery and a sign manufacturer – uses which did not need access off the main streets.

As with London, the buildings in downtown Hamilton match the shape of their underlying lots. In the CBD, buildings are built up the sidewalk and abut each other on opposite sides. Even industrial and wholesaling/warehousing in the case study area were built with similar aspects, although several noticeable gaps in the streetscape existed in several locations in both 1898 and 1933.

Fig. 5-10: The streetscape at King and Hughson, facing NW, c.1924. Source: Hamilton Public Library, Special Collections

Across the CBD, buildings were typically three times as deep as they were narrow. In some cases, buildings were even deeper, are up to seven times as deep as they are wide, with most of these examples located on King facing the Gore. One example of a building that exploited its frontage is the former Iroquois Hotel, at the northeast corner of King and Park. This hotel (whose building footprint was 3,400 square feet, with its frontage one-sixth of its depth) was an example of a building that extensively valued exploiting its frontage onto King, rather than having a main entrance off through streets such as Park.

Fig. 5-11: the former Iroquois Hotel, 1967. Source: Slote (2010)

Other buildings located on corner lots were comparatively shallower due to the lot splitting process described in the previous sub-section. One exception was the Lister Block, located at the northeastern corner of James and King William. The Lister Block has ten distinct addresses on the 1933 fire insurance plan as well as an arcaded interior, replacing seven smaller structures that appear on the 1898 plan.

Across the case study area in 1933, the typical building footprint was between 3-4,000 square feet. In that year, the two largest buildings in the downtown were the former Eaton's department store (whose building footprint measures 34,000 square feet) and the Dominion Public Building, with a building footprint of 26,000 square feet in area. Surprisingly, there were no industrial or wholesale/warehouse buildings in the case study area that exceeded 4,000 square feet in size.

Some buildings extended entirely across the block, with most examples occurring along York. Since York runs on a diagonal, it produced shallower blocks where it merged with the grid. One example of a building that runs through the entire block is the Hamilton Municipal Lodging House, which stretches from Market to King (between Park and McNab). This building had two extensions labeled as a garage; one brick and one (fronting Market) made of stone, indicating it was built in stages.

In order to contextualize development in downtown Hamilton during this era, the building fabric will be analyzed. Up until the 20th century, the tallest buildings in the core were churches. By 1876, 12 churches were built within the case study area, its spires dominating the early Hamilton skyline. The most prominent church was St. Paul's Presbyterian, located at the

northwest corner of James and Jackson. Opening in 1857, its 180 foot tall spire was (and remains) the tallest of its kind in Canada (Peace, 2011).

Other buildings in the CBD were more limited in height, at between one and five stories in height, due to the technological constraints posed by masonry construction for buildings built before 1910. One of the first steel-framed structures in the downtown was the 12 storey Royal Connaught Hotel, located at the southwestern corner of King and John. Opening in 1914, it was built by the Hamilton Board of Trade in order to prevent businessmen from commuting to more favourable accommodations in Toronto. The first true skyscraper in Hamilton was the Pigott building, an 18 storey art deco structure on James, opening in 1929 (Kosydar, 1999).

The earliest buildings in Hamilton were wood-framed, but restrictions on its use were passed in 1858 when city council adopted its first fire codes. On the 1933 fire insurance plan, a number of buildings throughout the central core are wood-framed, but are bricked over. The same map also shows dozens of sheds/additions that are made of wood.

Higher-quality building stock in the downtown was built from locally quarried stone – primarily sandstone and dolomite. Sandstone (which was quarried from near the base of the mountain) was the preferred stone in building construction from 1806 until the late 1850s. After new quarries were developed in the 1860s, dolomite became more popular. However, brick had always been the predominant material in construction by a large margin – by 1906, 96% of all housing structures in Hamilton was made of brick (Doucet and Weaver, 1991).

Until the 1870s, most of the downtown's commercial building stock consisted of the two part commercial block. A typical block of this typology stood between two and four stories high, with the facades and interiors divided into two distinct visual and functional areas. The ground floor is publicly accessible, typically containing a lobby or commercial (i.e. retail) uses, while the upper floors were typically semi-public/private space containing (but not limited to) offices, residences, storage, hotel rooms or light industrial uses. The building had a low-pitched roof with multiple chimneys, with little to no ornamentation on the facade – a reflection the attitudes of the owners/tenants of the era. By the late 19th century, the two part commercial block fell out of style; as commercial activity increased and demands for retail and professional services proliferated, the need for specialty, stand-alone buildings arose (The Fountain Foundation, 1995).

Other buildings erected during this era were slight variations on the two part commercial block, consisting of a variety of embellishments and decoration such as heavily

sculptured/detailed cornices, windows with elaborate sills, lintels, caps and surrounds, and floor divisions with stringcourses. The roof was often low-pitched and hidden from view (The Fountain Foundation, 1995).

The building stock on the north side of King consisted of a variety of multi-paned, floor to ceiling windows, with simply supported verandas extended over the storefronts atop of the planked sidewalks, providing relief for pedestrians from the weather. Although most buildings had relatively conservative facades, an eclectic mixture of commercial enterprises provided a diversity in terms of character, contrasting with the presence of open ditches, dusty streets and muddy fall tracks that existed throughout the core up until the 1880s. Retail building facades had more ornamentation, but with undecorated, plain rears – resulting in what is often called "Queen Anne fronts and Mary Anne backs" (The Fountain Foundation, p.52).

The streetscape throughout this era was relatively continuous, with buildings built up to the sidewalk without any gaps along certain stretches of the downtown. Although the building heights often differed dramatically, adjacent buildings had awnings windows and doors of a similar height, which helped to spatially define the streetscape by guiding the eye horizontally, reducing the impacts due to height. Signs and marquees were also a common fixture of the streetscape, protruding over the sidewalk. Other advertisements were painted on the blank sides of walls.

Fig. 5-12: Commercial block along James St facing north, c.1925. Source: Weaver, 1982

Because of Hamilton's higher susceptibility to the boom-and-bust economic cycles, as well as the relatively high degree of socio-economic diversity in the central core, a varied

architectural streetscape was created. In the 1870s, a dramatic economic boom resulted in the construction of a number of Italianate-designed structures. After an economic panic later that decade, several prominent buildings were erected in the Romanesque Revival style during the economic recovery, such as the Old City Hall and the Carnegie Library. Another economic boom in the 1920s resulted in a number of Art Deco buildings, the most prominent being the Dominion Public Building and the Pigott building.

5.2.4 – Land Use

For most of its history, downtown Hamilton served as the location for a variety of uses that co-existed side-by-side. Until the city's first zoning by-laws were enacted in 1913, development was in essence laissez-faire, with few controls on growth enacted. City council occasionally passed by-laws regulating development, but virtually no attempts were made to restrict land use or the timing of development. This was the norm for cities throughout Ontario and across North America during this era.

As early as the mid-1870s, land use clusters began to emerge in the core – retail increasingly became concentrated on the north side of Gore Park, while wholesalers clustered to the south (Shearmur and Hutton, 2011). The CBD was informally located within a two block area centered at the PVI at James and King. James in particular had the highest diversity of uses, serving as the location of City Hall and Market Square, in addition to a variety of commercial, residential and light industrial uses. King was the city's prime retail and services (i.e. restaurants, taverns, etc) corridor, while John was the location of much of the city's legal service offices, in addition to some of the city's primary institutions such as the courthouse, post office and YMCA.

As with other cities, commercial uses were located on the ground floor while other uses were located on a building's upper floors or in rear additions (i.e. apartments, light industry, offices and storage space). The vast majority of Hamilton's office inventory was located on James, on the upper floors of buildings. By 1933, stand-alone department stores proliferated, with three department stores (i.e. Eatons, Zellers and Robinson's) located within three blocks of each other along James St.

Throughout its history, Hamilton received little demand for office space, since firms preferred to locate their offices in nearby Toronto. Corner lots served as the most valuable locations, and were occupied by firms that valued visibility and could afford the steepest rents. In Hamilton, much of the corner lots were held by banks, druggists and hotels.

The industrial sector became much more grounded in Hamilton's economy once railways were established. After the Great Western railway (which ran near Barton St north of the case study zone) was completed in 1857, a number of wholesaling and industrial firms (primarily foundries and boilermakers) located along the rail corridor, with Rebecca serving as the unofficial line between the commercial area and the industrial sector. Such uses did not need to locate in the CBD, since they needed to be located near railways to receive/deliver goods, making a tradeoff between building space and land value.

A small but significant number of industrial firms were located in the core, in the John and King area. However, these firms either closed or moved to industrial locations elsewhere in the city. By 1913, virtually all industrial activity left the core after the city passed its first zoning by-laws, as evidenced by fig. 5-13:

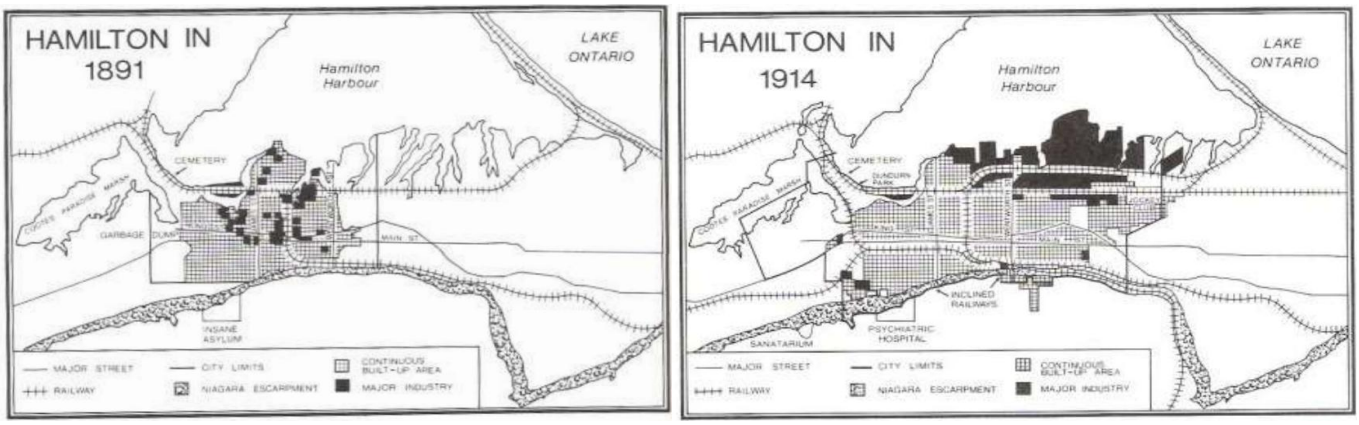


Fig. 5-13: Hamilton's land uses, 1891 and 1914. Note the concentration of industry, the lateral expansion to the east and the genesis of development on top of the mountain. Source: Peace, 2011

Residential units were located throughout the core. Most residential units existed as either stand-alone apartments, or as individual units above ground-floor commercial buildings. Distinct residential areas were concentrated south of Main St, west of Park St. James served as the boundary between the wealthy neighbourhood of Durand to the west and the poorer neighbourhood of Corktown to the east.

By the end of the First World War, the fortunes for many downtown residents declined. The loss of jobs in the industrial sector meant higher unemployment fore core residents. In addition, the chronic lack of demand for office space as well as the proliferation of surface parking lots and service stations resulted in fewer buildings being built. The stock market crash in 1929 and subsequent economic depression, virtually decimated new construction. This reinforced Hamilton's role as a city of manufacturing, which was a concern amongst civic

officials whom worried about the future direction of the city.

5.3 – Changes in Townscape: 1945 to 2013

Fig. 5-14: downtown Hamilton facing west, 1947, with Gore Park in center. Source: The Fountain Foundation, 1995.

This section will outline the alterations to downtown Hamilton's urban form from 1945 to the present date. Before the analysis can be conducted however, an overview the Civic Square urban renewal project is required in order to provide the context behind Hamilton's development during this era. This outline will also help to understand the ideology and rationale that was responsible for the outcome of this project. Following this, the discussion will proceed with measuring the change in the area's form complexes.

5.3.1 – Overview

After the Second World War, Hamilton emerged as one of the largest cities in Canada, with a population of 175,000 by 1946. With the sense of optimism about the future that emerged in the post-war era, civic leaders were determined to solve problems (both real and perceived) that plagued the downtown. Civic leaders were concerned about the levels of blight and disinvestment in the core, but what appeared to be most concerning was the lack of social and cultural facilities. The Report on Existing Conditions (1945) cited such issues such as a cramped library, an antiquated art gallery and the lack of a proper symphony orchestra. The report implied an inferiority complex existed amongst the local population as well as a crisis in civic morale, and suggested that Hamilton made no contribution to Ontario's socio-cultural landscape.

Once civic officials realized that the city's spot clearance initiatives were not enough to fix the problems associated with blight, the city hired the Toronto-based firm Murray V. Jones

and Associates to create a plan to transform a 12 block area of the core, named the Civic Square Urban Renewal Scheme (1965). The plan determined the degree of blight within an area bounded by James, Merrick, Bay and Main was relatively high and dispersed throughout the area. Among the concerns cited were a lack of off-street parking, recreational/cultural facilities and crumbling infrastructure such as streets and water mains (Murray V. Jones and Associates, 1965).

The single-biggest issue cited in the Jones plan was the condition of existing buildings. It indicated that most of the area's building stock (including an entire city block) was functionally obsolete and of a poor quality (i.e. lack of central heating and plumbing, uneven floors, poor electrical wiring, etc.) The plan stated that rehabilitation of said buildings was likely unfeasible for private developers and recommended the appropriate remedy was by "large-scale action to change the nature of the entire area at one time in accordance with a comprehensive plan of urban renewal" (p.40). City council immediately sought out federal urban renewal funds to begin land expropriation and construction of Civic Square.

The Jones scheme envisaged Civic Square to be Hamilton's centre for arts and culture, entertainment, education and commerce, with large amounts of open public space – providing a central focus for the downtown. The original plan included a planetarium surrounded by gardens and a reflecting pool/skating rink, leading up to a public auditorium. The Hamilton Spectator hailed the scheme as "undoubtedly the most ambitious attempt to resurrect a city ever undertaken in Canada" (Freeman, 2001; p.160). The first building (and consequently the only built component of this plan) was the Board of Education building, since federal funding was contingent on completing this building first. Located at the northeast corner of Main and Bay, it was completed in 1966 (subsequently demolished in 2013).

Fig. 5-15: Artist's sketch of Jones' Civic Square Urban Renewal Plan, 1965. The proposed reflecting pool

and sculpture gardens aligned with City Hall (at lower left) formed the centre of the plan. Source: Rockwell, 2009

However, plans for the project immediately began to unravel. Researchers believe the first mistake of this project was the city's decision to use in-house planning staff to carry out development, whom lacked knowledge and expertise in urban renewal. Periodic conflicts over funding emerged between the city and the project developer (Hamilton-based First Wentworth Development Co.), forcing the city to revise the plan on numerous occasions. City council barred the public and the media from covering these negotiations, fueling public cynicism over the project. In 1969, First Wentworth backed out of the project, and the city hired Montreal-based firm Yale Properties to complete Civic Square (Rockwell, 2009; Freeman, 2001).

To make-up the funding gap, almost all of the public components from the original plan were scrapped, including the gardens, reflecting pool, auditorium and planetarium. Another decision by Yale was to increase the commercial component of the project to 18 acres from the original 10.4 acres. Within a year of this change in project management, phase I of the Lloyd D. Jackson Square shopping centre was completed, with construction underway on the Stelco Tower and Hamilton Place in 1970 (Rockwell, 2009).

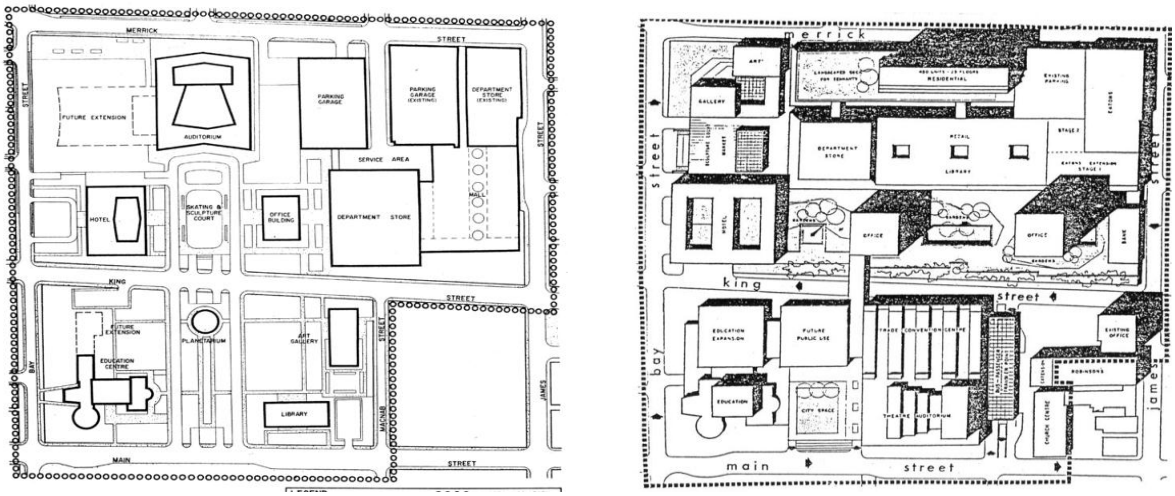


Fig. 5-16: Changes to plans for Civic Square; (a) is original Jones Plan (1965), (b) is the revised plan by Yale Properties, (1969). Source: Rockwell, 2009.

By this point in the project's timeline, the amount of land required for completion had already been expropriated, while buildings were being razed before financing was secured or even when plans were finalized. By 1970, at least four major revisions to the plan were made while approximately ten acres of land was sitting idle – each facet contributing to the sense that Civic Square would never be completed. Yale continually struggled to find tenants for building projects; for example, the major tenant of Jackson Square was to be a major department store,

but after repeated attempts to land a national chain failed, an office tower was built instead, even though Hamilton already had a surplus of 250,000 square feet of office space. In 1976, the Art Gallery of Hamilton and the six storey Bank of Montreal Pavilion was completed, with phase II of Jackson Square completed one year later (Freeman, 2001).

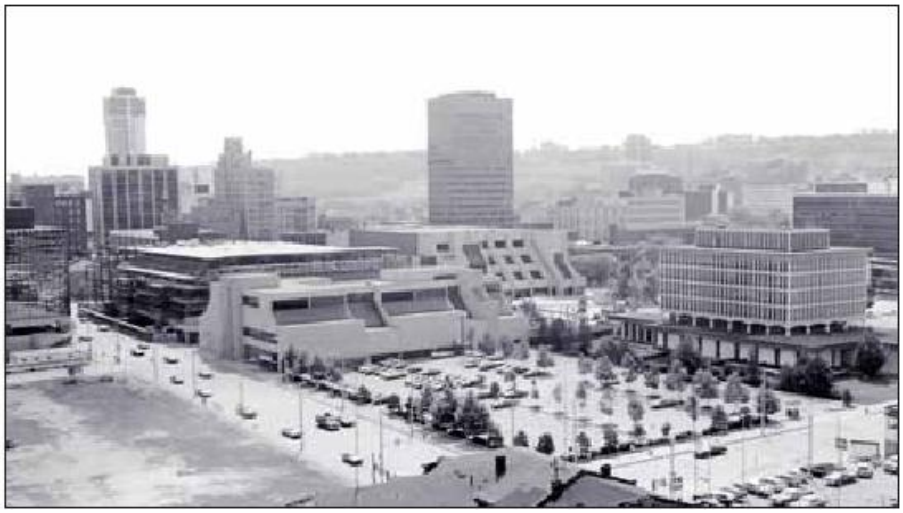


Fig. 5-17: acres of undeveloped land at King and Bay, 1973. Source: Freeman, 2001.

Asides from the department store, great emphasis was placed on building a hotel for Civic Square, with negotiations between Yale and the Sheraton hotel chain stalling several times throughout this period. In order to attract a major hotel chain and complete the project, the provincial government contributed $35 million for a combined convention centre and provincial office tower (since re-named the Ellen Fairclough building), opening in 1981. Two years later, the combined Hamilton Public Library/Farmers Market was completed, with Copps Coliseum, a parking garage and the aforementioned Sheraton Hotel opening in 1985 (Freeman, 2001).

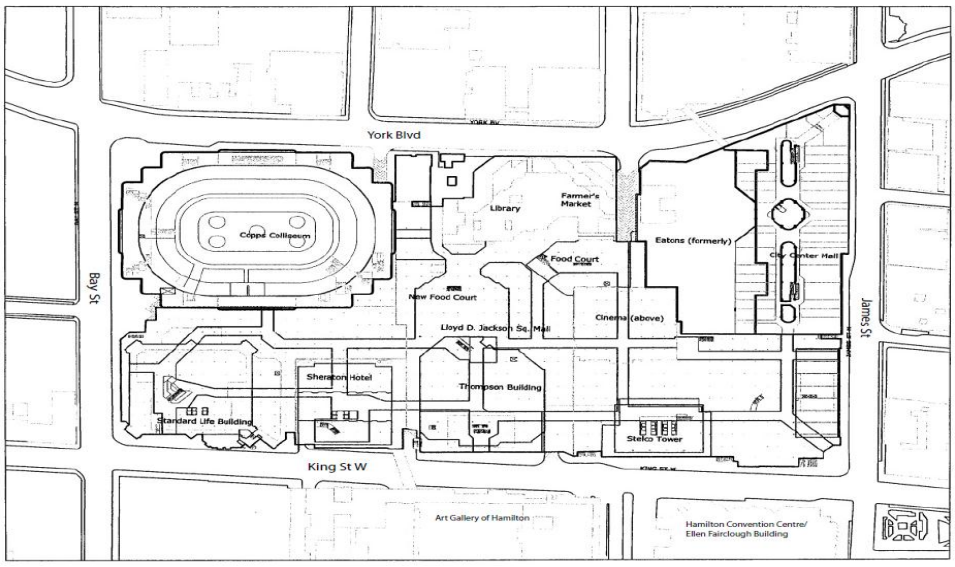


Fig. 5-18: Current ground floor plan, Jackson Square. Source adapted from: Sedyka, 2006.

The legacy of Civic Square remains mixed to this day. While the facilities are considered to be necessary and are functionally superior, the untold destruction of historic building stock as well as the the corrupt deal-making process has undoubtedly mired the outcome (The Fountain Foundation, 1995). Instead of attracting development and private investment, it did the exact opposite. Freeman (2001) estimates that between 25-50% of existing merchants in the urban renewal area were ultimately forced out of business, since due to their previous profit margins could not afford space in the new development. By 1970, 485 businesses were shuttered and 500 residents relocated – most of which occurred before plans for rebuilding were finalized.

Looking back at the original plans, it appeared transformative, optimistic, and even progressive within the context of its time. However, the plan – as well as the idea behind urban renewal – was rooted in a fundamental misunderstanding on how cities actually function. The impetus behind renewal stemmed from the belief that environmental conditions bred social problems, particularly the notion that the fine-grained, high density city spread blight – akin to mould or a virus. This ideology was also included into public policy as matter-of-fact; for example, the Report on Existing Conditions (1947) cited that the lack of air and light in the central city caused blight, and was spread by mixed-uses. It was not until after the creation of single-use zoning and the transformation of streets to thoroughfares that civic officials realized that these policies hastened the decline of the central core, not reversed it.

5.3.2 – Alterations to the Townscape

As previously mentioned, the period immediately after the end of the Second World War

marked the beginning of an era in which civic officials viewed the city in an overly-rational manner, believing in the orthodoxy that the fine-grained, pedestrian-friendly downtown was incompatible with the increasingly-popular automobile, and altered the townscape in order to separate pedestrians from cars. This transformation began as early as 1925, the year the city first introduced on-street parking on select streets such as James and King. Over time, traffic problems worsened, leading to increased travel times for streetcars. In response, the city decided to rip up the streetcar tracks in 1951, and converted the city's transit stock into buses. Another dramatic change to the street system occurred in 1957, when virtually every street in the downtown was converted to one-way traffic flow.

An important symbolic event that ushered Hamilton into the “modern” age was the demolition of its Romanesque Revival-designed City Hall. In 1955, the city began expropriating land for a new City Hall on Main St W. The new building (designed in the Internationalist style) opened in 1960, and required the expropriation of approximately 66 structures, including townhouses, churches and a lumberyard. This created a superblock, resulting in the elimination of a section of Jackson between Bay and McNab, as well as two block sections of Park and Charles between Main and Hunter.

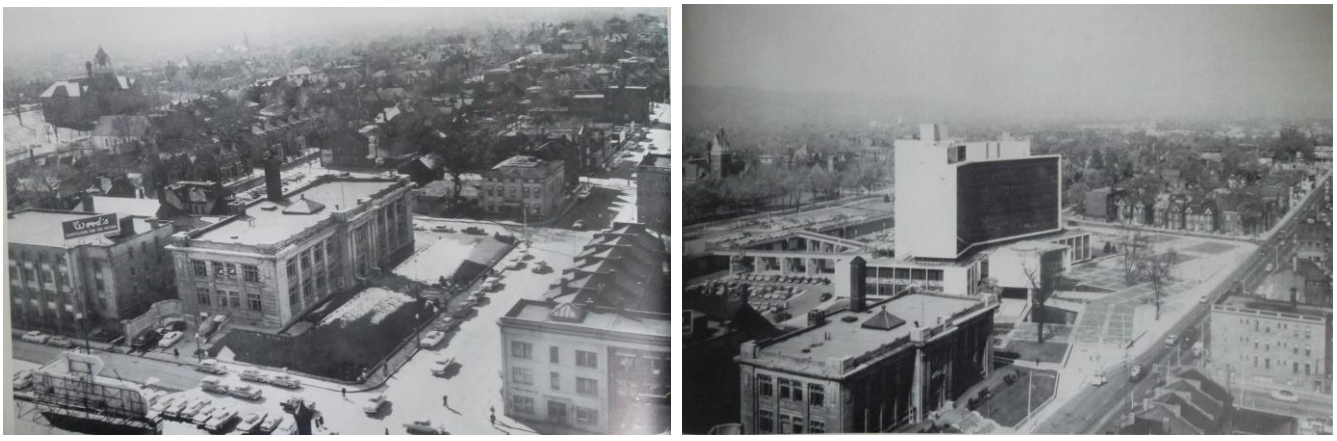


Fig. 5-19: site of City Hall and Hamilton Carnegie Public Library, (a) 1957 and, (b) 1959. Source: Weaver, 1982

Several buildings were razed during this era because they were declared obsolete. One such building was the original Hamilton Public Library, located at 20-22 Main St W. Opening in 1890 as among the first free public libraries in Canada, it was demolished in 1955. Concurrently, other new buildings were constructed on previously vacant land. In 1959, the city sold Market Square to Eaton's, which subsequently built a parking garage atop the square. After a minor controversy erupted over the future site of the Farmers Market, an agreement was reached in

1961, allowing the market to operate on the ground floor underneath the garage.

Other buildings in the core were razed due to decrepit conditions. In 1958, the city, in conjunction with the Canadian Mortgage and Housing Corporation, conducted a building inventory report, which concluded that over 60% of the buildings in the Civic Square area to be in fair to poor condition. One block in particular (bounded by James, Merrick, King and McNab) determined every building to be in poor condition (Murray V. Jones and Associates, 1965). The majority of these buildings were tenant-occupied, with low rent and low profit margins. According to the Jones Plan (1965), 178 out of 251 businesses in the area were tenant-occupied, with up to 80% of the buildings stock fronting James tenant-occupied. Such conditions contributed to the perception of blight in the downtown, with building owners having little to no incentive to improve building conditions.

The rents charged to businesses in the Civic Square area further portray the area as blighted. The levels of rent varied drastically across the area, with the ground floor rent of buildings on King between James and McNab being $4 per square foot (rent on the upper floors was $1.15 per square foot), while the average rent across the entire Civic Square area was $1 per square foot. Land value in the block between James King and Market Square was $11 per square foot while immediately adjacent blocks value was worth between $2-4. In fact, the total assessed value of buildings ($2,716,620) was less than the value of land ($2,885,620), which was among the justifications for urban renewal (Murray V. Jones and Associates, 1965).

By this time, the influx of new automobiles showed no signs of abating. A traffic study was conducted in 1961 concluded that 112,000 cars on average entered the CBD daily; of this total, 32,000 cars traveled on York, while Main and King recorded between 25-28,000 cars daily. The report also determined 7,960 recorded parking spaces existed within the downtown, figures that include public parking facilities and off-street parking (Jones, 1965).

Fig. 5-20: Entire urban blocks clearance for Jackson Square: (a) south side of Merrick between James and McNab, 1966; and (b) York and Merrick looking east, 1971. Sources: Hamilton Public Library, Special Collections.

These figures helped justify a realignment of select streets in order to funnel traffic more efficiently through the downtown. In 1970, York St was eliminated east of Bay St and realigned to flow down Merrick St, creating the superblock necessary to complete Civic Square. At the same time, Merrick was re-aligned to merge with Wilson St. Later that decade, the York Street Urban Renewal Plan was implemented, over the objections of local residents and businessmen. York was widened to 128 feet, officially re-opening on November 29, 1976, at a final cost of $5.5 million (in 1976 amounts) (Houghton, 2002).

By the early 1970s, critics of urban renewal practices became more vocal over the loss of historical building stock. One citizen's group was created to stop the cuts to public space at Civic Square and return to the original plan, but was rejected by the Ontario Municipal Board (the final board of appeal for development in Ontario). One of the most heated battles for heritage preservation emerged after the proposed demolition of the Birks Building, a Gothic Revival-designed building built in 1883 at the southeast corner of King and James. In 1972, Birks announced they were relocating to Jackson Square and demolishing their old headquarters. In the end, preservationists were unable to stop its demolition, which was carried out that same year (it was replaced by a 15 storey skyscraper currently known as the First City Trust Tower).

While dozens of buildings were destroyed during this decade, other buildings were erected in the core. In 1970, Sir John A. MacDonald high school opened (today Hamilton's largest public school), replacing the former McCoy foundry and a former soap manufacturer. Another important building completed is Landmark Place, Hamilton's tallest building – topping off at 43 stories. Located at 100 Main St E at Catherine St, it opened in 1974. Other buildings completed this decade include the BDC Tower in 1972 (located at the southeastern corner of Main and McNab) and the Continental Bank of Canada building, a ten storey skyscraper that replaced a two storey structure at King and Hughson in 1979.

In 1983, yet another change to the plans for Civic Square resulted in the creation of Copps Coliseum. Land at the southeastern corner of Bay and Merrick was originally reserved for a 810 unit townhouse/high-rise complex; however, Yale dropped this plan after city council decided to construct an arena in order to attract an NHL franchise. That same year, a two block section of Park between King and Market St was eliminated in order for Copps Coliseum to be completed.

More historical building stock was razed in the 1980s. In 1985, the former Bank of Hamilton building, the most imposing structure at King and James (originally built in 1872), was razed and replaced by Commerce Place, an office complex with two towers 16 stories in height each (opening in 1987 and 1990 respectively). In 1988, Zellers closed its downtown store and was immediately demolished; one year later, the Robinson's department store also closed, with the building razed shortly thereafter. In 1989, the Eaton's department store razed its parking garage (which had been in use for 19 years) in order to construct Eaton's Centre, a downtown shopping mall part of Jackson Square. Opening in 1990, the Eaton's Centre contained 121 stores (including an expansion of Eaton's) and an 825 stall parking garage.

However, other buildings in the core were converted to other uses. The former Carnegie Library was converted into the Unified family Courthouse, opening in 1989 after sitting empty for nine years. During the 1990s, three former department stores on King St E were restored, beginning with the Right House building (once the city's tallest building when it opened in 1893), converted into a combined retail/office building in 1995. Two years later, the Woolworth building was also converted into a combined retail/office complex, while the former Kresge building (at the northeastern corner of King and Hughson) was converted into a bingo hall. In 1996, the former TH&B rail station was converted into the Hamilton GO Station, thereby preserving an important Art Deco building (Houghton, 2012).

Other buildings were converted into adaptive re-use. The former Pigott and Sun Life towers were converted into a combined condominium complex, opening in 1996. Three years later, the Wentworth County Courthouse re-located across Main St to the Dominion Public Building (now known as the John Sopinka Courthouse) across the street, abandoning the site it had held since 1823. The old courthouse building is currently occupied by McMaster University's downtown campus.

However, a number of buildings have been torn down with little to replace it. This was the case of the former Canada Permanent Building, located on James St S (across from the Pigott Building). A more recent example is the partial demolition of the former Revenue Canada Building, located at the northeastern corner of Main and Caroline. In both examples, the building owners promised to replace the buildings after obtaining a demolition permit; as of 2013, both parcels are surface parking lots.

This loss of traditional townscapes and the lack of policy mechanisms that help prevent

such destruction have affected the lot pattern. On King St between Caroline and Catherine, the mean lot frontage width is 69 feet in 2010. That same year, the mean lot frontage width on the east side of James was 71 feet four inches, while on the west side of James the mean frontage width was 139 feet two inches. Between Cannon St and King St, the mean frontage was 50 feet, while on the west side the mean frontage width was 121 feet four inches. This is evidence that the strength of the lot pattern is much stronger east of James than on the west side.

The largest difference in land use between the two eras is the higher amounts of office space, with the BDC Tower and Stelco Tower the two most prominent examples of office space. Along James, more buildings have converted to retail uses, but the traditional retail/service corridor remains along King St. At the present time there is a large proportion of space reserved for parking – especially surface parking, which is spread throughout the downtown. In 2011, approximately 50% of the land within the case study boundary is used for parking, most of which are surface parking lots.

In recent years, the city has begun the process of converting downtown streets back to two-way traffic flow. The first streets to revert back to its original flow were James and John, in 2002 and 2004 respectively. In 2010, McNab St between King and Main was converted into a transit mall, known as the McNab Street Terminal. As a result, traffic has been reduced to one lane, with the other lane reserved exclusively for buses. The rest of McNab reverted back to two-way traffic in 2013.

At the micro-scale, downtown streets have been made more accessible. Hamilton has made strives to become an accessible city, and has installed street names in large letters with braille textured into the sidewalk. The concept of Urban Braille was originally introduced in the GO Area Urban Design Study (1994) and has been incorporated into site plans for downtown Hamilton, including the reconstruction of King St E and King William St (1997-2002). The Urban Braille system has most recently been implemented in the York Boulevard Urban Renewal Plan (2010), which additionally converted York back to two-way traffic flow, installed bike lanes and wider sidewalks.

Fig. 5-21: An example of the accessible urban braille street system, along James facing South in front of the Lister Block. Source: author.

In what could be the most important transformation of the downtown street system in decades, a Light Rapid Transit project (colloquially known as the B-Line), is proposed to run along King and Main streets, connecting McMaster University's campus to the Eastgate Mall. Although the plan is currently unfunded, it is identified as a Top 15 Priority Project by Metrolinx, the provincial agency tasked with transportation planning in the Greater Toronto and Hamilton Area (Metrolinx, 2013).

Other developments in the downtown include restorations to the Art Gallery of Hamilton, City Hall, The Hamilton Farmers Market/Public Library building (all completed by 2005) and the Lister Block, completed in 2011. That same year, Nations Fresh Food, a supermarket 55,000 square feet in area, opened in Jackson Square immediately south of Copps Coliseum. Other projects include Bella Towers, a 25 storey tower incorporated into the remains of the former Revenue Canada Building (currently under construction) and the McMaster University Downtown Health Campus, located on the site of the former Board of Education building (expected completion date of 2014) (City of Hamilton, 2013).

5.4 – Questionnaire

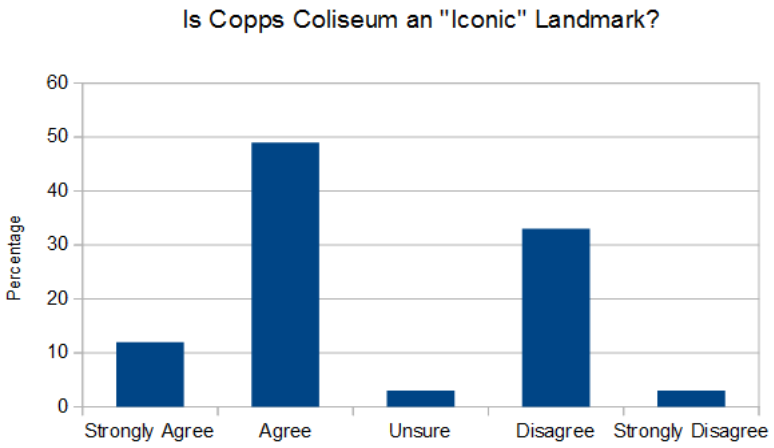
The questionnaire regarding Copps Coliseum and downtown Hamilton was distributed over a two day period, on August 2nd and 3rd, 2013, with 104 completed forms. Locations for distribution include Gore Park, Jackson Square and the James St North arts district. Of the 104 respondents, 59% were from Hamilton; of this total, 56% indicated they have been a resident of Hamilton since May of 1985 (the date Copps Coliseum opened). 56% of the respondents were

female, 32% had a high school diploma, and 38% had an average annual income of between $30-60,000.

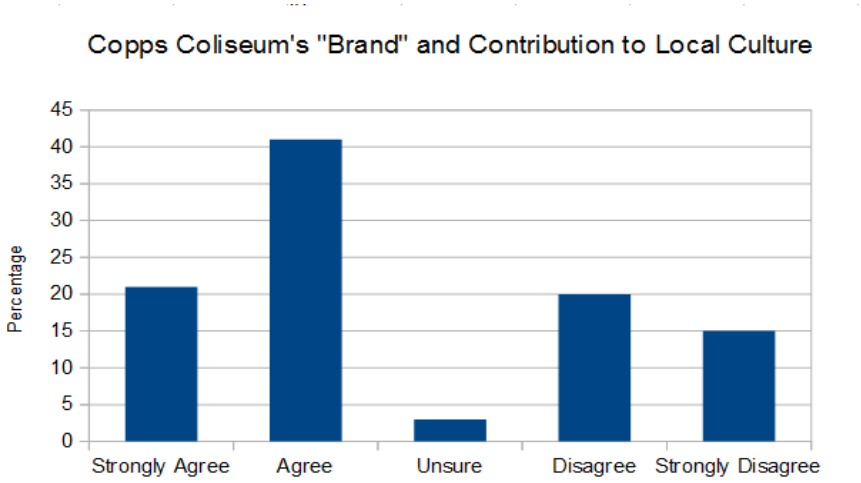
The results of the questionnaire revealed that 92% of the sample population had been to Copps Coliseum; of this total, 32% had been to 10-20 events since the facility opened, while 25% had attended 1-5 events over the same time period. Over the last 12 months, 53% of respondents indicated they had been to zero events. When asked about the events they had bought tickets for, 74% indicated they attended concerts, 38% saw sporting events, while 21% attended a combination of events.

Section two of the questionnaire revealed that respondents were split over the facility's contributions to place identity and imageability. 47% of respondents indicated they strongly agreed or agreed that they would show Copps Coliseum on a tour of downtown Hamilton with friends and family, while 21% were unsure with this statement. 67% of respondents indicated their family and friends would recognize Copps Coliseum if they were shown a picture of it. 56% agreed or strongly agreed that the facility successfully contributes to the streetscape, with 21% disagreed or strongly disagreed.

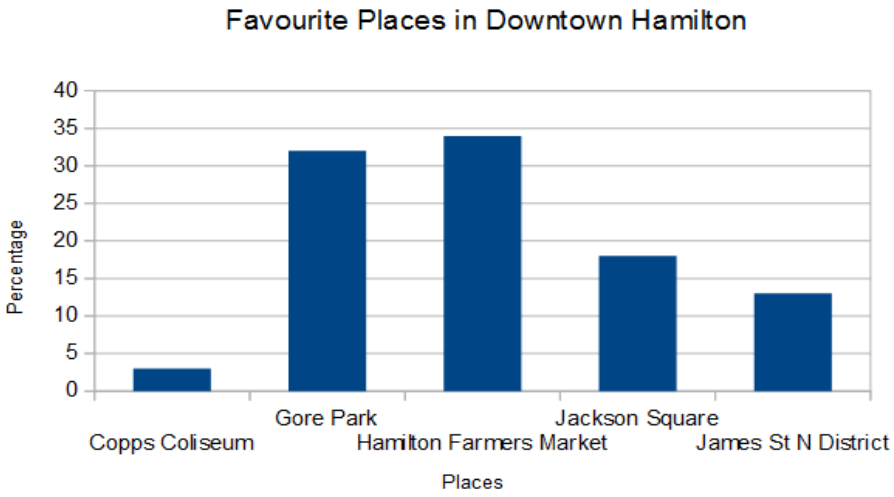
When asked whether the facility is an iconic landmark, respondents indicated the following:



When asked whether the facility exuded a “brand” for downtown Hamilton and positively contributed to local culture, respondents indicated the following:



Another question asked people's opinions on their favourite places in downtown Hamilton, with the results below:



The final section of the questionnaire gauged opinions concerning the effects of Copps Coliseum on the downtown. In what appears to be a contradiction, the vast majority of respondents (94%) agreed that Copps Coliseum has been a net benefit for the downtown. Several respondents wrote that Hamilton lacks entertainment/recreational facilities, while others commented that any and all efforts to contribute to revitalization is beneficial – both general attitudes could help explain this gap. When asked whether the downtown would change in terms of quality-of-life, 58% felt it would improve, while 25% felt it would stay the same.

The results of the questionnaire indicate that Copps Coliseum has contributed less to local place identity and imageability compared to Budweiser Gardens. Although the sample population believed the facility is recognizable and is an iconic landmark of downtown Hamilton, the poor location of the facility means it has not lived up to its full potential. The ability to contribute to

place identity is also crucial, given that Hamilton is close to Toronto, local residents can easily commute to Toronto to attend events rather than stay in Hamilton – a number of respondents indicated they did this.

5.5 – Discussion

The results of this research indicates that the process of development in downtown Hamilton was virtually identical to that of London or of any other city in North America; the central core was composed of a compact core, interspersed with a mixture of uses. The morphological frame was also based on the grid, which shaped the lot pattern and shaped the building fabric. The logic of development was also similar, with corner lots being the most valuable location for development. The main difference between Hamilton and London was the lack of a central focus for the core, affecting the overall building density.

However, the advent of the automobile and the ideology behind the urban renewal movements of the mid-20th century have drastically altered the traditional townscape of the central core. The creation of two superblocks, together with the conversion of narrow streets into wider thoroughfares, has overturned the traditional lot pattern in cities, creating large-scale, inward-facing developments. Almost 200 years after the city was founded, few traces of the original townscape remain.

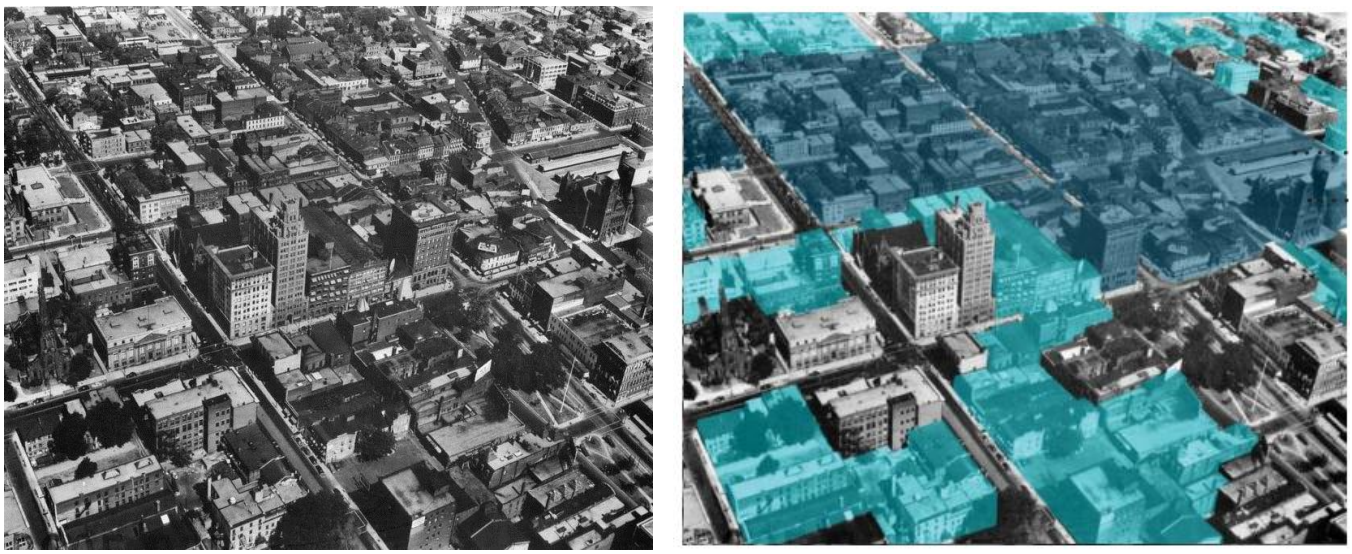


Fig. 5-22: Downtown Hamilton, 1948. (a) shows built-up core, while (b) is same picture with colours indicating the building fabric razed during urban renewal (in dark blue), with other buildings lost to demolition (in light blue). Source: Bryers, 2004.

As evidenced by the morphological analysis and questionnaire, the results state that

Copps Coliseum has not been able to live up to its full potential. Its very location inhibits the ability to attract ancillary development, and its lack of place references and monuments to former sports dynasties fails in contributing to local place identity. Ultimately, the outcome of morphogenesis in downtown Hamilton can be explained by another trialectic – between ideology, technology and economics. While current practitioners may decry the cumulative effects of urban renewal practices, it was rooted in a sincere belief that these outcomes were necessary to prevent the ruination of the downtown due to suburban growth.

Chapter Six – Research Findings and Analysis

This chapter presents and discusses the findings revealed in this research. The discussion addresses how theories of morphogenesis can be used to evaluate the outcome of catalytic revitalization projects such as sports arenas. Furthermore, theories related to civic image and place identity are linked to the townscapes of London and Hamilton, providing a framework upon which the research findings are analyzed. The chapter concludes with a point-by-point explanation as to how the outcomes of each arena differed, and identify patterns of development that can be used to influence the location and siting of catalytic redevelopment projects. But first, a review of relevant theories from this thesis is reviewed.

6.1 – The Morphogenesis Model

Urban morphology is a field that studies the change in urban form over time. The British School of urban morphology views the city as an evolving habitat that is constantly altered, yet structured by the preservation of its inherited forms – a template applicable in the evaluation of urban revitalization outcomes. The British School divides the townscape into three categories known as *form complexes*: the plan unit (i.e. streets, buildings and lots/parcels), building fabric and land use. By categorizing the townscape into these three elements, patterns of urban development can be detected, and hence, read.

Conzen (1960) broke ground on a theory that townscape change is due to a trialectic within the plan unit, whereby one agent shapes – and is shaped by – the other two agents. Within the plan unit, a hierarchy exists in which certain elements are more *resilient*; they are, in order: the street pattern, the lot pattern, the building pattern and land use – the latter of which is the most susceptible to change. The stronger the street pattern (i.e. the more of the overall street pattern is preserved), the more resilient the overall townscape.

In a more recent academic paper, Conzen (1981) added to his theoretical construct describing the nature of modern development projects and its effect on the lot pattern. Conzen (1981) argued that centralizing economic pressures tend to fuse parcels together in order to provide sufficient land needed for larger structures; such development falls under two typologies: adaptive change (redevelopment that occurs within the framework of the existing street pattern) and augmentative change (the street pattern is altered to contain new building

structures).

The impact of these development pressures onto the townscape has significant effects on the type of place that is created. To Conzen (1981), “This affects the building fabric of CBD's in towns widely and is a powerful agent in the obliteration of historical townscapes just where the character is most marked and calls for the most skillful management” (p.57). Conzen (1981) argues that by: (a) failing to recognize these patterns, and (b) that without concerted efforts to maintain a city's oldest plan unit (referred to as the *kernel*), we risk losing the significant “educative and regenerative influence” that historic landscapes facilitate (p.58).

These same influences that are woven into these historical townscapes are also directly related to civic image. In an addition to this theory on townscape change, Conzen (1966) provided a link between urban morphology and civic image, arguing that the entire urban fabric should be seen as a genius loci and an *objectivation of the spirit* of the previous societies that inhabited it. According to Conzen (1966), the urban form is a palimpsest, in which forms are subsequently added to the city, yet does not erase all traces of its predecessors.

Conzen (1966) argues that form complexes are the factors that constitute and define a townscape's uniqueness of the genius loci. The quality of historical townscapes rests upon the conservation of the plan unit and building fabric, since these two factors are the most stable elements against change – creating a morphological frame that influences contemporary development to some degree.

Viewed in this way, townscapes represent an accumulated experience (especially historical townscapes), and are therefore a precious asset. This asset, according to Conzen (from Larkham et al, 2002), is threefold:

- Practical: by providing orientation and constructing a mental map, which is dependent on one's recognition of the identity of localities
- Intellectual: in orienting individuals and groups through time, the townscape provides a strong visual experience of the history of the area, helping the individual place themselves within a wider evolving society, stimulating historical comparison and thus providing a more informed basis for reasoning.
- Aesthetic: the process of morphogenesis in historical urban areas has aesthetic value: for example, by maintaining human-scale, as well as the value of the visual impact of, and orientation provided by, dominant features in the townscape

Conzen (1966) used this concept to characterize the geographical variations of all three form complexes, but did not delve deeper into this assertion. However, it was central to his conceptualization of how people create and/or alter place.

Since Conzen based his academic work in medieval British cities, his research is not readily applicable in a North American context. To address this gap, the work of Moudon (1986) is of relevance to this research, particularly the role of the parcel in the preservation of physical form. Moudon (1986) argued that the parcel is an important element in a morphological analysis, writing that the parcel should be seen as "the basic cell of the neighbourhood fabric that establishes the pattern of the grain of the city and determines its scale" (p.144). Moudon (1986) hypothesized that the urban fabric is more resilient if lots are small and diversely-owned, asserting that the tension between centralizing developmental pressures and small-scale diversity lies at the heart of townscape preservation. Therefore, analyzing the lot pattern can be useful for determining townscape change.

The lot is constrained by the street pattern, but constrains the building and building fabric. In other words, the size and shape of the lots physically constrains the buildings, as evidenced by the long, narrow lots created on the main streets of London and Hamilton, which in turn created narrow and tall structures with only their facades exposed. If a building developer wished to build a specific type of structure, the requirements for buildings shape the parcels as seen in the lot amalgamations in the downtown in the post-war period in order to provide space for large structures (i.e. office buildings); therefore, one way to overcome these forces of the lot pattern is by a large capital infusion to expropriate land from landowners. This relationship between the lot pattern and building fabric is crucial in reading the urban form.

As has been presented in this research, other relationships between the townscape elements exist. For example, the multitude of land uses shapes the plan unit (most notably the lot pattern), as evidenced by the long, narrow lots in the CBD. The shape of the blocks and streets found in the town-plan enables and constrains their uses, with all of these relationships occurring simultaneously in forming and reforming the townscape. Thus, it is impossible to fully understand one element of the townscape without considering the others.

A third relationship between the building fabric and land use exists. For example, dozens of buildings on the main streets of London and Hamilton were Italianate, while classical-based motifs were seldom used. Domosh (1998) states this is due to the connotation of regal palaces

that Italianate architecture conjures, whereas Classical styled buildings are associated with powerful institutions (i.e. Government), which are unwelcoming for people.

These patterns associated with the form complexes (especially the plan unit) are crucial in reading the urban form, since, at the macro-scale level of resolution, it provides clues about a city's development patterns. By analyzing the plan unit and its alterations over time, a trialectic can be uncovered, revealing a particular logic behind the evolution of urban form. In a North American context, the logic behind morphogenesis for much of its history is largely due to the dictates of laissez-faire capitalism and the profit-maximization acts inherent in private firms. Along most of the streets in the downtown core, landowners created long, narrow lots – resulting in the construction of long, narrow buildings, with the main entrance of said buildings facing the primary streets. Since land value was tied to visibility, narrower buildings were built in areas with the highest land values, with corner lots being the most valuable locations for firms. Larger buildings (i.e. industrial or wholesalers) built larger structures, yet still located in the downtown close to transportation corridors due to the core's centrality.

6.2 – Aspects of Morphogenesis in London and Hamilton

The objective of this research was to determine whether new development respects or fits into its physical surroundings. It also measured whether each sports facility contributes to some facet of civic image of their respective city. Theories about morphogenesis have been discussed, as well as the logic behind urban development. The following section shall chart the morphogenesis of London and Hamilton, splitting the time period into two eras: the early 19th century to 1945, and 1945 to the present.

6.2.1 – Urban Form Development: Early 19th Century to 1945

Hamilton and London were both founded in the early 19th century (1816 and 1826, respectively) and were named the capitals of their respective district in Upper Canada (Gore and London, respectively). Since each settlement was named an administrative centre, this necessitated the construction of a courthouse, jail and public market. In both cases, the establishment of the market was the single-most influential trace element, with each market firmly establishing the location of both London and Hamilton's CBD.

The reasons a public market was such an influential factor in urban development was twofold: firstly, sanitation was of utmost concern to civic officials throughout the 19th century,

with the belief that illness could be spread from the sale of meat, produce and/or field crops. By restricting the sale of such goods to one location, outbreaks of disease could be stymied. This restriction of commerce is the second reason why the public market was an influential development factor; since residents were required to purchase goods at one location, a locational advantage among businesses could be established near the market, increasing their visibility (and hence revenues) for pedestrians who traveled by such establishments on their way to the market.

In Hamilton, the public market was established 16 years after the founding of the city on a parcel of land at James and York streets. London's public market was first held on the courthouse square, then subsequently moved to a newly-severed parcel after a group of merchants donated land for a new market. In both cases, the founding of the public market moved the CBD of each city, with businesses near the market more visible (and hence more valuable) than places far from the market. The following will outline characteristics according to the townscape elements.

(i) Streets

With few exceptions, the streets located in the downtowns of London and Hamilton were conceived and cleared based on the dictates of a survey, and were the first mark of a new settlement. The surveyors (Col. Mahlon Burwell in London and George Hamilton in Hamilton) tasked with planning the street layout based it on the grid to quickly and easily create property boundaries in order to sell land to incoming settlers. Streets ignored topographical obstacles such as hills, bogs and creeks, which Tausky (1993) argues is a metaphor for nature's subordination to human rule. The typical street created in each survey measured one surveyors' chain wide (66 feet); again, an easily replicable task for the surveyor in order to create a settlement.

Until the mid-19th century, the streets consisted of dirt, which turned to mud in cases of rain. The widespread use of horses, buggies and wagons caused wheel ruts to be carved into the ground, slowing travel times. To improve street conditions, streets were macadamized (in the order of their civic importance), with further improvements coming in the form of sidewalks, protecting pedestrians from the dirty, uneven streets. By the late 1870s, public transit authorities were founded in both cities, with streetcar tracks installed on the main streets (Dundas and Richmond in London, and King and James in Hamilton). In the 1890s, both cities electrified their streetcar lines, eliminating the need for horse-driven cars.

Throughout this early era, the street pattern of both cities has been able to adapt to

changes in technology and culture. Even after alterations to the grid (in both cities, first caused by the routing of railways), the grid remained flexible, yet able to accommodate existing development. However, the street system would be considered obsolete with the mass-ownership of the automobile, which first reached popularity by the mid-1920s. Traffic jams were caused by the clash between vehicles and streetcars, as well as the frequency of intersections (in both cities, a typical block was between 150 and 200 feet long) contributed to problems both real and perceived (more about the solutions each city took to alleviate traffic is listed in section 6.2.2)

(ii) Lots/Parcels

Since the lot fabric is constrained by the street pattern, the sole differentiating factor affecting the shape of a lot is land value. As a result, lots were drawn and re-drawn in order to maximize the efficiency of their land. After each settlement was founded, land speculators took procession of the most valuable lots – this was more the case for Hamilton than London. As has been revealed in this research, lots facing the main streets were split more often than through streets, evidence that the demand for frontage was greater along these streets.

In the CBD, long, narrow lots that were severed perpendicularly to the street, were created in order to fit as many buildings as possible along a given street frontage. Corner lots were shallower, and were severed so that the main entrance of a building could face the main street, yet still have access to the secondary street. Lots in these locations were the most visible and valuable, and were held by uses that could afford the steepest rents/costs, like banks, hotels and druggists. Even industrial and wholesale buildings follow the same general shape, although the lots containing these uses tend to be larger in area.

The CBD is the location of the smallest lots in both cities; this indicates that this area is (and remains to a certain extent) a desirable place to conduct business, forcing developers to maximize the efficiency of their land. The scattered ownership of lots also made lot amalgamations difficult, since it would take a series of dealings with neighbouring parties to obtain other lots. In the central core, some lots are less than 300 square feet while others are several times larger in size – this is a testament to the rich history of the area, its diverse ownership, and (most notably) the intense demand for land downtown. This was particularly the case in London, where small, diversely-owned lots predominated, while in Hamilton, a significant number of lots remained vacant throughout its history. In both cases, this eased the process of lot amalgamation, as was the case for the Eaton's department store when it purchased

neighbouring to construct a surface parking lot in 1927.

(iii) Building/Building Fabric

In London and Hamilton, the buildings and building fabric evolved in a similar manner. Buildings were constructed up to the street/sidewalk and were built up to each other laterally, leaving the rear of the property open (similar to the perimeter block common in European cities). Built coverage on downtown lots during this era increased over time until the 1920s, with block interiors and areas at the periphery of the downtown increasing in density. At its peak, built coverage was expansive, with at least 50% of the lot area covered, while 75% lot coverage was considered average. As a result of the narrow lot shape and high built coverage, the buildings in downtown London and Hamilton conform to the lot's shape – narrow and deep. In order to maximize the efficiency of land, there were no building setbacks from the sidewalk nor the sides with only the rear of the building containing open space, with the streetscape only being broken up by service lanes/alleyways.

As evidenced by the fire insurance maps in both cities during this era (and assessment rolls in the case of London), there is a correlation between the width of a building's frontage and its location proximate to the public market, with the narrowest frontages being located closest to the market. In London, there was a greater degree of centrality than in Hamilton, with the market sited less than 100 feet from the Peak Value Intersection (PVI).

Changes in construction technology shaped the building footprints in both cities. After 1910, steel began to be used in building construction, overcoming the height limitations inherent in masonry-framed buildings. The majority of building facades were made of brick, with stone being used for higher-quality building stock (i.e. banks, institutions, etc). Asides from design, the building fabric was also shaped by various forms of decoration, with signs, cupolas, parapets, lintels and patterns in the brickwork. Building owners invested considerable sums of money in festooning in order to attract people and visibility for their businesses. Although a variety of architectural styles existed in the cores of both cities, the three most common styles were Italianate, Romanesque-Revival and Art Deco – a result of a series of economic booms in Ontario during the 1870s, 1880s and 1920s, respectively.

(iv) Land Use

During this era, a variety of uses were sited in close proximity with each other, the by-product of an era in which people valued access and easy access to transportation corridors such

as railways and streetcar routes. This was the norm for cities across Ontario and the rest of North America before zoning by-laws mandated separation of hazardous uses. Although areas of the central core contained relatively distinct clusters of economic activity, the location of uses followed a general pattern: commercial units would occupy the ground floor of buildings, while the upper floors of a building would contain one or a combination of apartments, offices, storage or light industrial space. Wholesaling and heavy industrial uses would be located close to railways, away from the CBD.

From these generalizations, conclusions can be drawn from the history of development in London and Hamilton. The logic contained within the plan unit was not master planned, but came about in a gradual, piecemeal manner – the net result of the competition for space within the free market. A logical pattern of development is also evident in the location of its land uses: the most valuable locations were corner lots and were held by uses that could afford the steepest rents (i.e. banks, hotels, institutions and druggists were by far the most common during this era). Midblock locations were occupied by commercial uses (i.e. retail, professional services, etc) with other uses relegated to the upper floors.

The buildings that helped shape the townscape were either built individually (by landowners) or by developers (who leased space), with each building suiting the need(s) of the owner in its particular era. Although the buildings in the core of both cities were of different styles and ages, the building fabric formed a cohesive whole; buildings had a similar setback from the street and were of a similar height. Again, this was created gradually, independent of any master plan.

Fig. 6-1: James and King St, Hamilton, 1950. Note how all the ground floor units are retail, with office and/or residential units on the upper floors. Source: Slote, 2010.

The logic within the pattern of urban development helps define the trialectic in the townscape. Each townscape element impacts the other: the demand for space impacted the form/shape of buildings that were constructed, which in turn shaped the habits of their users. The building density shaped pedestrian activity, who demanded stylish premises for the purposes of patronage. Again, the logic in the plan unit was rooted in the capitalist desire for profit-maximization, whom shaped their environments in order to accomplish this objective – impacting its form and function.

However, alterations to the townscape were made, beginning in the mid-1920s. In order to accommodate the automobile, parking lots, service stations and a greater proportion of the street was demanded by car owners. Therefore, a reading of the townscape reveals that it is rational to view urban development over time through the lens of the free market, even after changes in technology (see above) destroyed much of the townscape's cohesiveness.

6.2.2 – Urban Form Development: 1945-Present

This thesis has contended that the advent of mass-produced automobiles has been the single-biggest factor in altering the townscape. This, concurrent with the modernist paradigm that dominated the popular discourse from the 1940s to the early 1970s brought about the view that the traditional city, with its mixed-uses and walkable form, was obsolete and had to be altered to accommodate more space for cars. As a result, the task of the planner became increasingly preoccupied with separating pedestrians from cars.

Neither London nor Hamilton were immune from these changes to the urban realm. By 1951, both cities had eliminated their streetcar tracks and replaced their entire transit fleet with buses, citing the inefficiencies in moving people by transit. Both cities also invested in providing space for parking facilities – the most notable examples in both cities was the elimination of their market squares to construct a parking garage, relegating the public markets to the ground floor. In addition, streets were converted to one-way traffic flow, transitioning downtown streets into thoroughfares.

However, the sole differentiating factor in the evolution of the townscape was in the outcome of urban renewal efforts. In London, the only successful outcome of federally-funded renewal scheme was the demolition of a two block area, now the site of the provincial offenses courthouse and an office building. Other plans were delayed or blocked, either due to cost or public outcry. In Hamilton, a much more concerted effort to renew the downtown was achieved

– the most important of which was Civic Square, Canada's largest urban renewal project. From this project alone, 11 blocks of the core were leveled. Including the assembling of land needed by Hamilton's new City Hall (completed in 1960), three superblocks were created.

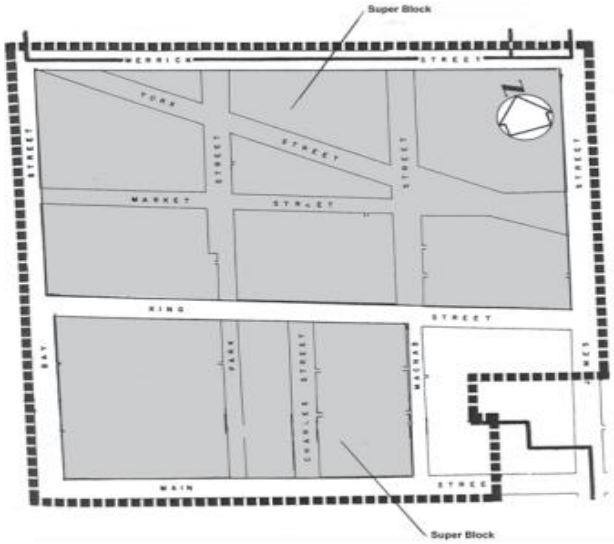


Fig. 6-2: A diagram showing how the former fine-grained street pattern of downtown Hamilton transitioned into superblocks. Source: Rockwell, 2009.

As shown by fig. 6-2, downtown Hamilton's street plan was radically altered, which in turn affected the lot and building pattern. At the same time, the adoption of euclidean zoning legislation further segmented the city. Levy (1999) states that zoning is often created individually, strung out to transportation plans, creating a fabric that is open, fragmented, heterogeneous and disrupted – thereby creating a space that no longer corresponds to plot. Modern architects called this the *freeing of the ground*, but Levy (1999) states this is really the severing of all relationships between adjacent uses.

As has been revealed, the outcome of Civic Square and other urban renewal projects only hastened the decline of the downtown, as evidenced by the displacement of hundreds of residents and businesses from the Civic Square area. The townscape's transition from a fine-grained, interconnected street pattern into road networks created barriers for people, with Jackson Square internalizing any foot traffic in the vicinity, further segmenting the city.

In recent years however, attempts have been made to restore the fine-grain, pedestrian-friendly townscape; through new construction, preserving heritage building stock and encouraging adaptive-reuse of existing buildings. In Hamilton, important projects geared towards revitalization include the restoration of the Lister Block, the Pigott and Sun Life

buildings, as well as the renovations to the Hamilton Public Library/Farmers Market Building and the Art Gallery of Hamilton. However, London has been far more comprehensive in its preservation of the urban fabric, with the adoption of the Downtown London Heritage Conservation District in April of 2012. Concurrently, Fanshawe College's new school of Applied and Performance Arts is currently re-locating in a former bank building, as well as the completion of Phase II of the Renaissance, with this project bringing 477 residential units to the downtown.

In summation, the greater degree of townscape preservation in London can be attributed to the resilience of the lot pattern, with the contemporary lot fabric being a product of diffused property ownership. The dearth of large lots in the downtown are a result of this diversity in land ownership and the hindrances this caused in securing adjoining lots. Even when plans were proposed that would have radically re-altered the street network, with federal urban renewal funds underwriting the entire project (i.e. the Margison Plan of 1960), it was still not strong enough to overturn the strength of the trialectic.

6.3 – Reasons for Divergent Outcomes

This thesis has emphasized that downtown London has had greater success in preserving its traditional townscape compared to Hamilton. This can be attributed to a number of factors, among them: the preservation of its street pattern, the resilience of its diversely-owned lot pattern, the higher percentage of owner-occupied building stock and the greater degree of centrality of the CBD. These factors in turn have affected the outcome of both arena projects, and are explained below.

6.3.1 – Aspects of Townscape Elements

To reiterate, a hierarchy exists within the plan unit, whereby the street pattern is the most resilient element. If the street pattern is severely altered, it effaces every element down the hierarchy – altering its morphological frame for decades, if not centuries. While both cities have had their street pattern altered, the overall frame has been preserved to a greater degree in London than in Hamilton. In London's case, minor alterations have occurred (i.e. the routing of the Great Western Railway and the creation of Carling St); in both cases, much of the existing building stock remained. Although a dramatic alteration occurred in the early 1970s with the re-routing of Queens Avenue (necessitating the demolition of existing building stock), it was

contained within a two block area, with the rest of the grid remaining intact.

In contrast, Hamilton has radically altered its street pattern. The fusing of 13 square blocks into two massive superblocks to create City Hall and Jackson Square effaced the lot pattern, building fabric and land uses within these urban renewal areas. Due to the dramatic alterations to the street pattern, its impacts will last for several decades, if not longer. Yale Developments holds a 99 year lease on the land Jackson Square is sited on, and has shown no interest in either recreating the original street pattern or even significantly altering Jackson Square in the future. As it stands, the current lease expires in the year 2070 (Wilson, 2012).

Largely due to the resilience of the street and lot pattern, downtown London's building fabric has been preserved. Although a few buildings have been preserved due to provincial heritage legislation, the protection of London's heritage assets has been isolated and spotty (as evidenced by the demolition of the Talbot Block). However, the City of London passed a comprehensive act of historic preservation known as the Downtown London Heritage Conservation District Plan (2012). Part of the city's new downtown master plan, this plan identifies unique features of the downtown by focusing on three “character statements”: heritage, architecture and landscape, with the conservation components focusing on the maintenance/repair of buildings, as well as finding viable uses for existing building stock. Under these new comprehensive yet flexible guidelines, much of the building fabric is now protected under Part V of the OHA (the section that recognizes historical districts) (City of London, 2012).

Fig. 6-3: diagram from the Downtown London Heritage Conservation District Plan (2012), which, among other things, regulates how new development must respect the character-defining aspects of the streetscape, such as the building setbacks and the visual rhythm of uniform door and window heights, etc. Source: City of London, 2012.

Legislation of a similar nature has not been enacted in Hamilton. On the contrary, the City of Hamilton is unwilling and/or unable to declare buildings of heritage status, with only a handful of buildings awarded provincial and/or federal designation located downtown. This, coupled with the revelation that the city's Planning and Economic Development office is understaffed, means that it can take upwards of one year to process heritage status applications.

The city keeps track of its building stock via an Inventory of Heritage Interest, but any building on this list can still have a demolition permit passed within a 30-day period of its application, the same duration as any other building (McGreal, 2012).

The degree of townscape preservation in London and Hamilton is emblematic when the original trace element (or *kernel*) of both cities is examined. In London, the London District Courthouse remains – its stone walls, public square and view of the Forks surviving intact since 1829. Col. Mahlon Burwell reserved this parcel of land when creating the town survey so that the building (to which London owes its entire existence to) would be prominently sited as a landmark from the Thames River, as well as Dundas and Ridout streets. In Hamilton, the Gore County Courthouse was rebuilt twice since its completion in 1821, then abandoned by the former Wentworth County in 1996. As a result, there is very little historical continuity in Hamilton (the only evidence marking the founding location of Hamilton is a plaque on John St).

Fig. 6-4: Middlesex County Courthouse, downtown London; view from Ridout St (a), view of the original stone wall built along Dundas St (b). Sources: Author.

Hamilton has always owed its existence entirely to the capitalist-driven land development cycles, and is the first speculative townsite in Canada to evolve into a major city; as Weaver (1982) says: “In effect, Hamilton was founded by a land developer. In that sense, it differed in purpose and character of a government, military or religious authority” (p.16). Thus, the city and its inhabitants did not value the location nor of the trace element of Hamilton to the degree that it occurred in London.

Another factor that has played a role in the overall preservation of the townscape is the degree of centrality in the downtown, with London's core being more centralized compared to Hamilton. As shown previously, a four block section of Dundas St and a two block section of Richmond St has remained as the CBD (commanding the highest land and building values), with land value decreasing proportionally with distance from the PVI. For most of its history,

downtown London has remained within a relatively concentrated area, with no outward expansion outside its traditional boundaries. This is largely due to fixation lines (i.e. the banks of the Thames River and the Canadian-Pacific Railway adjacent to York St), constraining downtown growth to the west and south, respectively. Even after a series of economic booms that generated immense amounts of developmental activity, the downtown has remained within a compact area.

Downtown Hamilton on the other hand has grown dramatically since its founding, lacking the degree of centrality and fixation lines found in London. Much of the outward growth of the downtown occurred during the construction of Civic Square, which sought to bring a focus to a new, modernized downtown, away from the traditional, "obsolete" downtown centered on the PVI at King and James streets. In hindsight, it should have been obvious that Civic Square would be a failure. The project was much too big for a city the size of Hamilton and there was never enough demand for commercial and office space to justify the project.

Urban renewal was undertaken by government because of a belief it could reverse a downward cycle of disinvestment by underwriting a portion of the costs associated with purchasing and demolishing private property as well as the construction of new buildings; yet still retaining ownership of the land, hoping the increase in land value of would recoup the government's investment. At the time, this was seen as a natural extension of a government's duty to increase the welfare of its citizens.

As Jacobs (1961) points out however, urban renewal is not an inevitable process, since it is a drastic correction to a downward cycle, using culturally-established ideology and government funds to force change on an area no longer seen as adaptable. For example, blight was strictly defined under the National Housing Act (1947). After the act was amended in 1964, blight was redefined, but was diluted to the point that it could be interpreted as to include any negative externality that unduly influenced urban development. The most concise definition came from the Canadian Mortgage and Housing Corporation, in a staff handbook (1964), which stated:

> Many complex factors contribute to blight; sometimes they are separate, often they are interrelated. Blight not only infects a single area but also spreads to adjoining ones. Comprehensive action is therefore essential to counteract these influences. At the same time, to be realistic, the scope and depth of any renewal action must be

within the resources of the municipality (p.5).

As the failures of urban renewal projects like Civic Square mounted, it became evident that the values and objectives of urban renewal were based on a fundamental misunderstanding of how cities work. Urban renewal stems from the belief that environmental conditions bred social problems, as well as the belief that the high density, fine-grained traditional city caused blight to grow and spread. Although Hamilton's Report on Existing Conditions (1947) did blame middle class disinvestment for the core's decline, it also blamed the lack of air and light – inferring that blight spread in a manner not unlike that of mould or a virus. Since these projects hastened the very decline urban renewal advocates sought to remedy, the traditional city may have possessed more economic vitality and potential than mid-century planners gave it credit for.

6.3.2 – Aspects of Townscape Affecting Revitalization Outcomes

This sub-section will outline the localized factors that have contributed to the outcome of Budweiser Gardens and Copps Coliseum today; tracing the evolution of the form complexes surrounding each arena from the early 19th century until the present. This section will also identify the reasons why the patterns associated with the evolution of historical townscapes are more conducive to revitalization than others.

(i) Budweiser Gardens, London

As previously mentioned, Budweiser Gardens was built within the existing street pattern; a development typology Conzen (1981) refers to as adaptive change. Although the building fabric had been eradicated within the block 10 years before its construction, the only demolition that is directly attributable to the facility was the Talbot Inn[3]. Budweiser Gardens is built within the street grid, without any setbacks from the sidewalk, with a variety of shops facing Talbot St that are open to the public when no games are held. As a result, Budweiser Gardens has helped preserve the downtown's morphological frame, strengthening the lot pattern and building pattern/fabric within its vicinity.

An overview of the local townscape is needed in order to understand the factors that have led to the current outcome of Budweiser Gardens. Throughout most of the history of downtown London, the townscape surrounding what is now Budweiser Gardens (formerly the Talbot Block) developed in a manner as described in Chapter four. The focus for the area was Covent Garden

[3] The original plans for the facility was to incorporate the original Talbot Inn into the arena, but it had already been too dilapidated in order for this to be feasible

Market and Market Square, and developers were willing to pay a premium for land facing Market Square in order to vie for visibility for people who frequented the square.

On the Talbot Block, lots were severed to face both Dundas and Talbot St. Between 1826 and 1916, the lot pattern along this stretch of Talbot St was severed more than four times, creating nine lots from the original two lots created in the 1826 town survey. As shown in Fig. 6-5, the buildings along Talbot St were oriented to face Market Square.

Fig. 6-5: the Talbot Block and downtown London, Goad Plan of 1915. Source: D.B. Wheldon Library, UWO.

However, the more valuable location was for the cluster of buildings on the east side of Talbot St, between Market Square and Dundas St, since these buildings had access to two streets instead of one. From the early 19th century until the 1940s, buildings gradually began to increase in density and expanded into the interior of the blocks – the lone exception being Market Square, since Covent Garden Market consolidated its operations in fewer buildings.

The first significant alteration to the townscape occurred in the early 1950s, when a parking garage was built on top of the market, removing a significant amount of public space from the downtown. The creation of the garage in turn led to the creation of a street (named Covent Market Place) to the north of Market Square, another reduction of public space in the need for automobile expediency. The only other serious alteration to the area's form complexes occurred during the construction of the Provincial Offenses Courthouse and the Bell office building, on the north side of Dundas St (which opened in 1974) – resulting in the clearance of one acre of building stock and the fusing of two city blocks.

Yet in only one of these cases was the street pattern significantly altered – and here, the demolition occurred within a two block area, leaving the rest of the street pattern (and hence

overall morphological frame) intact. Even when Cambridge Shopping Centres Ltd gradually purchased property on the Talbot Block and razed all the buildings in 1992 (save for the Talbot Inn), both the street pattern and lot pattern was preserved.

One of the first steps civic officials took in revitalizing downtown London after the Millennium Plan (1998) was passed was rebuilding Covent Garden Market in 1999. This project resulted in the completion of a new market hall, an expansion of Market Square (now known as Rotary Square) and moving the parking facility underground. Today, the square is an important forum in downtown London. While it is publicly accessible, it is privately managed by Covent Garden Market.

Fig. 6-6: Covent Garden Market, London. Rotary Square provides a functional flexibility for events, such as an expansion of the market during the summer (a), while the square is converted to a skating rink in the winter, thereby providing use year-round (b). Sources: author.

The building stock surrounding Budweiser Gardens has been preserved to a remarkable extent. The logic of urban development during the early history of London as well as the resiliency of the lot pattern has resulted in more buildings constructed along a given blockface across from Budweiser Gardens compared to Copps Coliseum. There are a total of ten buildings that front a one block stretch of King and Talbot St, in front of the main entrance to the facility. Such buildings contain a variety of uses including restaurants, bars and retail stores. Since more establishments can be located along a blockface, it can attract more people to the area, over longer periods of time.

Budweiser Gardens is sited in such a manner that it embraces the surrounding traditional townscape. The very conditions that have brought about the success of Budweiser Gardens can be attributed to the symbiotic relationship between the facility and its surrounding townscape. The facility brought more people to the core, which in turn brought about the adaptive reuse of

said building stock, thereby encouraging more people to visit the downtown. The building fabric itself encourages the conditions necessary for vibrancy, since they are built up to the sidewalk and abut each other laterally, creating a continuous streetscape. The lot pattern, which has proved to be resilient since the 19th century, remains so to this day, as shown by fig. 6-7:

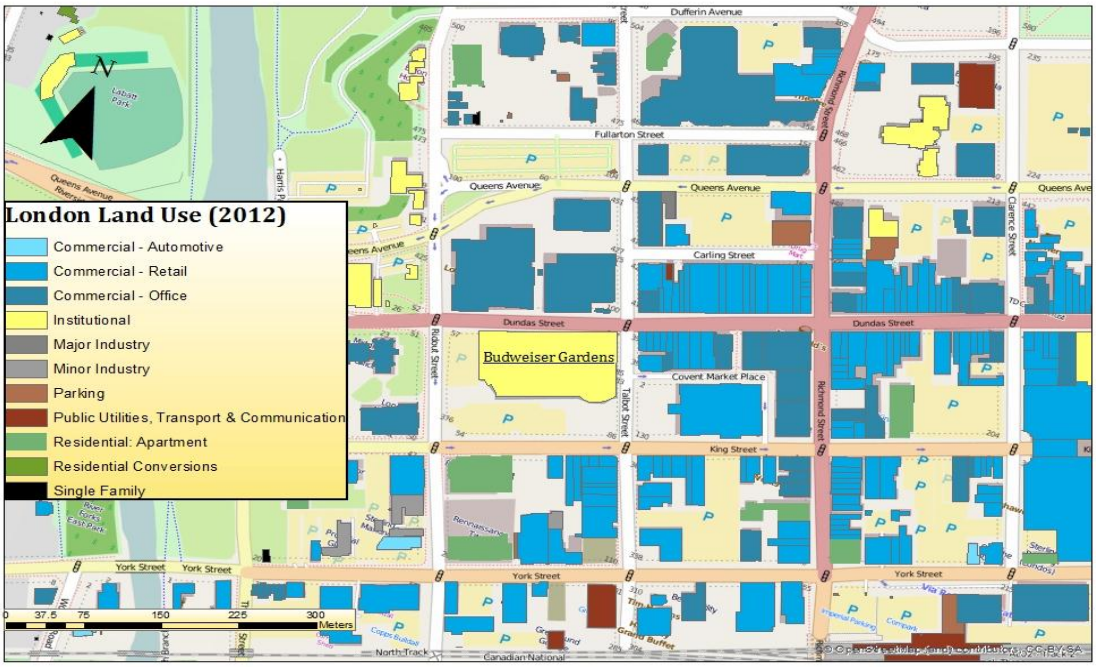


Fig. 6-7: Lot pattern and land uses surrounding Budweiser Gardens, scale 1:4,500.

The morphological analysis has revealed that Budweiser Gardens has been able to attract people and private investment to the downtown. The facility has been able to stimulate a number of new establishments and reduce the number of vacant storefronts across from its main entrance at Talbot and King St, which is reinforced by the location of the market. The assessment has also revealed this is in large part to the siting of the main entrance; not surprisingly, new businesses have chosen to operate along these two streets in order to draw patrons from events. Since there is no entrance along Dundas St, this likely explains the higher number of vacant storefronts at the present time.

This assessment not only reveals the need for a concentrated developmental focus on one area, but also the significance of fine-grained historical townscapes in stimulating ancillary development as well. The traditional city, with its dense building stock, narrow storefronts with a mix of land uses in close proximity with each other provides more options and flexibility for private actors in redevelopment/revitalization efforts, bringing more people to the area at different times of day, throughout the year.

(ii) Copps Coliseum, Hamilton

While Budweiser Gardens was built in a manner that both embraces and preserves its morphological frame, Copps Coliseum on the other hand was built within a reconfigured street pattern – a development typology known as augmentative change. The severe alterations made to Hamilton's morphological frame began in 1958, with 13 square blocks of the downtown fused into two superblocks within two decades – effacing the lot pattern, building pattern and building fabric (perhaps permanently).

Throughout the majority of Hamilton's history, the downtown's form complexes evolved in the same fashion as in London – resulting in a permeable street pattern and a fine-grained building fabric. Within the area in what is now Copps Coliseum, much of the demand for street frontage was located along York St, the primary entrance to the downtown and the CBD. However, much of the building stock fell into disrepair and neglect by the 1950s, prompting civic officials to request federal dollars to assist in urban renewal efforts for the area. By 1969, all of the buildings within the civic square urban renewal area were razed, eliminating York St southeast of Merrick, and creating a superblock that was championed by advocates of urban renewal.

Fig. 6-8: building footprints of Copps Coliseum and Jackson Square (white) superimposed on the 1964 Fire Insurance Plan, Hamilton. Source: Filion and Hammond, 2012.

As fig. 6-8 shows, the destruction of the historic townscape and the resultant coarsening of the urban fabric were widespread, significantly impacting the type of place that was subsequently created.

Within the new superblock, seven parcels were created, a reduction from the dozens of lots that previously existed. This in turn affected the building pattern, with a grouping of monolithic, inward-focused buildings constructed as a result.

The main entrance to Copps Coliseum is located at Bay and York, which was converted into a boulevard in 1976 as a result of the York Boulevard urban renewal project. This project demolished the existing fine-grained building stock along a seven block stretch of York, creating an automobile-oriented streetscape. Outside the main entrance within a one block area are just three buildings: a warehouse, and office building and a variety store.

The townscape created in the urban renewal era was created in order to remove blight from the existing historical townscape, as well as to create an environment that prioritized the movement of automobiles. This environment creates an environment ill-suited for pedestrians, thereby limiting pedestrian activity. The few buildings that are located near the main entrance limits the number of activities that take place in the area and do not encourage pedestrian spillover. As well, the building fabric along Bay St and York Blvd west of Copps Coliseum has building setbacks, which makes buildings inward-focused rather than outward-focused.

In addition, due to its situation attached to Jackson Square (more specifically the Lloyd D. Jackson Square shopping mall, the Hamilton Public Library/Farmers Market and a parking garage), it internalizes any foot traffic – limiting the amount of ancillary development generated.

Fig. 6-9: Copps Coliseum and surrounding streetscape along York Blvd (a) and Bay St, looking south (b). Sources: author.

Moreover, due to the number of large lots within its immediate vicinity means it resists minor changes to the townscape, thereby constraining the location (and distribution) of new changes. This is evidence that such disturbances or discontinuities in older, more slowly changing layers can have a very powerful legacy effect on subsequent development.

In recent years, the streetscape has been altered in order to make the environment more pedestrian-friendly. The streetscaping project along York Blvd (completed in 2010) has resulted in wider sidewalks, the re-introduction of two-way traffic flow, on-street parking and improved street lighting, among its several objectives. In addition, recent renovations to the Hamilton Public Library/Farmers Market have resulted in a new entrance off York as well as a more transparent façade at ground level. However, the building pattern and building fabric inhibits pedestrian activity.

The impetus behind Copps Coliseum, like other mega-projects, was motivated by a different urban planning philosophy of re-knitting (rather than clearing) the urban fabric. However, the other buildings that make-up Jackson Square (i.e. Hamilton City Centre, Hamilton Public Library/Farmers Market, etc.) also all have similarly large building footprints, lacking the human-scale found in the traditional townscape environment. As a result, the outcome of these redevelopment projects was no different than their modernist predecessors, since the end result was the coarsening of the urban grain.

Since it forms the anchor of a shopping complex, Copps Coliseum inhibits any ancillary development since all foot traffic around the facility is internalized inside Jackson Square, thereby killing vitality on surrounding streets – also called the *fortress effect* (Slote, 2010). This proves the need for, and value of, a fine-grained, resilient townscape.

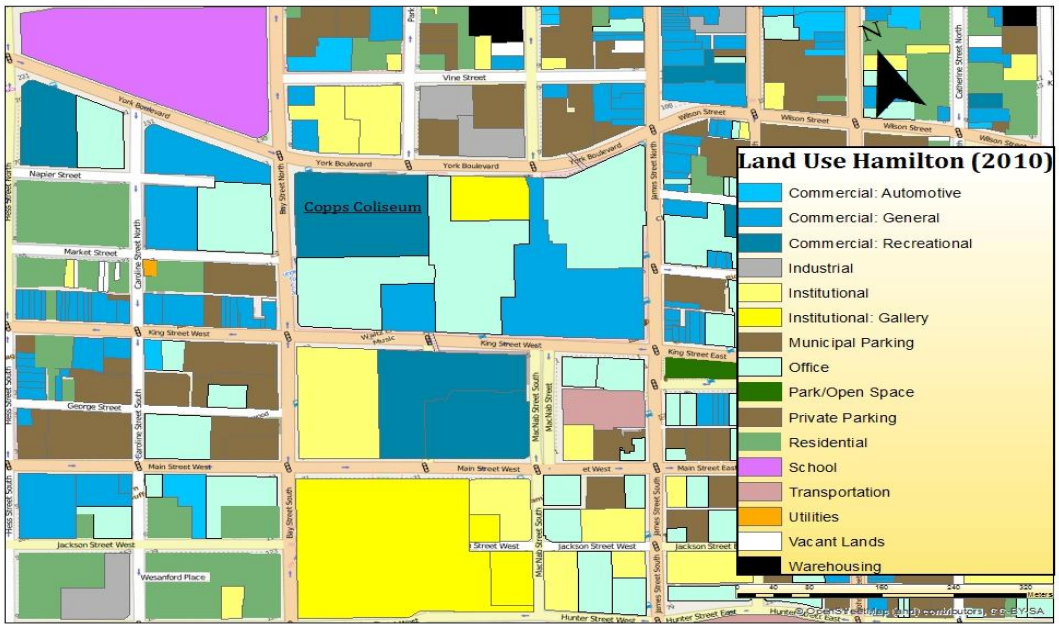
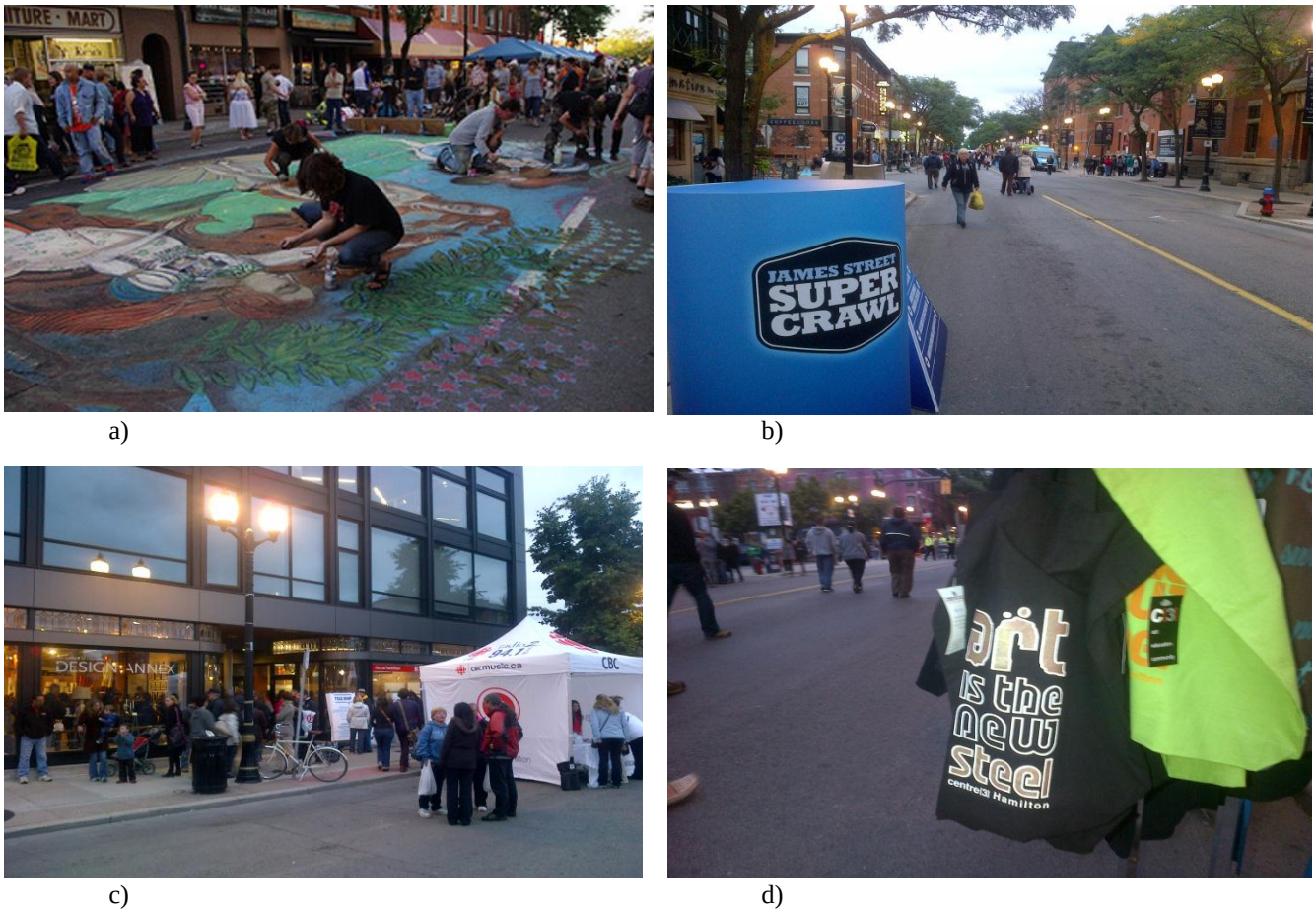


Fig. 6-10: Lot fabric and land use surrounding Copps Coliseum, scale 1:4,600. Note the larger parcel sizes and land uses surrounding Copps Coliseum, which creates a sterile environment on non-event days.

Another reason for the failure of Copps Coliseum as a catalytic project is its poor location, being beside a shopping mall, a high school and a warehouse. A better location would have been at the northwest corner of James and King (currently the site of the Bank of Montreal Pavilion). If the arena was located at this spot, it would draw patrons to Gore Park, as well as assisted in the preservation of the historic building stock along King St flanking the Gore. Potentially, this could have transformed James Street into an entertainment district, forming the southern anchor to the burgeoning James St North arts district.



a) b)

c) d)

Fig. 6-11: James St North Arts District: a) artists taking over the street; b) closing of James St N for Supercrawl; c) art gallery along James St N during Supercrawl; d) the new unofficial motto of the arts-driven economy "Art is the New Steel". Sources: McGreal, 2013; author

6.4 – Analysis of Findings

This section will answer and justify the research questions originally posed in chapter one.

6.4.1 – Research Question #1:

What does it mean for a development to respect, or fit into its physical surroundings?

When describing a large redevelopment project that is designed to act as a catalyst – thereby bringing people, jobs and investment to the core – the most important attribute of said project is that it must fit within the existing street pattern. Redevelopment that undergoes adaptive change (that is, development that occurs within an existing block and does not directly alter its immediate surroundings) is better positioned to preserve the overall morphological frame, as well as the surrounding lot pattern and building pattern/fabric. On the other hand, augmentative change tends to coarsen the urban fabric and reduce vitality on surrounding streets – thereby restricting ancillary development.

As this research has shown, a catalytic development that respects its physical surroundings is one that acts to preserve the area's traditional form complexes. The resilience of the plan unit influence future development to a certain degree; in most cases, these localized attributes influence the layout of new buildings. Conzen (1981) identified trends in the modern development industry, particularly the notion that larger, more coordinated development companies are better able to infuse capital and/or resources into assembling and purchasing property in order to construct larger structures. Although this thesis has shown that morphogenesis is constrained to a considerable degree by the existing lot pattern, this influence can be overcome; the example of the Talbot Block in London shows this process is difficult, but by no means impossible. The net result of these forces is that neighbouring lots are fused, thereby effacing the building pattern/fabric and land use pattern. A catalytic redevelopment project such as a stadium can help reinforce the morphological frame for decades.

However, a catalytic facility can still respect its physical surroundings by embracing the surrounding streetscape – this effect is most crucial at street level. Budweiser Gardens provides a good example, having its ground floor designed in a manner that is human-scaled, built out to the sidewalk without setbacks, and contains a mixture of uses that are directly accessible off the sidewalk. In addition, these uses are open when no events are held – making Budweiser Gardens a destination throughout the week, all year-round.

Fig. 6-12: Budweiser Gardens streetscape: a) along Talbot St; b) along Dundas St facing west. Sources: author

On the other hand, Copps Coliseum does not actively embrace its surroundings. Although it is built up to the sidewalk, is completely inaccessible when no events are held (in total, between 270 and 290 days annually). In addition, the ground floor lacks the sense of human-scale, having a monotonous facade and tinted windows that discourages pedestrians from lingering, examining and exploring the area.

Fig. 6-13: ground floor of Copps Coliseum along York Blvd. Note the lack of handles on the doors, meant to keep patrons away from the facility during non-event days. Source: author.

6.4.2 – Research Question #2:

How does one define success in evaluating urban sports facilities?

The term success denotes a number of connotations. Success could be defined as the return-on-investment from a sports facility's initial construction value, or the number of event days it hosts. Rosentraub (2009) argues that stadium success is derived from its situation within a redevelopment trinity that includes sports, entertainment and culture – however, none of these descriptors were used to define success for this research. For this research, success is defined as the number of ancillary development projects it has generated, its role in the preservation of traditional building stock, as well as the perception that the facility has improved the downtown

in terms of quality-of-life. In all three categories, Budweiser Gardens has been more successful than Copps Coliseum.

By serving as one of the anchors of the downtown, Budweiser Gardens has been able to attract new development and has enabled the re-use of existing building stock (thereby assisting in their preservation); this is evidenced by the increase in the number of adaptive re-use projects in the area, especially along King St and Talbot St. In Hamilton, the only ancillary development that is has helped generate is the Hamilton City Centre component of Jackson Square (which was revealed in chapter five to be one of the city's most notable failed attempts at urban revitalization), as well as a supermarket. However, this has less to do with Copps Coliseum and can be explained by the increased residential population in downtown Hamilton.

The results from the questionnaire reveal that Budweiser Gardens has also contributed to a higher overall perception of the downtown compared to Copps Coliseum. In London, 92% of respondents thought Budweiser Gardens was a net benefit for the downtown, with 59% believing this facility was the single biggest factor behind revitalization. Although respondents in Hamilton saw Copps Coliseum as a slightly higher net benefit for the downtown (94%), 46% disagreed with the assertion that it was the single-biggest factor behind revitalization efforts, with an additional 34% that were unsure. Hamiltonian respondents also skewed slightly higher than London residents when asked whether their respective downtowns will improve (in terms of quality-of-life) in the near future (58% versus 53%, respectively).

One of the reasons why Budweiser Gardens has been more successful is that it was part of a larger, comprehensive development plan, while Copps Coliseum was not. Copps Coliseum is situated in an area which does not have the same historical legacy compared to Budweiser Gardens, nor was it influenced by the participation of groups focused on broader, tangible objectives on downtown revitalization (one example is the business improvement area organization Downtown London). Instead, it was built by a coalition of public and private interests whose goals were more short-sighted than the interests behind Budweiser Gardens – culminating in an if-you-build-it-they-will-come type mentality on the part of civic officials (which has a dubious track record of successful revitalization efforts). In other words, such projects should be but one component of a long-term strategic plan for the downtown, not as a panacea to attract investment.

6.4.3 – Research Question #3:

Do successful urban sports facilities respect the morphology of their context, and how does this factor relate to civic image?

From the previous analysis, it is evident a relationship exists between the successful outcome of a catalytic redevelopment project and its surrounding morphology. Budweiser Gardens is human-scaled, accessible during non-event days, and even incorporates a lost townscape into the contemporary development. On the other hand, Copps Coliseum is a wholly modern development sited on what was formerly a vacant lot created in 1968 due to the Civic Square urban renewal project. In terms of context, Budweiser Gardens is sited in an area of the central core that still retains (to a great extent) its traditional form complexes.

As previously stated, the fine-grained historical townscape has been preserved to a greater degree in London. Although Budweiser Gardens is smaller in capacity than Copps Coliseum, more buildings front the streets surrounding the facility. At the micro-scale level of analysis it was determined that revitalization has occurred to a greater extent in front of the main entrance, near King and Talbot St. More buildings and a smaller frontage means a higher diversity of uses can inhabit the space, bringing people to the core for different purposes and different times of the day. Moudon (1986) notes that the pace of morphogenesis varies according to scale. "Generally, the smaller the scale of the physical environment, the more continuous and imperceptible the change. And the larger the scale, the slower – and more radical – the pace of change" (p.133).

Conzen (1966) has stated that the urban form is a palimpsest, in the sense that previous societies can be glimpsed from the historic townscape - in other words, the entire built fabric should be seen as the genius loci. If viewed through this theoretical lens, then Budweiser Gardens best embodies the genius loci compared to Copps Coliseum. Budweiser Gardens and its recreation of a lost townscape into the contemporary development provide a "glimpse" into the past, however superficial it might be. In other words, the built influence from Budweiser Gardens comes *from within*, while Copps Coliseum comes *from without* – in other words, it contains neither references to past townscapes nor any local place reference at all. This is what Conzen (1981) refers to as the regenerative and educational influences that the traditional townscape provides.

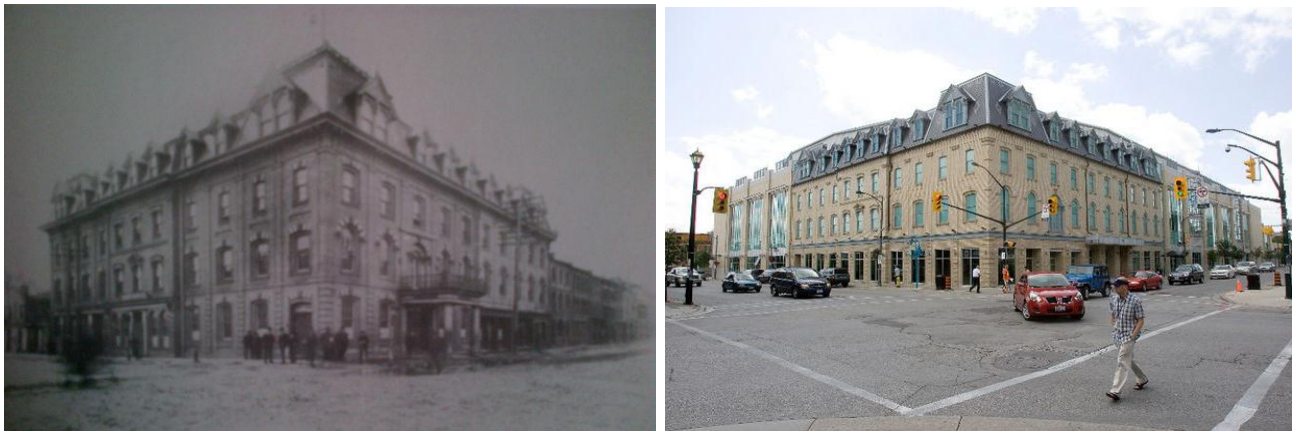


Fig. 6-14: Dundas and Talbot, London, looking southwest: a) former Talbot Inn, 1895; b) Budweiser Gardens, 2011. Sources: Tausky, 1993; London Free Press, 2011.

Due to the nature of the methodology, this research has not been able to comprehensively measure whether such contemporary development, together with the surrounding townscape, is the *objectivation of the spirit* of society. Most notably, the non-random distribution of the questionnaire cannot be considered an accurate representation of the local population; however, general conclusions can be gleaned from the results. For example, respondents from both Hamilton and London believe their respective downtown arena is a pleasurable place to be when no events are held (51% and 60% respectively). Future research should focus on using clearer definitions as well as pictures/diagrams in such surveys. More specifically, phenomenology should be the primary focus (i.e. understanding people's perceptions and/or ties to place).

To summarize, there is a positive correlation between contemporary development that respects its traditional historic morphology and the degree of contributions to civic image, place identity and success. Although the focus has been on downtown sports arenas, any development that respects or fits into its physical surroundings is one in which it at the very least embrace its surrounding streetscape and built fabric (Budweiser Gardens goes further, in attempting to re-create a lost townscape). As was shown in the questionnaire, a development need only attempt, even superficially, at creating a place that is human-scaled, accessible and memorable. However, more cases need to be examined in order to corroborate the findings in this thesis.

6.4.4 – Research Question #4:

How can we define and measure civic image, especially in conjunction with sports facilities?

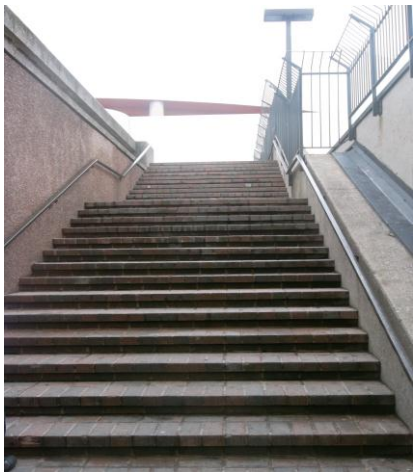
Sports facilities are an indelible component of the urban fabric – this has been arguably been the case since the mid-19th century, but is even more true today. Cities take what is unique

and identifiable about them in an effort to promote an image to sell to outsiders, with the downtown being in the most advantageous position. Such efforts have been enshrined in official civic documents, with both London and Hamilton acknowledging in their official plans that their respective downtowns are a unique environment and should be maintained in a way to preserve that sense of uniqueness. Sports can be one way to contribute to that sense of unique identity, in order to create an image to sell to outsiders.

Sports facilities are places where civic identity and personal memories are constructed; both categories individually private and communally shared simultaneously. By shaping the space in which these memories are created, it can shape the positive perception outside of the facility and into the broader downtown context as well. Oftentimes a sports franchise will select a particular vision (i.e. a former team dynasty) and imbue this theme into the public realm in order to create a collective memory that focuses on past glory.

In London, Jubilee Square is prominently sited in front of the main entrance of Budweiser Gardens. Facing Jubilee Square are banners and markers identifying and celebrating the victories held by the London Knights. In comparison, Copps Coliseum's sole public space is the rooftop garden built over Jackson Square, which is inaccessible for a significant portion of the population. No banners, monuments or any sort of marker identifying the Hamilton Bulldogs exist in this space.

a)



b)

Fig. 6-15: greater attempts at re-shaping space to celebrate its sporting champions have occurred in London (a), officially and unofficially, as evidenced by the re-naming of Covent Market Place to London Knights Way, in addition to this London Knights mural in an alley along Talbot St. Meanwhile, no such markers exist at all at Copps Coliseum (b), with Jackson Square's rooftop garden only accessible by staircases off the street. Sources: author

This thesis has revealed that the *iconicness* of a sports facility may have less to do with civic image as previously hypothesized. According to the questionnaire, Copps Coliseum is more recognizable to outsiders than Budweiser Gardens, but the comparisons between the two facilities in terms of an iconic landmark are unsubstantial (60% versus 54% respectively). This could be due to a number of factors, such as its size, location along a major thoroughfare, or because it has been in existence longer.

Of particular note are the higher levels of people who disagree with the statement that the arena is an iconic landmark (35% versus 10% for Hamilton and London, respectively). This

means that it might be too early to judge whether Budweiser Gardens is an iconic landmark of London, as compared to the Forks or Covent Garden Market, both of which are indelible landmarks of London. The results might also be due to the fact that the majority of respondents were not residents of Hamilton, and may lack the personal experience with the facility.

Ultimately, what is revealed is that by having a publicly accessible space at a sports arena can facilitate the creation and maintenance of a local culture, where shared experiences and a collective memory can be constructed. As Crang (1998) says, "places provide an anchor of shared experiences between people and continuity over time" (p.103). Although it is limited to sports, it nonetheless contributes to an overall civic image for their respective city.

6.5 – Conclusions

This research has attempted to provide a functional and theoretical template that links urban morphology to urban revitalization outcomes. To this end, a methodology was created in order to answer four research questions concerning sports stadia, urban morphology and civic image. The methods involved conducting a morphological analysis and distributing a questionnaire. The results show that in its application to two multi-purpose sports arenas, an urban morphological analysis can in fact be used to explain the developmental outcome of both projects.

A study of urban morphology leads to the insight that it is the long-term growth of the physical form that should be the main concern of a development plan. As evidenced by the townscape of downtown London, the preservation of its traditional form complexes, together with the resilience of its lot pattern, fixes contemporary development to a certain degree. Breaking down the urban form into three categories leads to new insights into how the urban form can be read, and hence, analyzed.

This research has determined there is a relationship between the location of a stadium and its successful outcome. In addition, a related factor is the correlation between lot frontage width and stadia success. Budweiser Gardens is located virtually adjacent to the CBD, in the heart of the downtown. Copps Coliseum on the other hand is located near the edge of the central core, away from the CBD.

Asides from the litany of existing literature on how stadia have more spinoff effects that benefit the downtown and metropolitan as a whole, this research has discovered that the specific

location within the downtown is just as an important question. In London, the facility is located across from the public market, which is the single-largest element that has shaped development in London, and has been continuously held on the same site since 1845. Hamilton, on the other hand is located in an area where little, if any, ancillary development can occur.

This thesis has also presented an awareness of traditional urban development patterns, in the hope that it will be replicated in contemporary development. For the majority of urban history in Ontario, the downtown has consisted of individually-planned mid-rise buildings, mixed-uses, and short blocks with an intricate web of alleyways. The morphological frame of a city influences such physical characteristics, and has been able to accommodate a great variety of functions/activities without demolishing their spatial and functional diversity (with the exceptions of urban renewal); the resulting townscapes created provide places to live, work, socialize, entertain and communicate. Therefore, recommendations for current revitalization objectives can be reached based on understanding historic patterns of urban forms. Although current circumstances have changed, the basic prerequisites for a healthy, vibrant downtown are not transitory.

Chapter Seven – Recommendations and Conclusion

The final chapter of this thesis summarizes the analysis and results from the preceding chapters, followed by the implications of this research. The chapter concludes with recommendations for future areas of study.

7.1 – Research Rationale

This thesis was originally inspired by Buckman and Mack (2012), who, in their examination of sports facilities and urban form, suggested that researchers should determine if there are aspects of the downtown's built form that are directly linked with the successful outcome of a downtown sports facility. Based on a case study examination of two multi-purpose sports arenas in two Canadian cities, the conclusion of this research backs the authors' assertion that "[the] urban form has an impact on the prospects for success of these projects and that strategies to deal with the urban form of a city should be incorporated into comprehensive plans to revitalize downtown areas" (p.1)

In terms of planning, the research revealed that performing an urban morphological analysis uncovered patterns to urban development since the early 19th century, providing clues as to why sports stadia succeeded in London, while failing in Hamilton. The research also reveals a relationship exists between a facility's contribution to civic image/place identity and its ability to generate ancillary development. Although this thesis is limited to two cases, the findings can be generalized to cover broad theoretical issues.

7.2 – Thesis Summary

The purpose of this research was to determine whether an analysis of the urban form can be an effective tool in assessing the outcome of a downtown sports stadium. The Ontario cities of London and Hamilton were selected as case sites, whose built fabric contains a variety of morphological features – from fine-grained traditional townscapes to large, modernistic edifices. Furthermore, issues concerning civic image played a role in evaluating the outcomes of each stadia project, as well as the perceptions that they contribute to overall revitalization.

The first objective was to perform an urban morphological analysis of two urban centres; tracking the evolution of the plan unit (i.e. the street pattern, lot/parcel pattern and building pattern), building fabric and land use patterns from the early 19th century to the present date. The

purpose of the analysis was twofold: (a) whether there were distinct patterns/commonalities in the evolution of these form complexes over the years, and (b) whether these patterns aided or inhibited the successful outcome of a sports stadium designed to act as a catalyst to revitalize the downtown.

After conducting the analysis (which is broken down into two eras), it is revealed that there are indeed patterns in the evolution of these three form complexes, and that these patterns play a role in the outcome of each arena project. As this thesis has shown, the downtowns of London and Hamilton developed in the same manner, from the early 19th century until the 1940s. This decade marked the beginning of an era in which a critical mass of the population owned private automobiles, which this thesis has argued was the single most important factor in the evolution of how cities were viewed, planned and built.

However, the degree of change in both cities is of importance. Copps Coliseum was the end result of what began as a decades-long process of urban renewal, with the city purchasing and razing 44 acres of the downtown in order to construct a number of different mega-projects. Concurrently, the street plan was significantly altered, with streets either converted to one-way traffic, widened, or eliminated altogether. As a result, such changes to the built form have failed in attracting ancillary development or investment. In comparison, downtown London has been able to resist these severe changes to the urban form. This is largely due to the downtown's fragmented, diversely-owned lot pattern, since the scattered ownership of lots made amalgamation and purchasing of private property difficult.

These factors explain why Budweiser Gardens has been more successful than Copps Coliseum. Since the facility is largely surrounded by fine-grained, traditional building fabric, it has enabled the re-use of existing building stock (as well as the preservation of said buildings) as well as generate vibrancy on surrounding streets. As well, its situation beside Covent Garden Market (a trace element in the city's morphology) has been helped centralize new development in downtown London.

Once the urban morphological analysis was conducted, the second objective of this research was to determine whether the facility affected the perceptions of the downtown in terms of quality-of-life; which was measured via a questionnaire. The questionnaire reveals that Budweiser Gardens more successfully contributes to the streetscape, is a pleasurable place to be (especially when no games are held) and contributes to a local place identity for the city (defined

for respondents as a *brand*) – all of which affects the perception of the facility's iconic landmark status.

This thesis confirms the findings of Conzen (1960) and Moudon (1986), particularly the assertion that the street and lot pattern are the most static elements in the urban fabric and are crucial in townscape preservation efforts. Furthermore, Conzen (1960) identifies the crucial role of the plan unit in evaluating urban form evolution, since every building and every use is accommodated on (at least) one element of the plan unit. One cannot read the urban form without understanding the effects of the plan unit on the process of morphogenesis.

From these findings, a new theoretical application to urban morphology into urban planning in Canada has been created. This thesis does not attempt to present a pro-stadium argument, but rather if the stadium is to be built, it should be done in conjunction with an awareness of its surrounding morphology. Further implications from this research, as well as a series of recommendations are listed below.

7.3 – Research Implications

Although the previous research is restricted to two case cities, the results can be generalized to be adopted by all cities. The most important implication of this research is that a morphological analysis can be a very important tool for cities, and should be adopted for use in the development of district plans. An urban morphological analysis can uncover a wealth of information, from understanding the logic inherent in the urban form, to patterns that affect ancillary development – such information is of value to cities considering funding large, catalytic redevelopment projects.

The urban morphological analysis reveals that the long-term growth of the physical form of settlements that should be the primary concern of a development plan. Changes to the physical form occurs unceasingly, since individuals and groups alter objects everyday (i.e. installing a sign, painting a storefront, etc.) Buildings are also relatively easy to change, perhaps by constructing an addition or changing the exterior cladding. Objects and buildings can – and should – be altered in order to suit the needs of the present. However, understanding the role of the morphological frame in morphogenesis and how it "frames" subsequent development is essential in detecting patterns of urban development over the long-term.

This thesis puts forward two sets of recommendations. First, a morphological analysis

should be conducted by planners in conjunction with an urban plan such as a district plan or a secondary plan. As this thesis has shown, identifying patterns in the urban form has been proven of value, and should be seen as such by planners tasked with downtown revitalization. If such patterns are identified at the earliest stages of planning for a sports stadium, then the siting and situation of said facility can be taken into account in order to accrue the maximum benefits for all stakeholders (i.e., the city, sports franchise owners, the public, etc.) as well as provide a greater return-on-investment. This research has emphasized that if a new stadium is to be built, it should be located in an area with a predominately fine-grained building fabric, close to the CBD, and built at a scale that respects its surrounding context.

Once these patterns are identified and enshrined in said plans, contemporary development should be guided in way that it follows, or at least respects, the rhythms and characteristics associated with the traditional townscape. This is a difficult task on the part of civic officials, since broader trends in the modern development industry advocate the fusion of neighbouring lots in order to construct larger buildings. The result of such processes is that the number of uses per block remains constant but the land use intensity per block declines. However, the Downtown London Heritage Conservation District Plan (2012) presents an example of best practices of how the contemporary development process should occur.

The final recommendation concerns the role of the planning practice, in that more focus should be placed on the form of development, not its use. The typical job of a planner is to analyze legislation that defines terms such as mixed-uses and activity zones, as well as analyze abstract and uncoordinated parameters such as jobs per hectare, parking ratios and floor-area ratios. However, if the planner is to affect change over the long-term, it is the buildings and the form they take that should be of scrutiny, since buildings endure for decades, even centuries.

Although planning legislation may be in effect for periods of approximately 10-20 years (and reviewed every five years), the mandates within such legislation may endure for several decades. The problem arises when plans/policies say little about the direction of physical form; with the result being that the decision to shape the physical form of buildings is left to the developer to create their own proposals. This is not to say land use is of no value; oftentimes, planners will have to address concerns concerning use. However, the plans/policies may become obsolete after a decade but remain enshrined in legislation for longer.

One method of ensuring that the physical form is scrutinized by planners is through the

adoption of form-based codes. According to Kaplan et al (2008), a form-based code is a regulatory tool that "focuses on the proposed buildings' design and form, rather than predetermined zoning criteria" (p.5). It is an emerging tool that is beginning to be adopted by cities across North America in order to replace convoluted, obsolete zoning codes. While conventional Euclidean-based zoning is restrictive, form-based codes are prescriptive, in that it states what can be done.

Another characteristic common in form-based codes is its use of pictures/diagrams to define zoning requirements, making it more concise, organized and legible – especially for the public, whom lack knowledge on the subject. As a result, the advantages to form-based zoning are twofold: not only will the resulting development have a higher-quality public realm according to good principles of placemaking and urban design, the development process is more streamlined, predictable, and intelligible to the public.

7.4 – Recommendations for Future Research

Due to the exploratory nature of this thesis, similar analyses to this topic should be conducted in order to corroborate its findings, as well as broaden its scope. Similar analyses should be done to provide a comparative analysis to the conclusions reached in this thesis, as well as isolate localized conditions. One example of a topic that would be of value is a comparison of large to mid-sized cities that have built multi-purpose arenas in their downtowns (i.e. Winnipeg and Oshawa, Montreal and Kingston, etc.), since sections of major cities have, in some places, been decimated in the same manner as mid-sized cities. A related topic is a morphological analysis that compares sports facilities across the Canadian and American border, which might be of interest.

Another topic for future research could be an urban morphological analysis of other catalytic projects built to revitalize the downtown. Examples of such projects include art galleries, performing arts centres, museums or institutional campuses. One theoretical lens future practitioners should consider examining is through a typomorphological approach to urban form.

Additionally, another topic (in effect is an exploratory examination) is to create a framework that accurately measures and quantifies an urban district's level of an *objectivation of the spirit* of society through the townscape. This requires a more thorough examination of phenomenology, which is an under-examined topic in academic literature.

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Appendix 1 – Questionnaires

An Evaluation of Budweiser Gardens and the Perceptions of Downtown London

Section One – Introduction

1. a.) Are you currently a resident of London?
□ Yes* □ No

b.) If yes, have you been a resident of London since before Budweiser Gardens opened (i.e. December, 2002)?
□ Yes □ No

2.) Which best describes you?
□ Home Owner □ Home Renter □ Other

3. What is your:
a.) Sex? □ M □ F
b.) Age? □ <30 □ 30-40 □ 41-50 □ 51-60 □ 61>
c.) Educational Attainment? □ High School/GED □Bachelors □ Masters □other _____
d.) Average annual income? □ <$30,000 □ $30-60,000 □ $61-90,000 □$91,000>

4. Have you attended an event at Budweiser Gardens/John Labatt Centre?
□ Yes □ No *(if no, skip to question #8)

5. How many events have you attended at this facility since December of 2002?
□ 1-5 □ 5-10 □ 10-20 □ 20>

6. How many tickets have you purchased for Budweiser Gardens events over the last 12 months?
□ None □ 1-5 □ 5-10 □ 10>

7. What type of event(s) did you attend? (check any that are applicable)
□ sports □ concert □ theater □ other _____

Section Two – Budweiser Gardens and Civic Image

For questions 8 to 17, please check one box to indicate your response:
Strongly Agree = SA Agree = A Unsure = U Disagree = D Strongly Disagree = SD

In your opinion:	**SA**	**A**	**U**	**D**	**SD**
8. Budweiser Gardens and the arena square is a pleasurable place to be when events are held at the arena	□	□	□	□	□
9. Budweiser Gardens and the arena square is a pleasurable place to be when no events are held at the arena	□	□	□	□	□

10. Budweiser Gardens is a place you would show friends or family on a tour of London	□	□	□	□	□
11. Budweiser Gardens is an iconic landmark of London	□	□	□	□	□
12. Most of your circle of family and friends would recognize Budweiser Gardens if they were shown a photo of it	□	□	□	□	□
13. Budweiser Gardens successfully contributes to the streetscape	□	□	□	□	□
14. The facility and the arena square is an exercise in Corporate city-building	□	□	□	□	□
15. The facility and arena square successfully contributes To local culture as well as a "brand" for London	□	□	□	□	□
16. Budweiser Gardens was built for the residents of London and not built solely to attract tourists	□	□	□	□	□
17. Budweiser Gardens has been the largest contributor to urban revitalization in downtown London	□	□	□	□	□

Section Four: Conclusion

18: In your opinion, has Budweiser Gardens been a net benefit for downtown London?

□ Yes □ No*

*if no, explain why _____

19. What is your favourite place in Downtown London?

□ Budweiser Gardens □ Covent Garden Market □ The Forks of the Thames

□ Middlesex Courthouse □ Dundas St Strip □ Other _____

20. Over the next 5-10 years, how do you expect downtown London to change in terms of quality of life?

□ Improve □ Stay Same □ Decline

21. Would you like to receive a copy of the results of this questionnaire?

□ Yes □ No

*If yes, please write down your address below:

_____

_____

An Evaluation of Copps Coliseum and the Perceptions of Downtown Hamilton

Section One – Introduction

1. a.) Are you currently a resident of Hamilton?

□ Yes* □ No

b.) If yes, have you been a resident of Hamilton since before Copps Coliseum opened (i.e. May, 1985)?

□ Yes □ No

2.) Which best describes you?

□ Home Owner □ Home Renter □ Other

3. What is your:

a.) Sex? □ M □ F

b.) Age? □ <30 □ 30-40 □ 41-50 □ 51-60 □ 61>

c.) Educational Attainment? □ High School/GED □Bachelors □ Masters □other _____

d.) Average annual income? □ <$30,000 □ $30-60,000 □ $61-90,000 □$91,000>

4. Have you attended an event at Copps Coliseum?

□ Yes □ No *(if no, skip to question #8)

5. How many events have you attended at this facility since May of 1985?

□ 1-5 □ 5-10 □ 10-20 □ 20>

6. How many tickets have you purchased for Copps Coliseum events over the last 12 months?

□ None □ 1-5 □ 5-10 □ 10>

7. What type of event(s) did you attend? (check any that are applicable)

□ sports □ concert □ theater □ other _____

Section Two – Copps Coliseum and Civic Image

For questions 8 to 17, please check one box to indicate your response:

Strongly Agree = SA Agree = A Unsure = U Disagree = D Strongly Disagree = SD

In your opinion:	**SA**	**A**	**U**	**D**	**SD**
8. Copps Coliseum and the arena square is a pleasurable place to be when events are held at the arena	□	□	□	□	□
9. Copps Coliseum and the arena square is a pleasurable place to be when no events are held at the arena	□	□	□	□	□
10. Copps Coliseum is a place you would show friends or family on a tour of Hamilton	□	□	□	□	□

11. Copps Coliseum is an iconic landmark of Hamilton	□	□	□	□	□
12. Most of your circle of family and friends would Recognize Copps Coliseum if they were shown a photo of it	□	□	□	□	□
13. Copps Coliseum successfully contributes to the streetscape	□	□	□	□	□
14. The facility and the arena square is an exercise in Corporate city-building	□	□	□	□	□
15. The facility and surrounding public space successfully contributes to local culture as well as a "brand" for Hamilton	□	□	□	□	□
16. Copps Coliseum was built for Hamilton residents and Not built solely to attract tourists	□	□	□	□	□
17. Copps Coliseum has been the largest contributor to Urban revitalization in downtown Hamilton	□	□	□	□	□

Section Four: Conclusion

18: In your opinion, has Copps Coliseum been a net benefit for downtown Hamilton?

□ Yes □ No

*if no, explain why _____

19. What is your one favourite place in downtown Hamilton?

□ Copps Coliseum □ Gore Park □ Hamilton Farmers Market

□ Jackson Square □ James St North Strip □ Other

20. Over the next 5-10 years, how do you expect downtown Hamilton to change in terms of quality of life?

□ Improve □ Stay Same □ Decline

21. Would you like to receive a copy of the results of this questionnaire?

□ Yes □ No *If yes, please write down your address below:

_____

Appendix 2 – Consent Letter

University of Waterloo

School of Planning

University of Waterloo
200 University Avenue West
Waterloo, Ontario, Canada
N2L 3G1

Dear respondent,

My name is Gavin Williamson. I am a second year master's student at the School of Planning at the University of Waterloo. Under the supervision of Dr. Robert Shipley, I am researching the role urban morphology (i.e. the change in urban form over time) plays in the outcome of downtown sports facilities and whether the facility contributes to civic image. As a professional who has had a direct or indirect role in designing/planning/managing this facility, your opinions may be important in answering research questions. I am hereby inviting you to participate in completing this questionnaire.

Your involvement in this questionnaire is entirely voluntary and there are no foreseeable risks for participating. Completion of this questionnaire should take no longer than 15 minutes of your time. You may also decline questions if you wish. All information that is provided will be entirely confidential and will be grouped with responses with other participants. You need not provide personal identifying information on the questionnaire. Attached is a return envelope to return the completed form, and should be returned by July 31, 2013 at the very latest.

The responses will only be used for the purpose of this research, and will only be reviewed by myself and Dr. Shipley. The completed forms will be stored in a lockbox at the researcher's residence, then will be destroyed one year after the date of completion. If you are interested in receiving more information regarding the results of this study, the thesis will be available online at the University of Waterloo immediately after the thesis is defended (anticipated by September 31, 2013).

If you have any questions/comments regarding the questionnaire or research please contact Gavin Williamson at g8willia@uwaterloo.ca. You may also contact Dr. Robert Shipley at rshipley@uwaterloo.ca. Please be assured that this study has received ethics clearance through a University of Waterloo Research Ethics Committee; however, the final decision about participation is yours. Should you have any comments or concerns resulting from your participation in this study, please contact Dr. Maureen Nummelin, the Director, Office of Research Ethics, at 1-519-888-4567, Ext. 36005 or maureen.nummelin@uwaterloo.ca.
Thank you in advance for your participation.

Sincerely,

Gavin Williamson
University of Waterloo

Appendix 3 – Feedback Letter

University of Waterloo

School of Planning

University of Waterloo
200 University Avenue West
Waterloo, Ontario, Canada
N2L 3G1

Dear Participant,

Thank you for your participation in my thesis research. To reiterate, the purpose of the research was to determine whether the surrounding urban morphology (also known as urban form) around a sports facility contributes to the facility's successful outcome, and whether said facility inhibits or contributes to civic image. The data collected through the questionnaire will help planners, developers and stakeholders determine the best possible siting for a new sports facility, so the maximum benefits can be accrued by it.

Please remember that any data pertaining to you as an individual participant will be kept confidential. Once all the data is collected, I plan on sharing this information with the research community through seminars, conferences, presentations, and journal articles. If you are interested in receiving more information regarding the results of this study, or would like a summary of the results, please provide your email address, and when the study is completed (anticipated by August 31, 2013), I will send you the information. In the meantime, if you have any questions about the study, please do not hesitate to contact me by email or telephone as noted below.

As with all University of Waterloo projects involving human participants, this project was reviewed by, and received ethics clearance through, the Office of Research Ethics at the University of Waterloo. Should you have any comments or concerns resulting from your participation in this study, please contact Dr. Maureen Nummelin, the Director, Office of Research Ethics, at 1-519-888-4567, ext. 36005 or maureen.nummelin@uwaterloo.ca.

Sincerely,

Gavin Williamson

School of Planning, University of Waterloo

g8willia@uwaterloo.ca