# Automatic consequences: A qualitative analysis of suburbanization in Edmonton, Alberta

by

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**ABSTRACT**

**Background:** The City of Edmonton estimates that its population will double in the next few decades. However, more than 90% of Edmonton residents currently live in suburban spaces that do not support active transportation behaviours, which the federal Public Health Agency identifies as an important contributor to population levels of chronic disease in Canada. Will Edmonton continue to house its new residents in such spaces?

**Methods:** Qualitative analysis of interview data from conversations with urban planners, all employed at the City of Edmonton.

**Results:** The participants characterized Edmonton's history as one of constant suburban expansion. Some expressed hope that Edmonton's future may be a denser, more compact built form while others thought that such an outcome is unlikely. They identified Edmonton's property market as the main determinant of the city's built form, highlighting consumer demand and developers' investment decisions as important processes. Participants indicated that they understood suburbs' negative outcomes with respect to chronic disease, climate change, suburbs' heightened burden on the municipal tax base, and reduced public transit quality. However, they expressed reservations about the effectiveness of city policies to curb suburban growth, citing consumer demand, the 'inertia' that suburban development has in Edmonton, and the involvement of development companies in the workings of local politics.

**Conclusions:** Edmontonians' cultural preference for suburban housing appears to be a strong driver of suburbanization. The state's investment in homeownership and automobile infrastructure contributes to the process. I argue that Edmonton's ongoing suburban expansion is an unavoidable consequence of the city's profit-driven framework of housing provision.

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## GLOSSARY

**annexation** a change in the political boundaries of a town or city to include more territory.

**active transportation** moving from place to place by walking, on a bike, e-bike or other human-powered transportation, or using public transit.

**built environment** all the elements of a landscape that humans create, including buildings and streets.

**built form** interchangeable with 'built environment.'

**capital** money invested for the purposes of generating profit.

**developer** a private company that buys property and uses it to build and sell housing.

**exchange-value** the price at which the owner of an asset can sell it on the market.

**greenfield development** creating structures on land that was previously undeveloped, like forests, other natural areas, or farmland.

**points of interest (POI)** 'destinations' in the urban environment; useful or interesting locations like restaurants, shops, government and health institutions, schools, and parks.

**population density** the number of people who live in a geographic area, measured in people per square kilometer.

**street connectivity** a measure of the possible paths between point A and point B in a street network. Street connectivity is measured by 'intersection density,' the number of intersections per square kilometre.

**suburb** an urban space that has a low population density, a low POI density, and low street connectivity (see Chapter 2).

**suburbanization** the process that creates suburbs.

**urban sprawl** a pejorative term that describes suburbs, connoting unpleasant, sterile, unhealthy spaces.

**use-value** the capacity for an object, structure, or other asset to satisfy a human want or need; its ability to serve a useful purpose. For example, the use-value of a house or apartment is mainly that it meets the human need for shelter.

**utilitarian physical exercise** physical exercise undertaken for the specific purpose of meeting one's needs and wants, like walking to work (commuting), biking to the grocery store, or taking

public transit to an appointment. As opposed to physical exercise undertaken strictly for health purposes or for leisure.

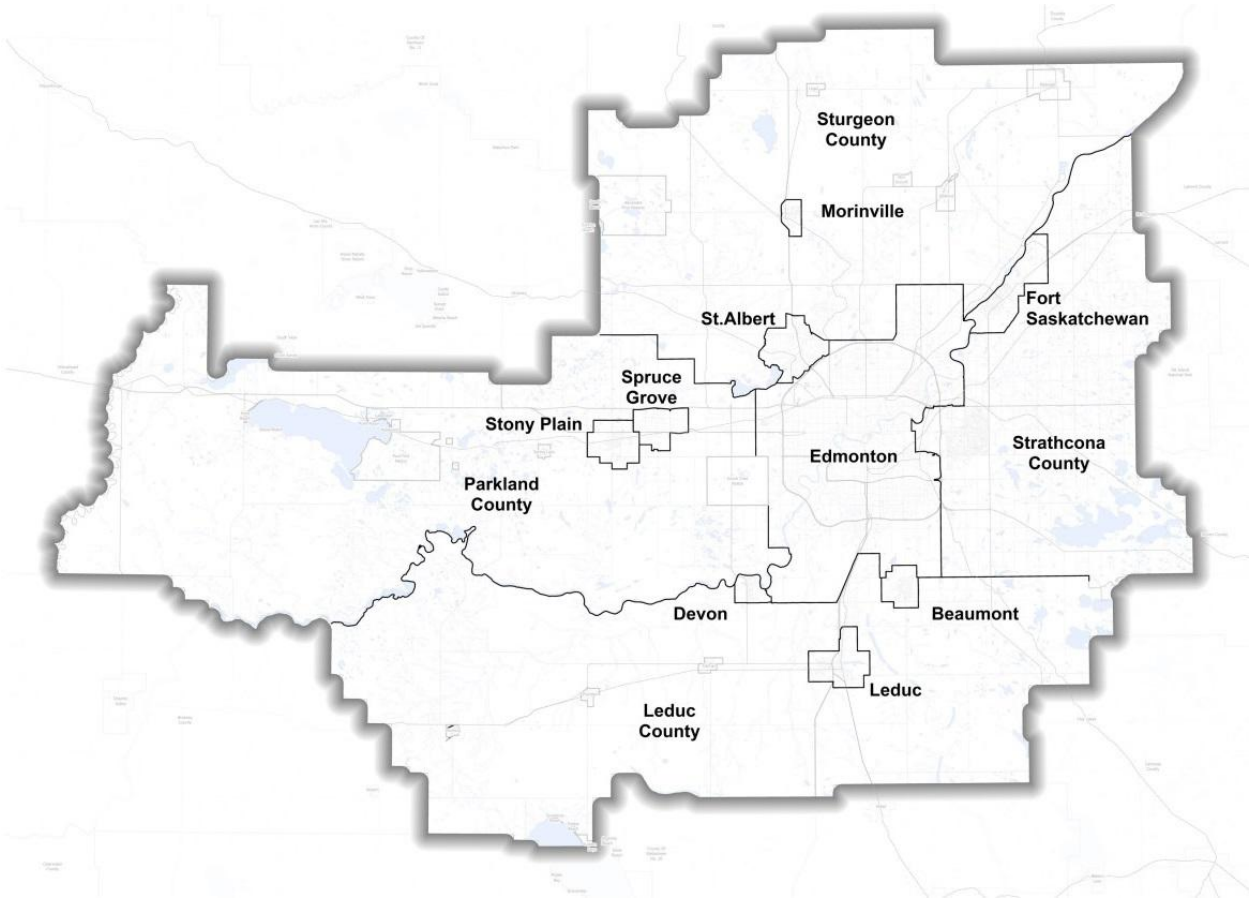
**Figure 1.1** Greenfield suburban development south of Edmonton, August 2020. Photograph by author.

# CHAPTER 1: INTRODUCTION

## 1.1 Situating this study

In 2017, the federal Chief Public Health Officer Dr. Theresa Tam identified the built environment as a key site of intervention to improve public health in Canada (PHAC, 2017: iii). Only one in five Canadians meet Health Canada's minimum guidelines for minutes spent exercising per week, and the well-established link between the built environment and utilitarian physical exercise has the potential to serve as a powerful tool in the hands of decisionmakers (PHAC, 2017: 14). However, the majority of Canadians live in suburban areas which do not display the neighbourhood characteristics that support utilitarian physical activity: high population density, well-connected street networks, and high density of shops, parks, and other points of interest (Gordon et al., 2013: 214; Herrmann et al., 2019; Cervero et al., 1997). Given that, decades ago, researchers demonstrated the link between these built environment characteristics and public health, the persistence of suburbs as the dominant form of neighbourhood design in 2021—the discrepancy between what policymakers know is healthy for Canadians and what builders actually do—suggests a disconnect between decisionmakers' intentions and results on the ground.

Focused on Edmonton as a case study, I will explore the processes driving suburban growth. In particular, I will concentrate on urban planners' understandings of the connection between the built environment and public health, and the strength of the link between their actions and the final built environment result. The geographic scope of this study is the Edmonton Census Metropolitan Area (CMA), in particular the recent and ongoing rapid suburban development south-west of the city, beyond the Anthony Henday ring road.




**Map 1.1** Edmonton and surrounding area. Source: Edmonton Metropolitan Region Board.

### 1.2 Research aim and questions

This research aims to investigate the economic and social processes driving the ongoing suburban growth beyond the Anthony Henday ring road in south-west Edmonton, how this suburban growth may affect public health, and local city planners' perceptions and proposed policy responses to this development. To that end, I will address the following research questions:

(1) How do urban planners characterize Edmonton's built form throughout the history of the city, into the present, and what trajectory do they anticipate it will follow in the future?

(2) What processes do urban planners identify as important determinants of Edmonton's built form?

(3) To what extent do urban planners take responsibility for promoting public health through planning in Edmonton? Why does Edmonton continue to produce residential spaces that do not serve to improve public health?

### 1.3 Thesis layout

In Chapter 1, I have introduced the problem motivating this study, given relevant contextual information, and stated the research aim and questions I will address. In Chapter 2, I review literature relating to suburbanization in Canada and its relevance at the intersection between public health and planning. In Chapter 3, I outline the methodology I used to address my research questions, and in Chapter 4, I discuss contextual information about Edmonton's built environment and suburbs. I present the results of the study in Chapter 5, and in Chapter 6, I discuss what they mean. In Chapter 7, I address limitations of my research design, and conclude the study.

## CHAPTER 2: LITERATURE REVIEW

### 2.1 Introduction

In this chapter I discuss literature relating to suburbanization in Canada and its relevance at the intersection between public health and planning. First, I review analyses of suburbanization to identify a definition of 'suburb' that suits my study. I then summarize the history of suburbanization in Canada and discuss the phenomenon through the lens of governance (Ekers et al., 2012). I illustrate the theoretical link between Canada's ongoing suburbanization and a market-based model of housing provision. I then discuss the connection between urban planning and the built environment, and conclude by reviewing studies that show the link between lower population rates of chronic disease and neighbourhoods that are characterized by high population density, mixed land use, and well-connected street networks.

### 2.2 Canadian suburbanization

The built environment exists as the result of human labour, and so the form of the city is the outcome of a set of social choices regarding the application of labour to the landscape, mediated through processes of negotiation and contestation. Urban morphology, then, carries political and social meanings (Charmes et al., 2015: 591; Harris, 2004: 18). My goal is to explore the meanings of Edmonton's suburban built environment and to better understand the factors influencing the particular shape it takes. But first, it is necessary to lay out exactly what a 'suburb' is.

#### 2.2.1 Defining suburbs

Scholars' concern for suburbanization has increased greatly since the 1990s (Harris, 2010: 16). Not only has the production of literature accelerated, but understandings of what counts as a suburb, where suburbs exist, and what kind of people live in suburbs—in short, what suburbs *are*—have broadened to include a wide variety of places in all parts of the world. At first, research usually centered the stereotypical American (Levittown-style) suburb as the paradigm case. In other words, early research assumed that a dormitory fabric of single-family

residences, placed in a cul-de-sac street layout, is the true 'suburb' against which to compare other places (Ekers et al., 2012: 409; Harris, 2010: 17).

However—responding in part to Jennifer Robinson's 2002 call to de-privilege Western urbanism in favour of theoretical treatments that account for the 'ordinary cities' found everywhere in the world—scholars now apply the term 'suburb' equally to insular factory communities in China, squatter settlements and *favelas* in South America, and peripheral public apartment-block housing in Western Europe and former Soviet Bloc countries (Robinson, 2002; Ekers et al., 2012: 413; Harris, 2010). Considering "the experience of the South forces us to rethink our assumptions about the nature and meaning of the suburbs" to the extent that the resulting framings "challenge distinctions between Western suburbs and the squatter settlements of public housing estates of a poorer world" (Harris, 2010: 20, 23). Any attempt to better understand suburbanization must clearly tread a careful line between the particular and the general, and at the very least be explicit about the *kind* of suburb under consideration.

The point of departure for my present study is the claim that Edmonton's built form is primarily suburban, and that the majority of its annual population growth is accommodated through the further development of new suburban neighbourhoods at the periphery. To show that such a claim is true, I will discuss previous studies of suburbanization in order to arrive at a definition appropriate for this research (Harris, 2004: 19).

In an important history of Canadian suburbs, Richard Harris proposes six initial criteria to define them: low population density, peripheral location, high rates of homeownership, political distinctiveness, predominance of middle- and upper-class residents, and primarily residential land-use requiring that residents commute to work (McCann, 2006: 33; Harris, 2004). Immediately, though, Harris notes that very few places that Canadians commonly consider suburban would meet all six of these criteria, illustrating the tricky nature of defining these spaces.

Earlier histories of suburbanization similarly fail to pass such a 'common sense' test. Tracing suburbs to their roots in the estates of aristocrats in 19th century Britain gives a definition that excludes most Canadian suburbs since they aren't, in general, occupied by industrial capitalists but rather a diverse set of upper- but also middle-class workers (Fishman,

1987). Analysis of American suburbanization defines suburbs as middle-class spaces somewhat tautologically, suggesting that the residents' status as homeowners is largely what puts them in the middle class in the first place (Jackson, 1985). Such an argument holds less in Canada, where one's class is still more determined by their occupation than by property ownership (Harris, 2004).

Sociological perspectives on suburbanization emphasize demographic change and position 'suburb' not as a geographic area but as a category through which a neighbourhood passes, as part of the process of urban expansion. Upon the development of a new, peripheral, low-density neighbourhood, characterized by single-family detached houses and high rates of owner-occupancy, residents tend to engage in an initial burst of socialization through which to build up social networks and community institutions (Clark, 1966; Harris, 2004: 40). In such neighbourhoods, the nuclear family is dominant, and so social activity and institutions mainly serve to support the family and child-rearing: volunteering with the school, putting on family events, and running children's sports teams. But the demographic homogeneity means that the social fabric changes as the neighbourhood children grow up and move away: the demographics start to resemble the city average, property values increase, and developers start to build multi-unit residences (Harris, 2004: 40). "Suburban" is not then an irrevocable label that a place is or is not, but rather a category that applies to a neighbourhood at a point in time, that it grows through and out of: a stage in a process.

The sociological emphasis provides important insights into the nature of Canadian suburbanization, but suggesting that a place stops being a suburb once its initial cohort of families matures overlooks the staying power of the built environment. Developers do build condominiums and denser infill homes in older suburbs, but the legacy of the initial plan survives well beyond the first residents through zoning that restrains land-use mix and densification, and through the actual street layout, which is often winding cul-de-sacs as opposed to a typical 'urban' grid.

As I will discuss in Section 2.3, low population density, prevalence of residential land-use patterns, and low street connectivity have negative impacts on public health. Recognizing both their relevance for public health and their significant inertia in the built environment (Charmes et

al., 2015: 593), I take these three characteristics to be the meaningful defining features of 'suburbs' in my study: an area is suburban if it has low street connectivity, low population density, and low density of points of interest, such as workplaces and shops.

Defining suburbs this way centers the built environment and aligns with quantitative analyses that rank neighbourhoods based on their capacity to support active transportation behaviour among residents. The Can-ALE framework (see Chapter 4) demonstrates that a clear majority of Edmonton is suburban by this definition, both in terms of land area and in terms of population.

### 2.2.2 History of suburbanization

Today, Canada is a primarily suburban nation (Gordon et al., 2013: 214). Tracing the development of Canadian suburbs back to the late 19th century, two main factors encouraged cities to grow via low-density outward expansion: the decentralization of industry and advances in transportation technology (Harris, 2004: 56; Ekers et al., 2012: 414). Canadian cities were unpleasant and unhealthy places, with higher rates of child mortality, water-borne disease, residential crowding, and air pollution than rural areas (Harris, 2004: 53). Living in the country or at least nearer to it, then, became desirable from the perspectives of residents, health reformers, and legislators. In Canada, workplace decentralization—with this goal in mind—took the form of industrial and commercial development around ports, stations, and freight yards, reflecting Canada's history as a colonial outpost of resource extraction (Harris, 2004: 57).

Through the 19th century, most workers commuted by walking and so were constrained to live very close to their place of employment (Harris, 2004: 9). The introduction of the streetcar, a fast and affordable mode of transportation, allowed workers to live much farther away from their workplace and so enabled the growth of suburbs. In Edmonton, the first streetcar ran in 1908 (Edmonton Radial Railway Society, 2020).

"Encouraged by the actions of suburban governments and land developers"—subsidies and speculative real estate investments—Canadian cities expanded with the construction of so-called "streetcar suburbs" during the early 1900s (Harris, 2004: 58; Ekers et al., 2012: 414). In western Canada, since the owners of private streetcar companies were often invested in

peripheral parcels of land, they commonly built streetcar lines outwards into undeveloped areas as a "promotional instrument," pushing up real estate prices and encouraging development of new suburban neighbourhoods (Harris, 2004: 9, 64). Because it was uncommon at the time for consumers to borrow much to buy a home, Harris maintains that, before WWII, the main driver of Canadian suburbanization was individual workers seeking cheap plots of land to build on, as opposed to corporate developers or state policy (Harris, 2004: 10; Ekers et al., 2012: 411).

The actions of private transportation companies and real estate investors that produced the streetcar suburb across Canada may challenge this interpretation, though, demonstrating that corporate land developers have played a role in suburbanization since at least the turn of the 20th century (McCann, 2006: 34). Indeed, the state may also have played a greater role through the offloading of investor-defaulted "tax lots" acquired during the wild swings of land speculation booms before WWI: to boost revenues, municipal governments sold lots to consumers at steep discounts, creating conditions that certainly encouraged further suburban development (McCann, 2006: 37).

The Great Depression saw the Canadian state take on a more active role in encouraging homeownership and suburbanization with the introduction of the 1935 Dominion Housing Act (DHA) and the 1938 National Housing Act (NHA). For the first time, individuals could borrow the majority of the money necessary to purchase or build a house from a bank, underwritten by the federal government (Hulchanski, 1986). Although these mortgages did not become the most common way to finance new housing until the 1950s, the DHA and the NHA clearly laid the foundations for today's highly financialized housing market, backed by the Canadian state.

The end of WWII ushered in the so-called golden age of welfare capitalism, marked by consistent economic growth in Western countries and generous government programs that redistributed wealth to the working class in the form of socialized health care and education. The mortgages made possible in the 1930s grew in popularity in the post-war period and, coupled with explicit policy and financial encouragement from the 1946 establishment of the Canadian Mortgage and Housing Corporation (CMHC), allowed more Canadians than ever to become homeowners (Ekers et al., 2012: 412). (It is important to question the redistributive effects of this particular program: the 'middle class' who could afford the initial down payment gained access to

a potent equity-building tool, while this state policy relegated the poorer, and inevitably racialized, class to paying landlords for their accommodation (Ekers et al., 2012: 412).) Geographically, the increase in middle-class homeownership in Canada that took place after the war was not evenly distributed, either. Though urban areas did see a population increase, it was suburbs that accommodated the main part of mid-century population growth (Onusko, 2015: 4; Harris, 2004: 73).

Suburbanization was certainly facilitated by easy access to federally-insured credit and encouraged by increasingly active private housing developers (Onusko, 2015: 29), but the importance of transportation in determining urban form was again evident as the Canadian public turned primarily to the private automobile. Suburban living as Canadians have known it since the 1940s would not be possible without the car, and so by extension the Canadian form of suburbanization would not be possible without heavy and sustained state investment in automobile infrastructure, again demonstrating the impact of state policy decisions in shaping the built environment to produce suburbs (Ekers et al., 2012: 412).

Today, 66% of Canadians live in the suburbs (Gordon et al., 2013: 214). The post-war period to the present day may seem to be a large jump in the history of suburbanization, but scholarship assessing the prevalence and causes of the phenomenon suggest that the factors driving Canadian cities to continue building suburban housing were fully developed by the early 1960s and remain relatively unchanged since then (Harris, 2004: 10). If anything, recent research suggests that suburbanization in Canada has only sped up in the years since then (Ekers et al., 2012: 414). The private automobile is still the main transportation mode for 80% of Canadian workers (Statistics Canada, 2017: 4), private housing companies continue to profit greatly from the development and sale of new peripheral neighbourhoods (Statistics Canada, 2020: 3), the state maintains its vast investment in automobile infrastructure (Bartko, 2019), Canadians continue to hold homeownership as an important cultural value (Harris, 2000: 471), and the federal government continues to underwrite highly leveraged forms of mortgage debt that consumers hold for several decades, to the benefit of large banks (CMHC, 2020; Golombek, 2019).

### 2.2.3 Suburban governance

Harris's history of Canadian suburbanization correctly identifies the three main parties whose actions shape the suburban built environment: individual homeowners, for-profit development corporations, and the various levels of state government. Scholars use the same categories to discuss the built environment in terms of *governance*, conceptually a "heuristic device angled towards understanding how different processes and issues are negotiated, regulated, and struggled over" (Ekers et al., 2012: 408). Applied to suburbanization, governance provides a framework of understanding for the incentives, motivations, and conflicts between the main actors that ultimately produce the built environment with all of its social and environmental consequences.

> The concept of governance is appealing insofar as it tries to gather together and identify the varying institutions, practices, discourses, ideologies and representations that affect how different spaces and processes are produced, contested and experienced. For instance, understanding different processes of suburbanization requires grasping the discourses of homeownership, the aesthetics of architecture, the dynamics of capital accumulation, political processes of annexation and incorporation, representations of central cities, and many more relations. Treated broadly, governance helps these varied relations to be appreciated (Ekers et al., 2012: 408).

Of Ekers' three "modalities" of suburban governance—self-built, state-led, and private-led suburbanization—the latter category, suburbanization driven by private developers and motivated by capital accumulation, is clearly the most applicable in the Canadian case. Canada's suburbs were once primarily 'self-built,' but as I discussed in the preceding section, individual homeowner-builders gave way to corporate developers as the primary instigators of suburbanization shortly after WWII (Ekers et al., 2012: 410).

And it may seem that much of contemporary Canadian suburbanization could be in the 'state-led' category, given the strong supports that the government provides: underwriting mortgage debt, paying for costly automobile infrastructure, and writing or backing zoning legislation that encourages the further development of suburban space. However, since almost all

residential building in Canada is actually overseen by for-profit developers (and not the state), it is most accurate to say that Canadian suburbanization is mainly private-led. Besides, "private-led development tends to involve decentralized control, yet the state plays a facilitative role in terms of land use, labour and environmental policy, and judicial and legislative frameworks" (Ekers et al., 2012: 410). Ultimately, though private-led suburban development is clearly the dominant form of suburban governance in Canada, the three modalities discussed above "work through one another" to produce and govern the suburban built environment (Ekers et al., 2012: 411).

Recognizing private-led governance as the main driver of Canadian suburbanization means recognizing the supremacy of capital accumulation as a guiding force in the production of the built environment (Ekers et al., 2012: 414). The imperatives of competition and profit-seeking, to which development companies are subject, influence the built environment outcomes of their actions, and equally influence the tastes, choices, and ultimately the behaviours of residents. That most Canadians today live in suburban spaces expresses "a good deal about Canadian society: a belief in the primacy of laissez-faire development, individualism, the right to property, and the virtue of private domesticity" (Harris, 2004: 33). The suburbs are a built environment manifestation of the aggregate political and social values of settler Canadian society.

The market, though—and it is through a market that Canada has opted to meet the public's need for housing—is not simply a straightforward expression of culture and consumer tastes. A kind of distortion happens since owners of development companies make decisions not specifically to meet the needs and wants of consumers but rather with the goal of increasing profit.

> In general, [developers] have offered what their customers wanted, but when they have been in any doubt, their judgements have also been shaped by what they deemed to be most profitable. Low-density suburban development, of the sort that has become commonplace, has been especially profitable to land developers, builders, and the manufacturers of myriad goods and services, from cars to lawn care. … it has been aggressively promoted by real estate entrepreneurs for well over a century. (Harris, 2004: 32).

Not only is the development of suburban housing highly profitable for developers, but since it is only accessible to consumers through "highly leveraged debt," the practice of providing mortgages to homeowners is extremely profitable for financial institutions in Canada (Harris, 2004: 10).

> Highly leveraged forms of home ownership—down payments of less than 10 per cent and amortized repayment over twenty-five years or more—can be very profitable to lending institutions. It would be absurd to argue that the demand for mortgaged suburban living has simply been created, but it would be naive to ignore the fact that it has also been profitably nurtured through advertising. (Harris, 2004: 32)

In Canada the main motivation driving housing development, then, is not the provision of housing within a rights-based framework, but rather seeking to accumulate capital through building and selling homes on the market or lending money for mortgages. In practice, the geographic consequences are suburban housing. Developers and investors seek to "capitalize on spatial differences in an effort to increase the rate of accumulation," pushing them to invest money in acquiring and developing land for residential and industrial use at the periphery of cities, where both development and real estate costs are lower than they are closer to the central city (Ekers et al., 2012: 414). Understood this way, it is clear that suburbanization—"the combination of noncentral population and economic growth with urban spatial expansion"—is an unavoidable and automatic consequence of a profit-driven model of housing provision (Ekers et al., 2012: 407). The baseline mandate of companies to maximize profit means that they will prioritize investment in peripheral land and continue producing more suburban spaces.

With very few exceptions, Canada's housing supply is expanded through private-led development, which is subject to the dynamic I discussed above. However—though discussions of suburbanization, density, land-use mix, infill, and automobile and public transportation infrastructure are all hot-button political issues in North America, Edmonton being no exception—it is rare to hear critics or supporters of suburban development directly address the dynamic I discussed above. Private-led development, simply by virtue of being a corporate activity, *must* perpetuate suburbanization to remain profitable and competitive, yet most

discussions of the issue in media or in the proceedings of municipal politics take the actions of developers for granted, "as if processes such as capital accumulation did not exist" (Ekers et al., 2012: 413). Instead, "governance is generally discussed in terms of different actors that enter into processes of negotiation and dialogue regarding a discreet [*sic*] problem. More often than not, the large forces that shape the direction of discussion and eventual course of events are occluded" (Ekers et al., 2012: 413). The same tendency was apparent in the interviews I conducted. The participants made little mention of the motives of private developers (who were ultimately building the spaces we discussed), preferring to speak in terms of how the government could best support the market, assuming that the economic health of individual Edmontonian households and of the city as a whole would follow.

Owners of development companies and bank shareholders play an important role in pushing further suburbanization in pursuit of profit. Individuals who buy houses and take on mortgage debt, too, participate in the expansion of suburbs as the 'demand side' of the equation, albeit in a more ambiguous class position. Though workers undoubtedly participate in the housing market at least partly to have a roof over their head—exchanging money for a use-value, namely housing—the intense commodification of the housing market in Canada leads consumers to look at their home as an investment that will eventually provide them with a return. So even though mortgage-holders are, on one hand, workers earning wages and spending them to meet their need for secure housing, they are, on the other hand, also investors participating in the speculative housing market alongside the banks and private development companies. The fixation that Canadian consumers have, on not only getting a house for their own housing but *building equity in an asset*, highlights an important consequence of providing housing through the real estate market: consumer choices reflect the pursuit of exchange value in a way that ultimately shapes the built environment itself. Housing is "increasingly a fictitious commodity disconnected from its use-value," a situation that has real consequences in the built environment and, in turn, the behaviours and health of the people who live in it (Ekers et al., 2012: 415; Harvey, 1982).

### 2.2.4 Choice

An important topic in the discussion of global suburbs is the idea of choice (Harris, 2010: 19). Did residents choose their suburban homes, or were they compelled to live there? Governments in China, the USSR, Europe, and North America have all inflicted forced relocation to suburbs, whether as part of industrialization schemes or so-called 'slum clearance' (see Baron Haussman's razing of central Paris and the destruction of Halifax's Africville). But in Canada, the notion of 'consumer choice' is extremely powerful when it comes to suburban housing, both in normative discussions of culture—as in "people just want a house"—and in terms of market dynamics.

Normally, critics assume that suburban homeowners in North America *did* choose freely to live where and how they do (Harris, 2010: 19). However, this may not be the case. Given my earlier discussion, of the corporate logic of housing developers and their propensity for building suburban housing, the industry is already primed to deliver exactly that (and not much else) to consumers. There is also the question of the dubious choice between renting or owning one's housing. Though renting and holding a mortgage are both similar in practice (since both involve paying an important proportion of one's wages to a landlord or bank for several decades), and though cooperative housing exists marginally as a third option, most Canadians take on mortgages and buy suburban homes. Why?

Contemporary folk wisdom suggests that buying a home in the suburbs is just 'common sense,' since it allows workers to eventually own property, an important financial asset. This set of social mores around homeownership and debt have changed dramatically in the last 80 years: until the 1930s, mortgages never exceeded more than 50% of the cost of housing, were usually limited to less than five year terms, and lenders were overwhelmingly individuals as opposed to large banks (Harris, 2004). A 25-year mortgage with only 5% down, 'common sense' today, would have been unthinkable before the Depression. Considering private housing developers' strong suburban bias and the arguably false dichotomy between paying rent to a landlord or making several decades of mortgage payments to a bank, a worker buying a suburban home seems less like an active choice and more like the least bad option, even in Edmonton.

## 2.3 Urban planning and the built environment

Given the complex and interwoven modalities of governance that produce the built environment, there is debate concerning the effectiveness of city plans and land-use zoning. Does urban planning do anything? Some argue that the work of city planners may not affect built environment outcomes at all, and that proving the effectiveness of city planning remains impossible given the complex, multicausal nature of urban processes (Talen, 1996: 255; Healey, 1986: 114). Others argue that the essentially "negative" mechanism of land-use zoning means that plans can only ever follow what the market would do anyway: planners can only say 'no' to a project, reducing their role to merely guiding the behaviour of market capital (Gurran, 2017: 20).

While these critiques of urban planning have merit, and while their calls for better evaluation methodologies are justified, ignoring the continued importance of urban planning in Canadian cities is throwing the baby out with the bathwater: "[r]esearchers must acknowledge that a determinate relationship exists between the desires of decisionmakers and outcomes" (Talen, 1996: 256). Methodological critiques provide an important cautionary note when considering the relationship between city planning and the actual built environment. But it is safe to say that these epistemological shortcomings are an acceptable margin of error—and count city planners among the factors that influence the city's form. They constitute part of the 'state-led' mode of governance that works in tandem with private-led development to create urban and suburban spaces.

City planners, then, are important actors in the processes that produce the built environment. Understanding their values, politics, and blind spots is important because, as I will discuss in the next section, the character of the built environment has public health consequences. I aim to achieve this in my study through interviews with planners (see Chapter 3).

## 2.4 The built environment and public health

The environment in which humans live affects their health (Jackson, 2002: 199). The built environment is a special case, since its qualities and therefore its effects on resident's health are the result of human choices and actions. In post-industrial countries, public health policy has

successfully reduced the burden of infectious diseases that were formerly major causes of illness and death. Chronic illnesses like heart disease and type II diabetes, though, are still widespread and cannot be targeted with the same kinds of interventions as infectious diseases (PHAC, 2017: iii; Jackson, 2002: 200). Personal lifestyle choices, notably the decision to engage in regular physical exercise, are important ways to address these chronic illnesses. Public health researchers and practitioners now seek to identify interventions that help individuals make choices that improve their health.

Given the environment's influence on human health, the "built environment … represents a tremendous unexamined resource for improving human and environmental health" (Jackson, 2002: 200; PHAC, 2017). Researchers have identified built environment characteristics that encourage people to exercise. An important part of the field focuses on utilitarian active transportation, "walking and cycling for the purpose of transportation, and using public transportation" (Herrman et al., 2019: 192). Increasing the proportion of total trips taken in a city by active transportation gets people out of cars, in turn reducing automobile-related pollution, strain on infrastructure, and increasing the average amount of physical exercise residents do. In a study on San Francisco, Cervero et al. show that "compact, mixed-use, pedestrian-friendly" neighbourhoods can reduce vehicle trips and encourage active transportation (Cervero et al. 1997, 216). They found that "residential neighbourhoods that were spatially accessible to commercial activities" tend to have fewer vehicle miles travelled per household, and that people also tend to walk more for utilitarian purposes in places that have a street layout arranged in a grid, meaning that streets are highly connected to one another and provide more options for route choices as opposed to a winding cul-de-sac layout (Cervero et al., 1997: 217).

These factors, population density, street connectivity, and POI density, form the basis of the Canadian Active Living Environments (Can-ALE) dataset (Herrman et al., 2019). The dataset groups Canadian neighbourhoods into five classes by their capacity to encourage active transportation behaviours. The Can-ALE study findings "draw attention to the spatial distribution of active living environments in Canada" and provide a way to quantitatively assess the built environment in terms of public health. Mapping and understanding which neighbourhoods in

Edmonton are likely to encourage residents to exercise can inform discourse and policy surrounding the kinds of neighbourhoods that the city will build in the future.

## 2.5 Conclusion

In this chapter, I defined 'suburb' to be a neighbourhood that has a low population density, a low density of points of interest (e.g. shops), and a street network that is not well-connected (e.g. cul-de-sacs). I discussed analyses that demonstrate the importance of population-dense, mixed-use neighbourhoods with well-connected street networks for public health. I identified urban planners as important actors who influence the built environment. I also highlighted policies and technologies throughout Canada's post-Confederation history that have led to the present, where most residents live in suburbs and where most population growth is accommodated in suburbs. In the next chapter I describe how I use data from my interviews with planning professionals to better understand why, in effect, Canadian cities continue to build new suburban neighbourhoods which don't take advantage of the built environment to improve the health and well-being of the people that live in them.

# CHAPTER 3: METHODOLOGY

## 3.1 Introduction

In this chapter, I describe this study's research design and methodology, including the sampling and recruitment procedure for my semi-structured interviews with Edmonton city planners; the qualitative analysis method I applied to these data; and my positionality and ethical considerations.

## 3.2 Edmonton city planners as research participants

This study investigates the economic and social processes driving suburban growth in south-west Edmonton, beyond the Anthony Henday ring road. To that end, I conducted seven phone interviews with city planners working for Edmonton's municipal government.

In Canada, planners work with city council and property developers to determine how property owners may use their land, primarily through zoning regulations (Thomas, 2013). Planners' work ranges from lot-by-lot zoning decisions at the smallest scale to producing big-picture policy documents, such as the Edmonton Metropolitan Region Board (EMRB) Growth Plan or the forthcoming new City Plan (EMRB, 2020; City of Edmonton, 2020). I chose to use this group of professionals as key informants from whom to collect data relevant to my research aim (Sikder et al., 2016: 7).

## 3.3 Sampling and recruitment

I recruited my sample of interview participants by contacting thirty planning professionals working for Edmonton's municipal government over email, identified from a variety of publicly available planning documents (purposive sampling). In several of the interviews, participants recommended one or more colleagues who they felt would be valuable to the study, a form of snowball sampling (Onusko, 2015: 2).

A challenge I faced in this process was a tendency among this group of planners to decide on my behalf that their input would not be valuable. This may have been an attempt to politely

decline the interview request. Several planners replied by email that, since they knew that one of their other colleagues already took part in my study, they would not have anything novel to add.

### 3.4 Semi-structured interviews

I used semi-structured interviews to collect qualitative data. Semi-structured interviews consist of a conversation between an interviewer and a research participant, where the former guides the conversation by asking questions (Cochrane, 2014: 2; Dunn, 2010: 101-110). Although guided, participants' responses are less constrained than in questionnaire-style structured interviews. I had a general understanding of the concepts about which I wanted to gather information, but I chose the more open-ended semi-structured interview because I knew that the participants would likely have specific insights that I may not have considered, and that I then might have missed with a more restricted and structured method.

In October and November 2019, I interviewed seven urban planners, each of whom were working for the City of Edmonton at that time. Each interview lasted between thirty and forty-five minutes, and I reached the participants either by phone or by internet video chat. During the calls, I made audio recordings for transcription and took notes by hand.

To gather data on the economic and social causes of Edmonton's suburban growth, I asked participants for their perspectives on three broad topics: the factors contributing to Edmonton's urban form, the advantages and disadvantages associated with suburban development, and the relationship between the built environment and public health. See Table 3.1 for examples of specific interview questions.

| **Edmonton's urban form** | **Advantages and disadvantages of suburban development** | **Relationship between the built environment and public health** |
|---|---|---|
| Why is southwest Edmonton growing faster than other parts of the city? | Does the city as a whole benefit from allowing or encouraging this kind of suburban sprawl? | Is there any relationship between suburban development and public health in Edmonton? |
| In your mind, what motivates an individual Edmontonian to decide that they would rather live out in the suburbs than in a more central neighbourhood? | Are there any disadvantages associated with low-density suburban development? | What elements of the built environment encourage active transportation? |

**Table 3.1** Example questions from interview guide.

### 3.5 Analysis

To analyze the qualitative data from the semi-structured interviews, I transcribed the recorded audio and used coding to find patterns in the resulting text (Martinez-Linares et al., 2020: 5; Watt et al., 2008: 415). Coding is an activity through which "we evaluate, organize, and 'make sense'" of qualitative data by reduction and organization (Cope, 2010: 281). It is necessary for several reasons. The data needs to be cut down to a manageable size. Besides reduction, coding allows researchers to organize qualitative data and abstract from the raw text to form broader, more intelligible concepts that identify patterns (Sikder et al., 2016; Cope, 2010: 284). It is a robust and commonly-used research method, characterized as a "formalization" of the process by which all of us already come to know and analyze the social world as we live our lives (Cope, 2010: 293; Watt, 2008: 416).

Specifically, I used Auerbach & Silverstein's iterative coding method to build up a "coding structure", statements grouped together by "similarities, substantive relationships, and

conceptual links" (Auerbach et al., 2003; Cope, 2010: 291). This is a way to move from the "raw text" through a sequence of abstractions to ultimately bridge to my research questions (Martinez-Linares et al., 2020: 5; Cope, 2010: 284). Purpose-built coding software exists, but I completed the process "by hand" using a word processor to organize the text by reading, copying, and pasting the relevant sections.

Beginning with the interview text, I passed over each transcript to identify sections ("relevant text") that related to my research aim. I then compared each statement in the relevant text to every other statement, iteratively reading through the document and identifying groups of statements expressing the same idea ("repeating ideas"). Once I had completed this process for each transcript, I created a master list of repeating ideas by comparing the new groupings across *all* the transcripts. Another round of grouping this master list produced "themes", an "implicit idea or topic that a group of repeating ideas have in common" (Auerbach et al., 2003: 62). Grouping these together into "theoretical constructs" allowed me to begin abstracting and connecting the interview data to the literature, and finally I combined all the constructs into a "theoretical narrative" which forms Chapter 5 of this study (Watt et al., 2008: 416-418). The theoretical narrative "describes the process that the research participants reported in terms of [the] theoretical constructs" that I produced in the earlier step (Auerbach et al., 2003: 73). In other words, this iterative method of coding qualitative data generates a text that relays the subjective experiences of the informants in a way that is both true to their interview responses and that I can discuss in terms set out by the existing literature. See Figure 3.1 for a graphic representation of this process.

Coding as a method of organizing the interview data "is based on the premise that no one is smart enough or intuitive enough to read a series of transcripts and immediately see the patterns within them" (Auerbach et al., 2003: 37). Using this qualitative technique, I moved from the raw text of the interview transcripts to a coherent narrative that connects the perspectives of Edmonton's city planners to existing literature in a way that retains analytical rigour.

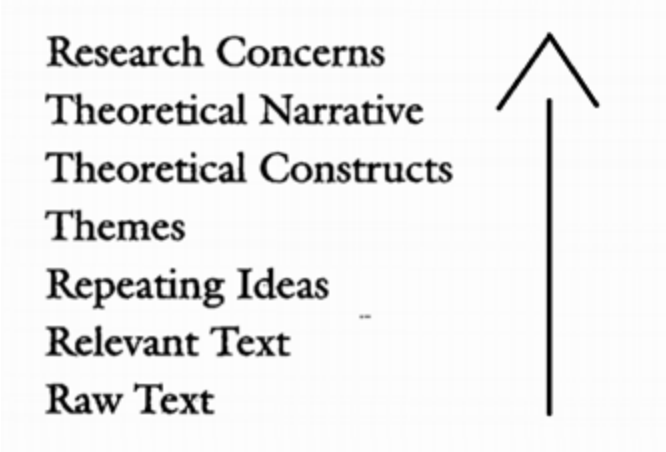



**Figure 3.1** Auerbach and Silverstein's coding procedure (Auerbach et. al, 2003)

### 3.6 Ethics and positionality

I completed this study for credit towards an undergraduate degree at McGill University, and did not receive funding from any organization. I conducted the interviews with the approval of McGill's Research Ethics Board (REB File #: 38-0619).

Scholars have explored the power relations inherent in the interview process (Besio, 2003; England, 1994; Rose, 1997). Given that, in my position as an undergraduate student researcher, I conducted interviews with urban planning professionals working in a major Canadian city, I do not foresee any negative community outcomes from my interview process, nor can I identify a racialized, gendered, or any other power imbalance between myself and the participants in my study that would negatively affect them or skew the data.

### 3.7 Conclusion

In this section, I discussed the research design and methodology I used in this study. I justified my engagement with Edmonton city planners as informants for semi-structured interviews, and discussed sampling, recruitment and my qualitative analysis procedure. I ended with a discussion of ethical considerations and my own positionality.

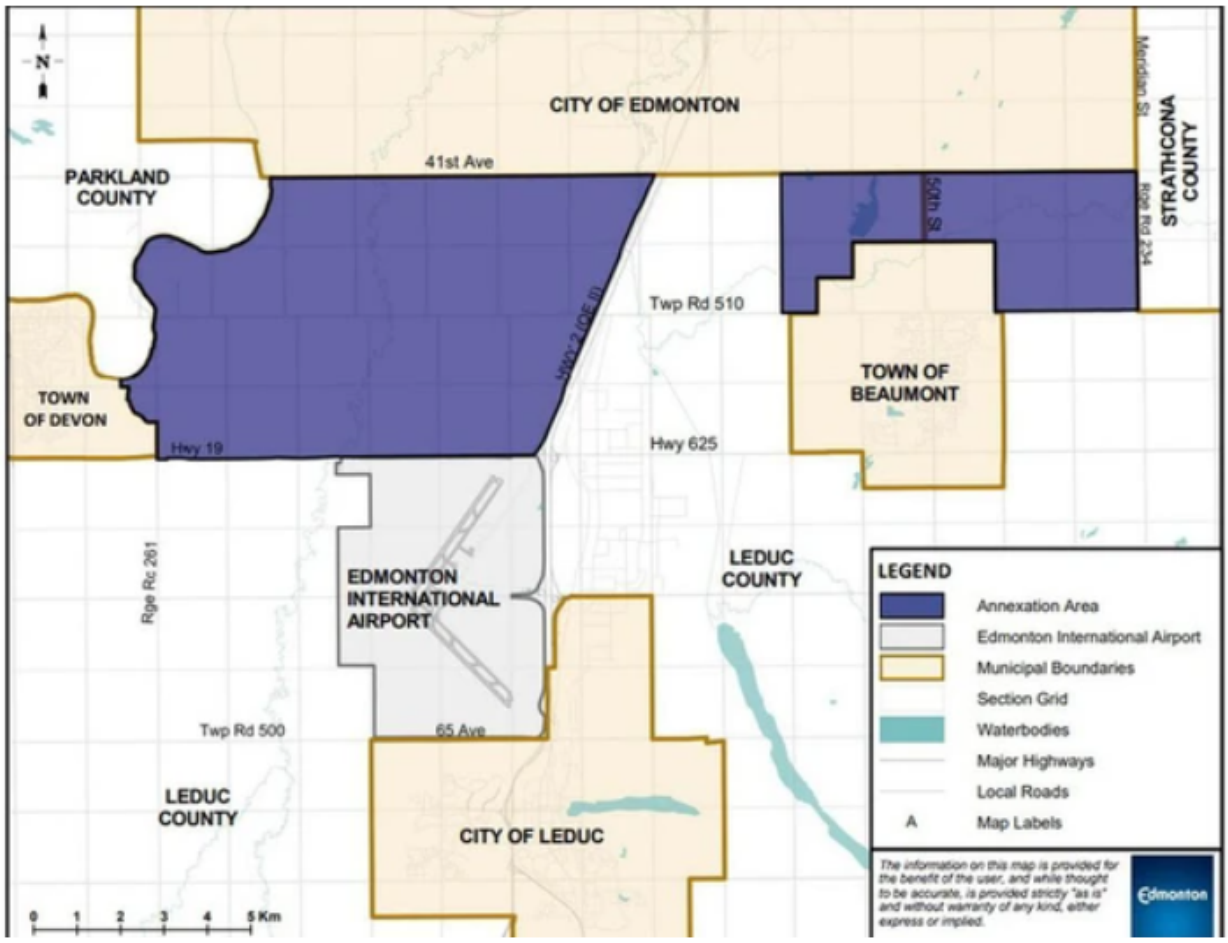
# CHAPTER 4: EDMONTON'S BUILT ENVIRONMENT

## 4.1 Introduction

Since its incorporation as a city in 1904, Edmonton's population has grown quickly relative to Canada's population overall, and its growth has been accommodated mostly in suburban housing. In this chapter I will discuss Edmonton's history of peripheral land annexations, the tendency of Edmonton's population to diminish in the city's centre and grow at the outskirts over time, and the (low) capacity of Edmonton's built environment to drive active transportation behaviours among residents, providing important historical and empirical context for my discussion of the interview results to follow in Chapter 5.

## 4.2 Annexations

To continue building new neighbourhoods and to develop industrial land, Edmonton has proceeded with 29 annexations adding land to expand its municipal boundaries since 1904 (City of Edmonton, N.D.). Some annexations were very small, adding only one or two square kilometres to Edmonton's total area. On average, each annexation added 26.3 $km^2$, and the largest annexation, in 1982, added 369.5 $km^2$ to the city's area, increasing it by 112%. The most recent annexation took effect January 1st, 2019, adding 82.7 $km^2$ to the city's area (Wakefield, 2018). The newly annexed land includes two sections to the south of the city, the larger one bounded by 41st ave, Parkland County, the town of Devon, Highway 19, and Highway 2 (Map 4.1).



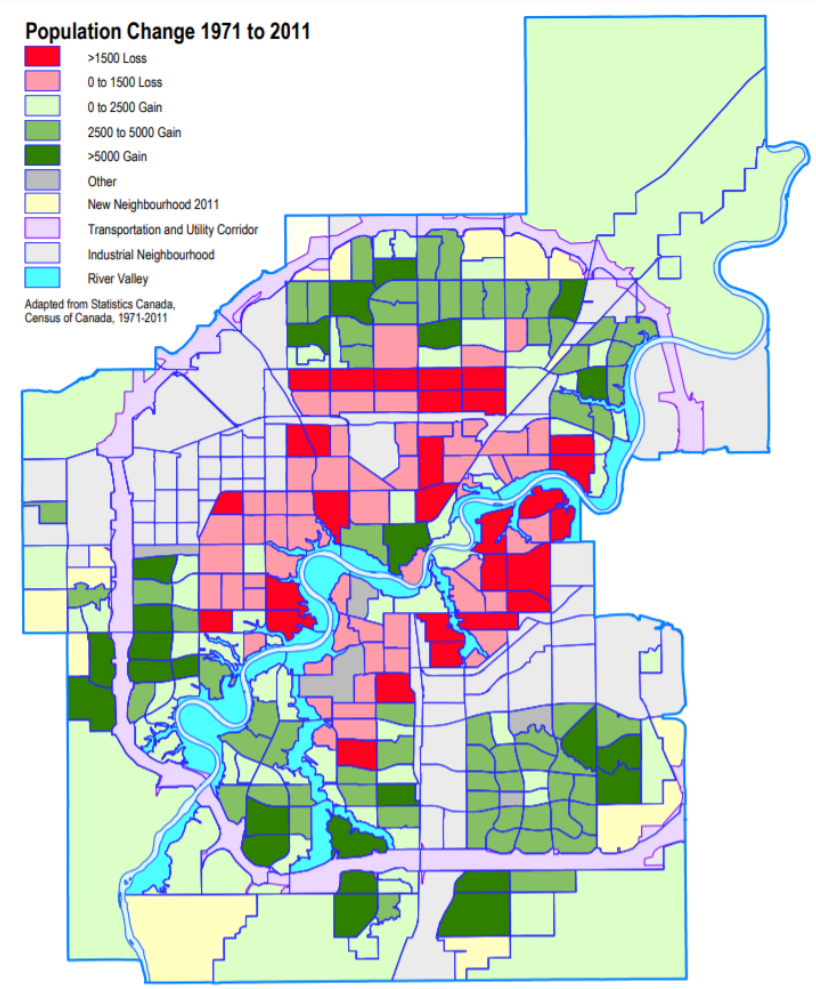

Edmonton will officially annex land in Leduc County Jan. 1. 2019. People in the highlighted areas officially become Edmonton residents but will pay county tax rates for 50 years. Edmonton

**Map 4.1** The 2019 annexations between Edmonton and Leduc. Source: Edmonton Journal.

### 4.3 Change in neighbourhood population

Not only has Edmonton grown mainly through suburban expansion, but as older, more central suburban neighbourhoods age, their population tends to decline as developers build new suburbs at the edge. In Chapter 2, I discussed theories that describe the formation of the built environment in places where builders produce housing in a profit-driven framework, like Edmonton. Analyses like Map 4.2 lend credibility to these theories. All the neighbourhoods that lost population between 1971 and 2011 are clustered in the centre of the city, while all peripheral neighbourhoods saw population growth.

Given high rates of car commuting (Statistics Canada, 2017: 4), this necessarily means that the state has continued to invest in automobile infrastructure and approve zoning for new peripheral neighbourhoods (see Map 4.2, "New neighbourhood 2011" category). Theory also suggests that the drive to increase profit will always push developers to seek cheap land and building costs at the edge of the city, and the population shift evident in Map 4.2 offers some empirical confirmation of that pattern.




**Map 4.2** Population change in Edmonton, 1971-2011 Source: City of Edmonton.

### 4.4 Active transportation and the built environment

Edmonton, then, grows by further developing the periphery as the core hollows out over time. In Chapter 2, I defined suburbs as places that are characterized by the combination of low street connectivity, low population density, and low density of points of interest (POI), to align

with research on the built environment's capacity to encourage residents to engage in active transportation behaviours. I introduced the Can-ALE framework in Section 2.4, and I will now describe the five classes in greater detail and demonstrate that Edmonton's growth pattern has produced a city that is almost entirely suburban and, therefore, only very weakly encourages active transportation.

The Can-ALE dataset is available at the level of the dissemination area, a unit of census geography that Statistics Canada defines as "a small, relatively stable geographic unit ... with an average population of 400 to 700 persons." Can-ALE bins every dissemination area in Canada into five categories, with a "1" being least supportive of active transportation behaviour and a "5" being most supportive, based on the population, intersection, and POI density. Most rural areas in Canada are Can-ALE Class 1; Classes 2 and 3 are suburban; Class 4 is a lot more like what Canadians would generally consider 'urban'; and only the very densest and most central parts of Canada's major cities are Class 5. Breaking down a city by Can-ALE class, then, not only determines which neighbourhoods meet my study's definition of suburban, but also provides a quantitative way to assess the built environment's capacity to encourage physical activity and therefore positively influence public health.

Table 4.1 examines Edmonton by Can-ALE class. More than half of Edmonton's area is Class 1, but since less than 8% of the population lives there, it is likely that most of the land in this category is industrial. The vast majority of Edmontonians (86.3%) live in neighbourhoods classed either 2 or 3, accounting for 46.9% of the city's area. Of the areas of Edmonton that are residential, then, almost all are suburban, and most of Edmonton's population lives there. Can-ALE Classes 4 and 5 have the strongest positive effect on residents' active transportation behaviour, and yet in Edmonton they house only 4.3% and 1.6% of the population and occupy only 1.4% and 0.2% of the city's total area, respectively. See Figure Map 4.3 for the geographic distribution of Can-ALE class in Edmonton.

| Can-ALE class | Number of dissemination areas | Land area ($km^2$) | Population (2016) |
|---|---|---|---|
| 1 | 43 (3.5%) | 347.11 (51.5%) | 72 997 (7.8%) |
| 2 | 406 (34.0%) | 181.72 (27.0%) | 342 972 (36.8%) |
| 3 | 665 (55.6%) | 134.32 (19.9%) | 461 850 (49.5%) |
| 4 | 59 (4.9%) | 9.28 (1.4%) | 40 180 (4.3%) |
| 5 | 22 (1.8%) | 1.18 (0.2%) | 14 522 (1.6%) |
| Total | 1195 | 673.61 | 932 521 |

**Table 4.1** Edmonton census subdivision by Can-ALE class, 2016 (Statistics Canada, 2016; Herrmann et al., 2019).

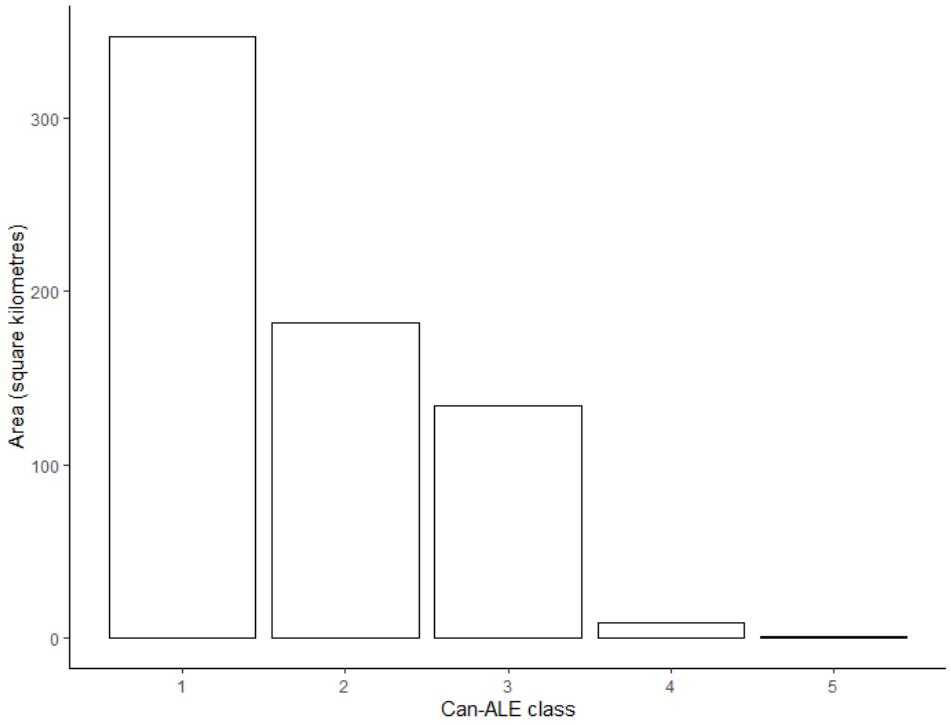



**Figure 4.1** Edmonton's land area by Can-ALE class.

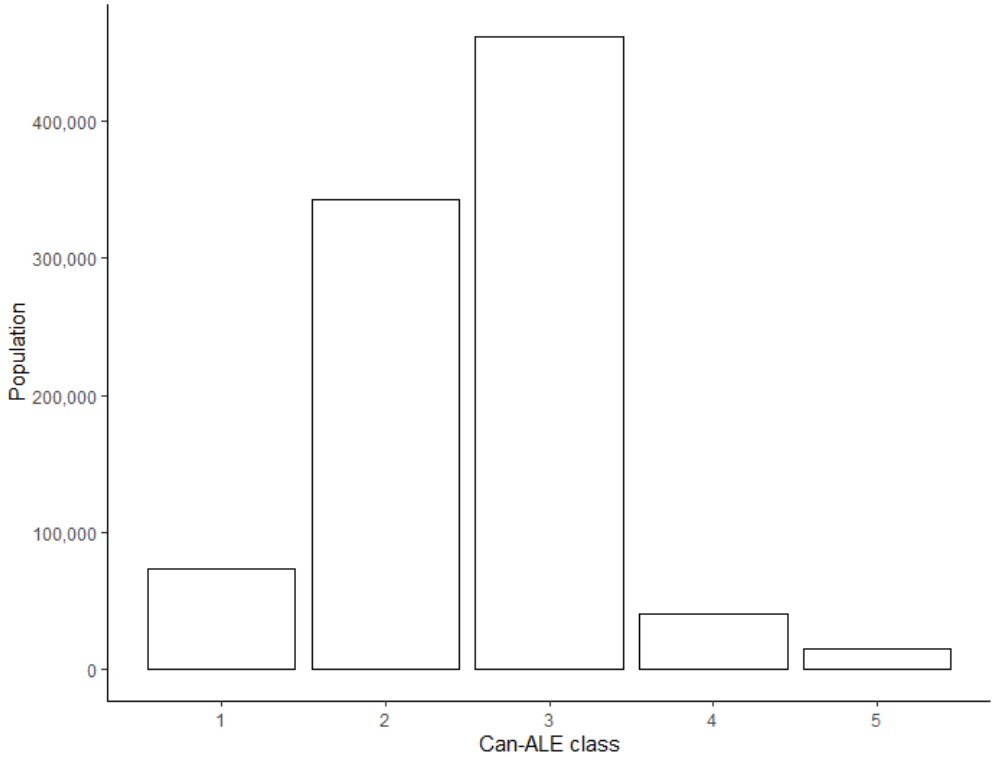
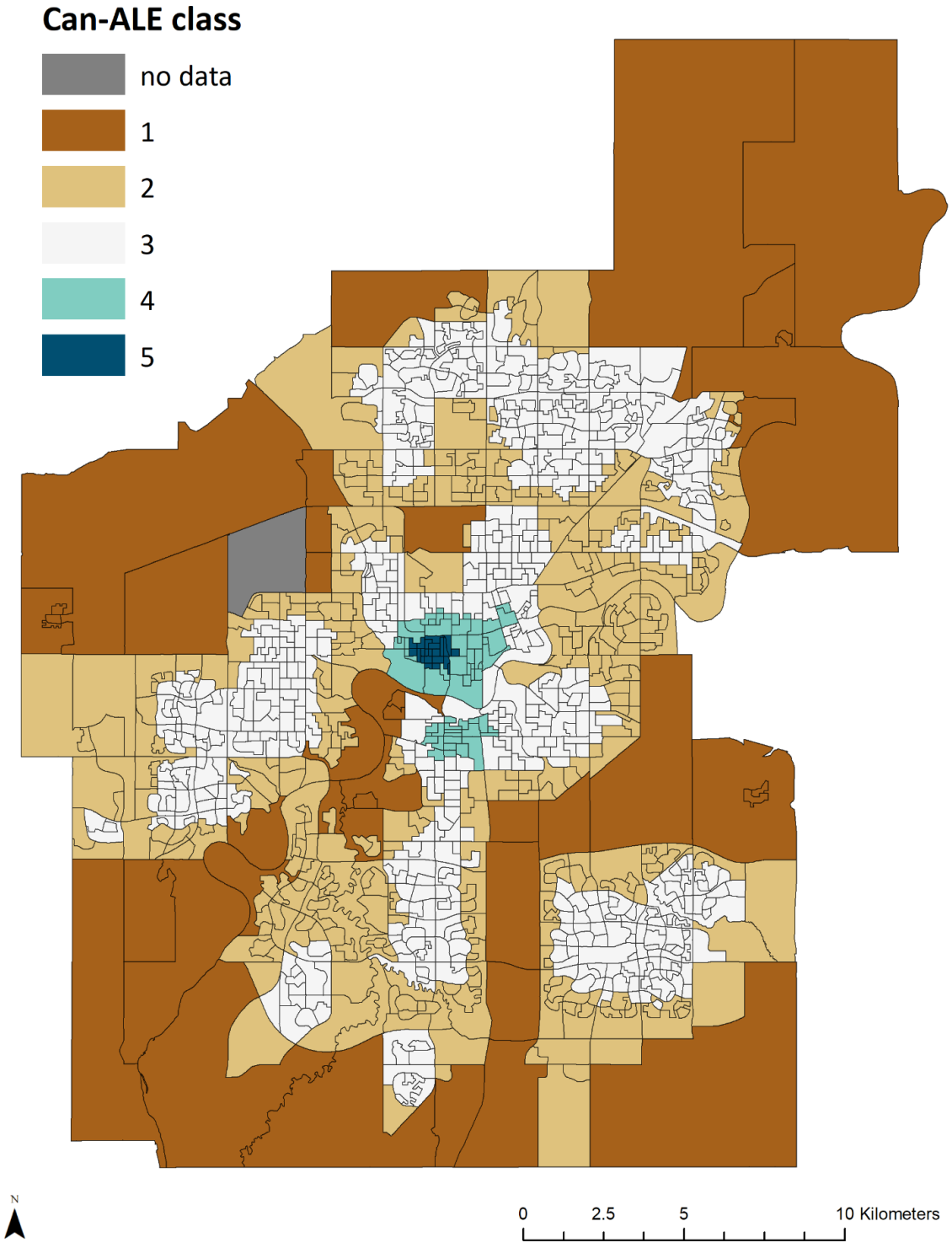



**Figure 4.2** Edmonton's population by Can-ALE class.




**Map 4.3** Edmonton by Can-ALE class at the dissemination area level.

### 4.5 Conclusion

The Can-ALE analysis confirms that the overwhelming majority of Edmonton's present-day neighbourhoods have very weak potential for driving active transportation behaviour among residents. The historical trends of municipal expansion by annexation, zoning for new neighbourhoods at the periphery, and investing in expensive automobile infrastructure like the Anthony Henday ring road has produced a hollowing-out of Edmonton's central population, ongoing since at least the early 1970s.

Those trends are still evident today, and nothing suggests they are slowing down. However, civic leaders and politicians today express the need to intensify Edmonton's urban fabric, acknowledging car traffic's heavy environmental impact and the importance of encouraging active transportation, often called "walkability" (CBC News, 2020; Stantec, 2009). Using data from my interviews with Edmonton city planners, I aim to understand the disconnect between Edmonton's unchanging and distinctly suburban historical trajectory and the intentions of decisionmakers to intensify Edmonton's urban fabric for the sake of public health in Edmonton. I present the results from my interviews in the next chapter.

# CHAPTER 5: RESULTS

## 5.1 Introduction

In this chapter I present interview data relevant to each of my research questions (Section 1.2). This chapter forms the "theoretical narrative," the end result of the coding process I described in Chapter 3. Phrases in quotation marks are direct citations from the interviews.

## 5.2 Historical trajectory: Edmonton's built environment

The planners characterized Edmonton's history as fast and outward bound growth. "Our expansion strategy over the last hundred years has been to grow outwards and to annex or amalgamate all of those towns that stand in our way," at a pace one participant called "astonishing." In terms of outward spatial expansion, though, participants said that Edmonton is no different than other cities since "all across North America we've basically been developing the same way."

The planners diverged on their characterization of Edmonton's contemporary built form. Critics use the term 'sprawl' pejoratively to describe suburban spaces, and while some interviewees actively applied the term to Edmonton neighbourhoods, others suggested that it isn't accurate. As the results show in Section 5.3, the planners perceived Edmonton's employment pattern to be highly dispersed across (and even outside) the city. On this basis, one participant said "I'm not personally convinced that [sprawl] is what's happening in Edmonton." Their statement implies a rather narrow definition of suburbs, suggesting that the only criteria is the distance a worker must travel to get to their job (and nothing about the neighbourhood itself). On the other hand, some participants gave due emphasis to the built environment. "Far be it for anyone to move into a suburb from the 1950s and say, 'I don't live in sprawl,' yes you do, you live in a version of sprawl that was built in 1950," one participant commented, noting that nearly all Edmonton neighbourhoods are low-density and primarily residential.

Though the interviewees acknowledged Edmonton's historical geographic expansion and, for the most part, its present-day suburban form, the nature of the city's built environment is "starting to shift a little bit, and I suspect it'll shift a lot more in the future" towards "more intense

urban development." Among the reasons planners gave for such a shift were generational wealth disparity, immigrants' expectations when they arrive in Edmonton, the need to mitigate climate change, and walkability. Homeownership is arguably less popular among millennials who, in some cases, "simply can't afford a brand new single-family house." One participant suggested that the people who now tend to immigrate to Edmonton come from very large cities elsewhere in the world, and so may arrive with expectations of density and efficient public transit and eventually influence the city to move in that direction. Planners linked both carbon emission reduction and greater walkability to "more intense urban development," speaking to the advantages of public transportation and population density as means of addressing environmental sustainability and public health.

### 5.3 Determinants of the built environment

I asked the participants why they thought Edmonton is so predominantly suburban. They agreed that "there's just a lot of space" in the flat prairie landscape, with few natural or political boundaries to suburban expansion. One planner went as far as calling Edmonton "a really efficient urban sprawl system," a "machine that churns out new neighbourhoods onto the farmland."

The spatial distribution of employment in Edmonton is an important factor, according to the interview participants. "Relative to [other] major Canadian cities ... commute times in Edmonton are just not that bad," since the city's employment pattern is more "dispersed" than cities like Calgary or Toronto that see a higher proportion of their jobs concentrated downtown. The planners said that Edmonton's ongoing role as a "logistics hub" for resource extraction in Canada's north means that jobs are spread more evenly across and outside the city: "we do work *as a region.*" Industrial employment at the edges of Edmonton, in neighbouring municipalities, and in remote locations like oilfield work camps, then, reduce or eliminate the importance of the commute in determining a worker's choice of neighbourhood. For some workers, it makes more sense to live closer to Leduc and Nisku and the airport than it does to live centrally, to the extent that in Edmonton, one planner said that "I'm sure some people haven't come downtown in years."

The interviewees emphasized consumer demand as the single strongest reason that Edmonton has built and continues to build suburbs. Cultural values play an important role, certainly helping shape consumer choices. Suburban living is "just a mentality thing," where consumers expect detached houses and car-based transportation as the default. The planners perceived Edmontonians as resistant to row houses and apartment living, saying that "people don't want that, they want to live in a house." They explained the difficulty of encouraging infill in Edmonton's older, more central suburbs, highlighting that, culturally, residents value the *feeling* of suburban living as well as their actual housing and, when builders make efforts to intensify the city, "there is obviously a pushback from community members who live in the core, they don't want a fourplex going up beside them."

In areas like the newly annexed southwest, participants said that the opportunity to be close to "natural amenities" like the North Saskatchewan river valley pushes consumer demand. Conversely, planners noted that a commonly-held prejudice (or "negative connotations" as one participant put it) against Edmonton's inner north-side neighbourhoods can also drive more affluent residents to take their buying power and seek housing in suburbs—in the opposite direction.

Finally, in terms of cultural factors that influence consumer demand, one participant said that young families choose to live in suburbs because of the "sense of community" they provide. Other interviewees suggested that suburbs, to the contrary, may drive higher rates of isolation and loneliness among residents, but this participant's observation does echo Clark's (1966) processual explanation of the suburbanization process (see Section 2.2.1).

Cultural preference for suburban living, according to the interview participants, is clearly an important factor in Edmonton's suburban development. But equally important is cost. Preferences aside, said the planners, mortgaging a suburban house in a newly-built peripheral neighbourhood is just the economically rational thing to do. They were unanimous in identifying cost as the single most important factor that pushes individual Edmontonians to choose suburban housing, and often invoked a geographic comparison to demonstrate the point. "What you can get for $400 000 in these new communities is a lot different than what you could get for

$400 000 in mature communities, especially if you're looking for something that's newly built … I think it's a pretty clear choice to make for most buyers."

The planners made no distinction between housing as a use-value and housing as an investment, often discussing the need for "attainable" housing and the need to build equity in an asset in the same breath. Some participants pointed out the role of national monetary and fiscal policy in driving suburban expansion, since "low interest rates and low down payments have made it affordable for people to buy properties." In some cases, interviewees made the tension between homeownership in the suburbs and the benefits of density explicit. "Far be it from casting dispersion [*sic*] about lack of walkability or whatever people like to criticize these days, [suburban homeownership] has actually been a fundamental building block for our country." For most of the planners I interviewed, suburban homeownership came with so many positive effects as a middle-class investment vehicle that it actually justified any negative environmental or public health effects. They frequently invoked the idea of "balance," suggesting that incremental densification could be beneficial, but that the ability of middle-class individuals to build personal wealth through homeownership must be maintained.

Consumer demand in Edmonton is met by private development companies. Illustrating the way that profit-driven development will automatically produce suburbs, planners said that "people moving to the outer edges are doing that because the costs are low for development, for housing, they can put a family on a lot." Compared to doing infill, purpose-built rental units, and other denser forms of housing, building single-family detached homes on the edge of town is "a model that's inherently more profitable" for developers.

Developers' decisionmaking criteria are based on profit. Since they direct most of the capital investment that goes into Edmonton's built environment, Edmonton's urban form fundamentally reflects their decisionmaking processes and the results have implications not only for population density, but also for the density of points of interest. As one planner put it, the bulk of Edmonton's commercial development takes the form of big-box, car-dependent shopping complexes because "the types of people with the money to front on development are not the ones that are taking risks on that small, local corner coffee shop type of retail."

In Edmonton, so much control over the built environment sits in the hands of developers that the zoning and planning process is actually flipped. "It doesn't happen like this everywhere, but in Edmonton, the Area Plans are prepared almost exclusively by the proponents of those plans." In other words, the development companies who own land, not the City of Edmonton, make the design decisions and require only the green light from City Council. Council can ask for adjustments, but, according to the interviewees, when developers ask for permission to plan and build a new peripheral neighbourhood, Council has always approved the request. "I don't believe they ever said no to that question."

Besides considering the choices of consumers and private housing developers, the planners indicated that the City of Edmonton's municipal entrepreneurialism encourages geographic expansion. The interviewees were split on the issue of the 2019 annexation, some suggesting that "we needed that land for [industrial] taxes," others saying that Edmonton's pre-2019 footprint was still "grossly underdeveloped" prior to the addition of new land (see Section 4.2). The geographic expansion served as a kind of subsidy to boost tax revenue in the big picture, according to some participants. "Every city needs to grow … the whole concept of not growing in a city, from a planner's perspective, is foreign," and though peripheral expansion is a financial drain on the city's tax base, it is worth it since Edmonton needs to compete to attract skilled labour and external capital investment: "that [low] density, it's not by itself fiscally sustainable, but as soon as you do start bringing in people, you start to support a commercial base and an industrial base, and those taxes help balance out the rest of the city … It's the same everywhere, right? It's how many head offices you attract, how much industrial commercial base, property base, tax base, that's always the way."

In sum, the interview participants said that the suburbs developed and continued to grow in Edmonton because of cultural preference for car transportation and suburban living, and because it's most profitable for both middle-class mortgage-holders and private development companies. The pursuit of higher tax revenues, in their perspective, also motivates the City of Edmonton to expand geographically in hopes of attracting a talented labour pool and external capital investment.

### 5.4 Planners, public health, and policy efficacy

I asked the planners about the relationship between suburbs and public health in Edmonton. We also spoke about the City's efforts to increase density and so-called "walkability," and the barriers that prevent or slow them down.

#### 5.4.1 Suburbs and public health

The interviewees identified suburban living as "unhealthy for people." "When people are driving like an hour or more one way in a car every day," remarked one planner, "that's less time that they've got to spend with their families, that's less time that they've got to be active." They also suggested that social isolation could be a problem in suburbs, which "kind of depreciate any sense of community and those kinds of social aspects."

Some participants connected public health to the environment, identifying both local and global impacts of suburban development in Edmonton. "Taking out farmland impacts the ecosystems and the water systems" on the edge of the city where the new development takes place, and "low density development that's auto-dependent contributes a lot of greenhouse gas emissions," worsening the toll of global climate change.

In the eyes of one participant, the disadvantages associated with peripheral development are unjustifiable: "I see no value in anything in the suburbs." However, even by their own admission this opinion makes them an "extremist" in Edmonton, and indeed no other interviewee took such a hard line against suburban development.

The planners said that they are taking steps to improve public health in Edmonton. By adding walking trails, shared-use paths, and opportunities for activities like tobogganing, "we're trying to make [the new suburbs] more walkable, so you can mingle." One participant went further, saying that "a lot of our neighbourhoods are already walkable" and that "they've always been designed" with transit access as a priority. The Can-ALE analysis in Chapter 4, however, does not support this claim.

In general the participants acknowledged that most residential areas in Edmonton are less dense than they need to be to support active transportation among residents, one planner calling the city "grossly underdeveloped." In defense of the newest peripheral neighbourhoods, though,

some participants pointed out that they are "quite a bit more dense than our mature neighbourhoods," due in part to smaller lot sizes.

### 5.4.2 Barriers to urban intensification

In terms of policy attempts to raise density, interviewees identified two recent important developments: the Edmonton Metropolitan Region Board (EMRB) Growth Plan, which sets minimum density requirements for Edmonton *and* all surrounding municipalities, and Edmonton's own City Plan. The EMRB Growth Plan "has kind of leveled the playing field," according to one participant, since without a common set of rules, developers will metaphorically "go to the side of the street with the rules that they like."

Many planners expressed hope that the new City Plan will curb suburban expansion and raise density in Edmonton, one interviewee calling it "the best chance we've got." "In the new City Plan, you're going to see a lot more of this walkable neighbourhood being developed," and actually "if our City Plan had been in existence three years ago, I don't think we'd have done the [2019] annexation," said another.

An important guiding principle in the discourse around Edmonton's future is the aim to "double our population from one to two million without changing our boundaries." In fact, the City Plan, a combination transportation master plan and municipal development plan approved by City Council in December 2020, is subtitled "One Million More." Some interview participants referenced this idea, suggesting that Edmonton is on track to densify its urban fabric and better mitigate climate change, but there was no consensus. Others said that with past initiatives, "when things start to change, either the plan is abandoned or simply ignored, that's the typical response," casting doubt on the potential of the latest City Plan. One participant said that "the new City Plan will probably get watered down to being some sort of compromise," and another said that even the basic goal to double the population on the same footprint means little after the 2019 annexation.

> Annexing that land and then saying 'now we're not going to annex any more land' is not that bold of a statement … The reality is we can accommodate almost 700,000 more people within our

> borders at our current way of developing, we still have a ton of space … So it's not actually even that hard to get to two million without expanding our borders.

A similar pessimism underscored many of the respondents' perspectives on Edmonton's future. Low density, by stretching the same tax base over a larger geographic space, necessarily raises the cost of infrastructure, service provision, and transit routes. One planner said that "every once in a while we'll try attempts to improve our transit system, but we have no hopes of doing any of that if we continue to allow [the city] to grow the way it is." Another pointed out that walking trails and tobogganing may encourage some forms of physical activity, but "at low enough densities, you can do active transportation but then it's just recreation." The fundamental built environment characteristics that encourage active transportation are population and POI density and street connectivity, and without those, any add-on design features "really can't overcome the overwhelming push towards using a car, just the amount of distance between locations … there is policy language, the intent is there, however, in newly developing areas, it's very difficult to follow up on." "I still think it's a long way off," said one participant of the density required to encourage active transportation. Infill as a strategy to address this problem has so far been ineffective: "the City does have infill targets, but we're not hitting our targets."

The question remains: why is it so difficult to curb suburban development in Edmonton, and why do attempts to intensify the city's built environment fall short? One explanation the planners offer is the political heft of development companies. It's not that builders refuse to cooperate with zoning and regulatory decisions; as one planner put it, "we do see more things that come in that comply with our policy that don't." This issue is rather that, if developers are cooperating with the City's planning policy and the results are still overwhelmingly low-density (some say 'sprawling') neighbourhoods, the policy itself may not be effective and, some participants suggested, it may be difficult for politicians to effectively contain Edmonton's geographic expansion because of the political pressure that developers can exert.

Planners said that Alberta generally has a so-called "open for business" stance with respect to corporations and development. "Edmonton is very pro-private entities and private interests … the default around here is that all development is good, and there should be very few exceptions that are bad." This leaves planners with lessened control over built environment

outcomes, because "we can advocate as much as we want but most developers around here, especially local ones, they won't put that effort in, and they don't need to, because it'll get approved anyway."

Even when decisionmakers accept the advantages of limiting suburban development, planners said that builders will resist by emphasizing their role as employers and stewards of investment capital. "Developers have their own input," said one interviewee, "and are saying 'we've invested a tremendous amount in this already, we're prepared to invest a lot more' … And I think when you arrive at that point, it's very hard for City Council to say no." Only one interview participant chose to speak directly to the issue of developers doing politics.

> Now, your question about how do developers influence the political process? Well, I'm not in the best position to answer that, but of course they do ... Developers have a lot of money on the line, right? If you spent millions of dollars buying up land with the intention not of farming it but of preparing a plan and developing it, then you absolutely would use every tool at your disposal to try to get the results that you need.

Most planners agreed that a general move towards limiting Edmonton's outward geographic expansion is an important goal. However, they said "it is politically quite difficult to do and we haven't done it."

# CHAPTER 6: DISCUSSION

## 6.1 Introduction

Taking the perspective that Edmonton should aim to increase the proportion of residents living in areas that encourage active transportation for the sake of public health, the results I presented in the previous chapter are not encouraging, overall. Though some of the planners put faith in the city's initiatives to increase density and maybe even slow Edmonton's outward expansion, many of them were pessimistic about the plans and their likelihood of success. Popular discussion of suburbanization characterizes the process as somewhat mysterious, but I will argue that, viewed through the lens of private- and state-led modalities of suburban governance, what is happening in Edmonton is straightforward and can be called the automatic result of housing provision within a profit-driven, as opposed to a rights-based, framework.

## 6.2 Preference, familiarity, and choice

Edmontonians have a cultural preference for suburban living and car transportation, according to the planners I interviewed. No doubt this is the case. But as Harris (2004) notes, observers must also acknowledge that suburban living has been "aggressively promoted by real estate entrepreneurs for over a century" and "profitably nurtured through advertising" (Harris, 2004: 32). So much money is at stake for banks and development companies that, at the very least, we have to admit the possibility that Edmontonians' "preference" for suburban living may not be entirely organic.

Attitudes are likely also shaped by familiarity and tradition. I demonstrated in Chapter 4 that, in 2016, 94% of Edmontonians lived in suburbs. It stands to reason that a person would prefer what is familiar to them, and in Edmonton, the familiar is the suburban. As Joe Costello (2020) puts it, "history is the shaping matter of all politics … everything existing today was dependent on a series of contingent events happening in the past" (Costello, 2020). It is accurate to say that Edmontonians have a cultural preference for suburban living, but given the degree to which such a preference is no doubt shaped by the weight of familiarity and history, should this actually serve as a valid justification for the perpetual expansion of suburban Edmonton?

Harris's reflections on the concept of choice in the suburbs are again relevant. The planners I interviewed unanimously agreed that the suburbs expand because residents can afford housing there (Harris, 2010: 19). If Edmontonians have to live in suburban housing on the basis of market imperatives—and this is unequivocally the case, based on the interviews—the degree to which they actually make a free choice is questionable.

### 6.3 Private- and state-led modalities of urban governance

Viewed through the lens of private- and state-led governance (Ekers et al., 2012), the expansion of suburban Edmonton is the result of a straightforward process of capital accumulation facilitated by the state. In Section 2.2, I described the spatial consequences of treating housing as an exchange-value as do real estate investors, developers, banks, and individual homeowners. The interview results lend credibility to the theoretical case: the planners highlighted the profit-seeking behaviour of private companies developing cheaper land on the periphery, consumers moving to the suburbs for lower housing costs, and the importance of mortgage-holding as a way to eventually build up equity in an asset.

In places that choose the profit-driven model of housing provision, "the most common advocate [of development] is the owner of suburban land, who is tempted to capitalize on the rise in land values that attends urban expansion, and who fights attempts to limit development" (Harris, 2010: 35). The dynamics of private-led suburban governance are clearly at play in Edmonton, based on the interview data.

Developers' involvement in the political and zoning processes, too, are unsurprising considered within the governance framework. News of developers explicitly taking action to sway political decisions would likely cause a scandal in popular media, but the interviewees' suggestions that developers push for the results they want are just one example of the private modality of governance "working through" the state-led one (Ekers et al., 2015: 411). The vast state investment in road infrastructure, fundamentally necessary for suburban life in Edmonton, is another example of the state working to facilitate capital accumulation through the development of suburban housing and the associated mortgage interest that banks collect.

On the same theme, the federal government invests a huge sum of money every year into

the maintenance and expansion of suburbs. The CMHC, with taxpayer money, insures mortgages that would have been considered fatally risky as recently as the 1950s (see Section 2.2.4). The Central Bank of Canada maintains extremely low interest rates to enable the necessary debt. The Capital Gains Principal Residence tax exemption forgoes an impressive share of government revenue to explicitly encourage and subsidize homeownership, while remaining inaccessible to renters. In other words, and especially considering that the state is democratically accountable to Canadians, the sum of these programs and expenditures demonstrates that suburban expansion is effectively a policy decision, renewed every year at the federal, provincial, and municipal levels.

The planners I interviewed identified some problems that suburbs cause, and some even pointed out the processes of capital accumulation and state-led governance that continue to drive their expansion. However, every interview participant unquestioningly accepted the profit-based model of housing provision. No planner I spoke with suggested alternatives to the private-led nature of development in Edmonton, though they often identified problems it causes. That none of the planners—all of whom are agents of the municipal government in Edmonton—challenged it directly or suggested the provision of housing outside of a profit-driven framework further demonstrates the extent to which private-led governance "works through" the state.

### 6.4 Conclusion

Some of the planners I interviewed expressed hope that the new City Plan will chart a new course of increased density, better transit, and a higher degree of built environment support for active transportation (and therefore improved public health). However, based on Edmonton's historical trajectory and the unchanging political conditions that produce the dynamics of capital accumulation that I described above, there is little evidence to support their optimism.

# CHAPTER 7: CONCLUSIONS

## 7.1 Limitations

This study has several limitations. I interviewed nine planners, and (due to corrupted audio) was unable to use data from two of the participants, reducing my sample size to only seven people. Given the wide range of factors involved in a process as complex as suburbanization, my study would have benefited from the inclusion of perspectives from outside the planning profession. Conversations with owners of development companies or professionals working for them would have provided an interesting additional point of view, as would the inclusion of homeowners, landlords, and tenants in the city. Finally, on a methodological note, I completed this project alone: the qualitative analysis is then especially vulnerable to my subjectivity. It is common to code the data in a team of four or more people, which may have changed the interpretation of the interview texts.

## 7.2 Automatic consequences

The built environment is what we create for ourselves to live our lives inside of: it is the solution to a set of problems. Suburbs solve some problems, as my interview participants explained. If we accept the ideological frame that positions housing as an exchange-value first and foremost—something in which to invest more importantly than live—then we see that suburbs are a potent wealth-building tool for middle-class Edmontonians, and they have kept the cost of housing down in a city whose population has grown very quickly for decades. Suburbs (debatably) give settler Canadian consumers what they want: a house and access to automobile transportation infrastructure, as my interview participants described. Their development is also extremely profitable for the owners of development companies and banks that issue mortgages, and, if we accept the entrepreneurial frame, contributes to Edmonton's well-being by helping attract skilled labour and external capital investment.

Suburbs cause some problems, too. Though the planners I interviewed recognized that suburbs drive climate change, impoverish transit systems, drive up municipal infrastructure costs, and, most importantly for this study, provide little to no support for active transportation,

they accepted the sacrifice in general, invoking the idea of "balance" to suggest that all these important disadvantages are worth it, as long as middle-class wealth can be maintained and the cost of housing on average be kept somewhat low.

Some of the participants said that Edmonton's neighbourhoods aren't 'sprawl' and that Edmonton is already a "walkable" city. As I demonstrated above, the latter claim is not supported by the evidence. However, some participants were optimistic that "things are changing" in Edmonton, and the trend in the walkability of the built environment is an opportunity for further research. Extending the Can-ALE framework (see Chapter 4) to include the results of the 2021 Canadian census, for example, will allow researchers to evaluate whether or not, indeed, things are changing towards a more intense urban fabric in Edmonton.

Since Edmonton is forecasting strong population growth to continue for decades, expecting to double in size to two million, the trend in the built environment to support active transportation (or not) will affect the lives and health of many new residents. In this study, I presented a theoretical case, supported by qualitative evidence, suggesting that suburbanization in Edmonton shows no credible signs of slowing. As a result, it is likely that Edmonton will continue to house its expanding population in neighbourhoods that do not leverage the ability of the built environment to encourage physical activity. The city is on track to accommodate its expected "One Million More" in low-density suburbs, missing the mark on Dr. Theresa Tam's 2017 call to keep public health in mind when making choices about the built environment (see Chapter 1).

Through the lens of private- and state-led urban governance, I aimed to demonstrate that suburban expansion is an automatic consequence of profit-driven housing provision. If decisionmakers accept the negative consequences of suburban development and want to try to slow or stop the process, changing the framework within which builders provide housing is crucial. Canada has a rich history of cooperative housing, for example. After WWII, democratically-run co-operatives arranged for the construction of more than 10,000 dwellings in Eastern Canada and Quebec (Harris, 2004: 113-115). Instead of the heavy and sustained investment that all levels of government currently funnel into private suburban homeownership, a shift in direction to co-operative building and collective or state ownership could have

important results in the built environment—and therefore public health.

In this study, I concentrated on the public health implications of Edmonton's property market, and I will conclude with the same focus. However, the built environment is the site of many interlocking struggles, of which public health is only one. Crucially, contemporary Edmonton is a location implicated in Treaty 6, an agreement that binds Canada to share land and resources with the Indigenous nations who originally inhabited the territory (including the Papaschase Cree and the Blackfoot). Scholars and Indigenous people themselves widely acknowledge that, in 1876, Canada signed the treaty in bad faith and would continue to target Indigenous people using tactics of genocide, including intentional mass starvation, to impose its colonial governance over the territory (Shipley, 2020: 37). Thankfully, the Canadian government's racist policies have not been entirely successful, and, today, the Indigenous nations that the Canadian government tried to destroy continue to assert their legitimate claims to sovereignty on their traditional territories.

Though an adequate analytic treatment of Indigenous land stewardship falls outside the scope of this study, the fact is that colonialism and all of its accompanying violence is fundamentally about controlling land, a dynamic that is also at the heart of my discussion of suburbanization and Edmonton's housing market. It is telling that none of my interview participants ever referred to Indigenous nations or Indigenous governance in their discussion of urban planning and housing in Edmonton, nor did they ever refer to a point in Edmonton's history earlier than the turn of the 20th century, though Indigenous people have lived and worked on the territory now called 'Edmonton' for thousands of years. The housing market that drives suburbanization is a distinctly colonial system, based on European conceptions of private ownership, that differs dramatically from the ways that Indigenous peoples have managed land since time immemorial (Blomley, 2004: 9). I will not speculate on the type of land management that a decolonized Edmonton—one whose administration operates according to real respect for Indigenous sovereignty—might undertake, but only say that, today, Edmonton's administration and the private housing market over which it presides is still thoroughly colonial.

Today only one in five Canadians meet Health Canada's minimum guidelines for minutes spent exercising per week. Public health officials have called for greater use of the built

environment as an intervention, to drive active transportation behaviours that will in turn reduce rates of heart disease and type II diabetes (among other chronic diseases). Answering their call means making meaningful steps towards stopping the growth of suburban spaces, especially in Edmonton, a city that anticipates welcoming one million new residents in the near future.

However, as I have tried to demonstrate, doing so will require that decisionmakers seriously rethink the framework within which builders provide housing in the city. City planners' tacit acceptance of the profit-driven model of housing provision will prove to be a major, if not insurmountable, roadblock in their attempts to reshape Edmonton into a city that supports walking, cycling, and public transportation at levels great enough to meaningfully improve public health.

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