MUCH "ADU" ABOUT A LOT: HOW SOCIAL RELATIONS INFLUENCE THE AFFORDABILITY OF ACCESSORY DWELLING UNITS IN EDMONTON, ALBERTA, CANADA

by

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Abstract

This research examines Detached Accessory Dwelling Units (DADUs) in Edmonton, Alberta. In Edmonton, these types of units are referred to as Garage/Garden Suites, however, in other municipalities they go by a variety of names including: Laneway Homes, Granny Flats, Carriage Homes, or Secondary Suites. It has been suggested that ADUs offer a number of social, environmental, and economic benefits, and a number of municipalities across North America are beginning to promote them as a form of private sector affordable housing. As such, several cities have relaxed zoning restrictions to allow for ADUs on most residential lots. Edmonton was chosen for this study in part because of its recently relaxed zoning restrictions. It is also a city of interest because of the exponential growth of Garage/Garden Suites Edmonton has experienced over the past 10 years. This research examines Garage/Garden Suites in Edmonton from an affordable housing perspective and establishes the first comprehensive dataset on Garage/Garden Suites in Edmonton. While this research gathered data on suite use, occupancy, construction, and demographics, it focuses on a concept called "voluntary affordability" whereby owners of the Garage/Garden Suite willingly charge low to ultra-low rent. For this research, all 122 Garage/Garden Suite owners in Edmonton were contacted and asked to participate in a 34-question survey about their suite, of which 72 completed the surveys. In total, it was found that 36% of suites were rented to family at an average rent of $504, 52% were rented to people the owners did not know at an average rent of $1,154, and 12% were rented to friends at an average rent of $1,225. By looking at suites that were rented at zero- and very-low-rent it was found that 25% of Edmonton's Garage/Garden Suites are <$700/month, which are considered affordable rents in Edmonton by many definitions. 89% of the occupants of these free-or-clearly-below-market rentals are family members of the owner, thus demonstrating the role social relationships

play in facilitating voluntary affordability. When looking at who is building Garage/Garden Suites, 72% of respondents have a household income greater than $100,000, suggesting that the people most likely to benefit from the voluntary affordability associated with Garage/Garden Suites are family members of wealthy individuals. If rented to people who the owners did not know, it was found that on average, occupants were charged slightly below market rate. With this in mind, Garage/Garden Suites should not be viewed as the universal remedy to the affordable housing crisis in Canada, but as one important piece of the affordable housing puzzle. Policy changes that make Garage/Garden Suites more accessible and affordable for middle-income Canadians to build may enable greater numbers of Canadians to reap the benefits associated ADUs.

Acknowledgements

Thank you to Karen Foster, my supervisor, for guiding me through this process, and to the College of Sustainability for its ongoing support and ingenuity in enabling students to follow their passions and be the change they want to see in the world. Thank you to my partner, Travis, for being as weirdly excited about ADUs as I am, and encouraging me to reach new heights. To my father, Rick, for your ongoing support and for being the best chauffeur a student researcher could ask for. To my mother, Joyce, thank you for your endless love and support, and for shaping me into the woman I am today. Finally, thank you to my participants – without you this research would not have been possible.

Chapter 1: INTRODUCTION

Statement of the Problem

Housing costs in Canada have steadily increased relative to incomes (Bunting, Walks, & Filion, 2004; Gurstein, 2012), and the availability of affordable rental housing and homeownership has failed to keep pace with need (Gurstein, 2012). The factors behind increased stress on housing affordability are multi-faceted and deeply rooted in a combination of social, demographic, economic, and policy changes that have occurred over the past several decades (Bunting, Walks, & Filion, 2004). Beginning in the mid-1990s with the federal government's withdrawal of investment in affordable housing, Canadian housing policy has increasingly relied on private sector solutions to affordable housing. Up until very recently, the provision of affordable housing has largely been left up to the market (Seasons, 2014; Hulchanski, 2007), and responsibility for providing affordable housing has rested with provinces and municipalities. However, as of March 2016, with the release of the 2016 Federal Budget, new federal funding has been allocated to affordable housing, of which $208.3 million will go towards supporting the construction of affordable rental housing through the Affordable Rental Housing Innovation Fund (Federal Budget, 2016). In the last ten years in Canada, policies aimed at promoting residential infill development have been adopted at provincial and municipal levels as a way of encouraging the private sector to develop housing that may increase affordable housing stock while increasing urban density (CHMC, 2015, Infranca, 2014). Over the past decade, various municipalities across Canada have loosened zoning restrictions on existing single-family residential lots to allow for infill developments of various types in an attempt to meet increasing demands for affordable rental housing as well as provide flexible and gentle densification (CMHC, 2015). This is seen most prominently in cities such as Vancouver where laneway

housing has taken off. Such policies are characteristic of a neoliberal shift away from the public provision of affordable housing in Canada towards reliance on the private sector and individuals to meet housing needs (Hackworth, 2007, Bunting & Filion, 2010). It should also be noted that for the purpose of this study, the term "affordable housing" means housing costs that are below 30% of household income. This is consistent with CMHC standards whereby housing is considered affordable if it costs less than 30% of before-tax household income (CMHC, n.d.).

My thesis examines infill development as a form of non-traditional, innovative rental housing, with a focus on affordability. Focusing on Edmonton, Alberta, Canada as a case study, I examine a form of infill referred to as Accessory Dwelling Units (ADUs), which are additional housing units placed on existing single-family residential lots, usually as small stand-alone backyard homes, or as basement suites. They are most often owned and rented out by the owner of the principal dwelling (Foley, 2016). For the purpose of this study, I focus on a specific type of ADU, referred to as a detached ADU, or "DADU." In Edmonton, these types of ADUs are termed Garage/Garden Suites by the City of Edmonton (City of Edmonton, 2015). They take the form of either a unit above a detached garage or of a ground-level backyard home and are sometimes referred to as laneway homes.

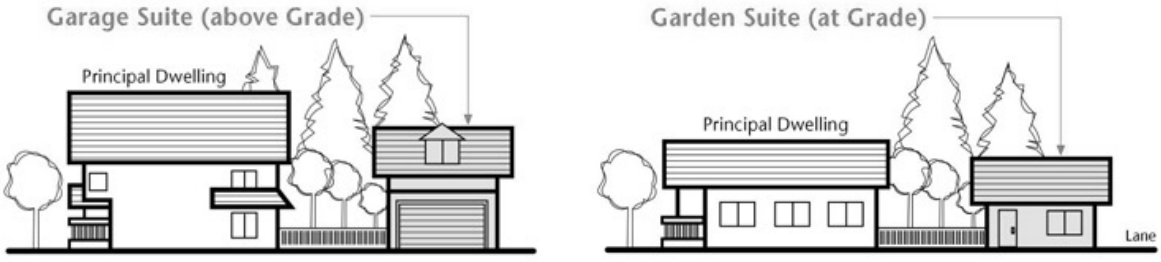


Figure 1: City of Edmonton (2017). Secondary Suite FAQ. Retrieved from https://www.edmonton.ca/city_government/urban_planning_and_design/secondary-suites-faq.aspx

From this point on, when referring to ADUs or DADUs in an Edmonton context, the terms Garage/Garden Suite are used to maintain consistency.

ADUs are claimed to be a form of infill development with many social, environmental, and financial benefits, which differ from traditional housing developments, apartments, or other styles of infill. ADUs have the potential benefits of increasing affordable housing stock, meeting housing needs across diverse demographics, allowing for aging in place, increased density, and potentially reducing the "Not-in-my-backyard" (NIMBY) effect associated with larger scale infill or traditional affordable housing (CMHC, 2015; Nichols & Adams, 2013; Wegmann & Chapple, 2012; Chapman & Howe, 2001; Brown & Palmeri, 2014; Foley, 2016). ADUs thus represent an "incrementalist" approach to affordable housing and urban densification as opposed to large-scale, top-down development of affordable housing and master-planning (Huchzermeyer & Misselwitz, 2016). ADUs are often rented to family or friends at low to ultra-low rates, sometimes in exchange for non-monetary services such as lawn maintenance or childcare (Nichols & Adams, 2013). Sometimes referred to as "granny flats," ADUs are promoted as housing that meets the needs of seniors who are looking to downsize while remaining in their existing neighbourhoods. Increasingly, ADUs are also being used to house younger people who may not be able to afford higher rents or homeownership (Nichols & Adams, 2013; Foley, 2016).

Given the distinctive characteristics of ADUs and the unique relational arrangement between owner and occupant, research suggests they may be functioning as a form of "voluntary affordable housing" whereby owners agree to charge low to ultra-low rental rates, contrary to what would conventionally be seen as being in the best financial interests of the owner (Brown & Palmeri, 2014). Understanding how ADUs, particularly Garage/Garden Suites, function as a form of affordable housing, based on the idea of voluntary affordability, adds to a better

understanding of how these dwellings may contribute to affordable housing stock. They may provide an interesting means of offering affordable housing, which is especially relevant given the current political climate in which affordable rental housing has seemingly been made a priority, but against a backdrop of austerity that often prohibits adequate *public* investments.

Although there are many suggested benefits to ADUs, there is currently a lack of empirical evidence and concrete understanding about their use and no clear proof of whether or not the promotion of ADUs at the planning and policy level is positively affecting affordable housing. Given the current political context in which significant federal funding has been put aside for innovative forms of affordable rental housing, the potential for ADUs to function as a form of affordable housing based on the idea of voluntary affordability must be further explored. Currently, there is a lack of knowledge on how ADUs are used, who uses them, if they serve as a form of affordable housing, and what influence the relationship between owner and occupant has on affordability and motivation to build.

Purpose of Study

My analysis has two main purposes. First, it aims to explore and understand how the relationships between owners and occupants of ADUs may facilitate "voluntary affordability." Second, this is the first research done on Garage/Garden Suites in Edmonton and has resulted in an original dataset that includes data on Garage/Garden Suite use, occupancy, construction, and demographics. Given that the prevalence of Garage/Garden Suites is growing in Edmonton, as shown by Figure 2, establishing a starting point for future studies on this topic is important.

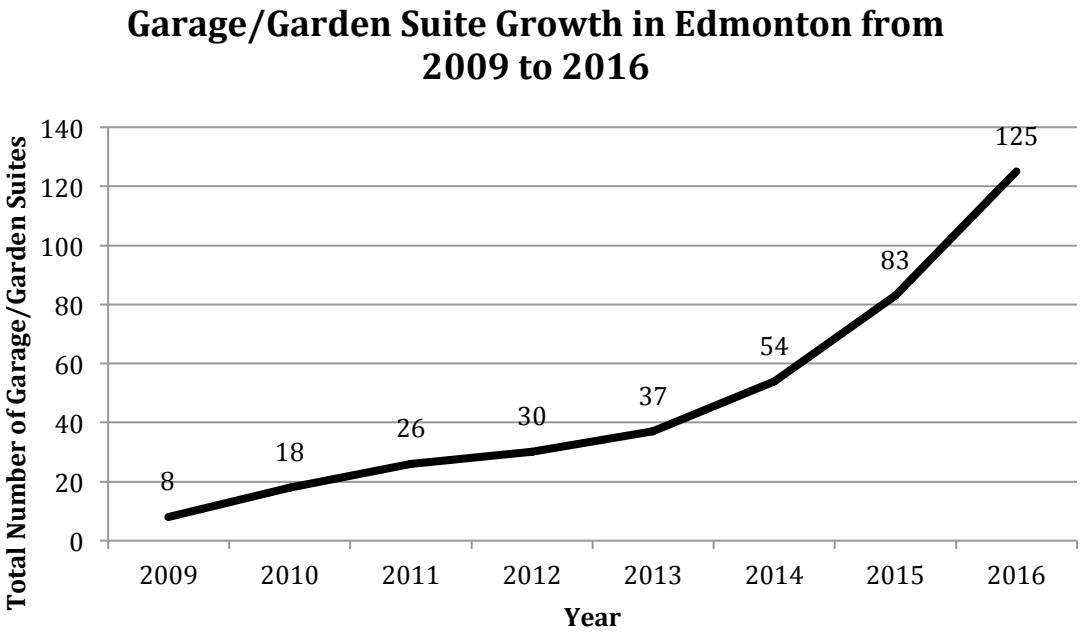


Figure 2: Edmonton Open Data Catalogue. (2016, October 22). General Building Permits filtered for Garage/Garden Suites.

My analysis addresses the knowledge gaps surrounding Garage/Garden Suites in Edmonton, including how they are used, who uses them, if they serve as a form of affordable housing, and what influence the relationship between owners and occupants has on affordability and motivation to build. With much of the literature suggesting ADUs offer a wide range of benefits including the provision of affordable rental housing to a broad range of households, thus meeting the needs of changing demographics while simultaneously decreasing sprawl (CMHC, 2015; Been Gross, & Infranca, 2014; Chapple et al., 2011), this research demonstrates the real-life implications and outcomes of such dwellings. Importantly, one of the main purposes of my research was to address the question of voluntary affordability by examining how the relationship between owner and occupant may result in the production of affordable rental housing. The growth of affordable rental housing outside of the public sector may suggest that the move towards private sector provision of affordable housing has resulted in individuals

turning to alternative forms of affordable housing based on relational and social ties. As a result, findings from my research have the potential to inform policies on urban planning and sustainable neighborhood development.

Assessing Garage/Garden Suites as a Form of Affordable Housing in Edmonton

The foregoing research objectives were achieved using quantitative survey methods whereby surveys were distributed to all owners of Garage/Garden Suites in Edmonton. This study focuses on Edmonton because it is a municipality, which, as of April 2015, has relaxed restrictions of the development of Garage/Garden Suites to allow them on almost all single-family residential lots in the city. Edmonton has adopted a relatively progressive stance towards infill, shown through the development of Edmonton's Infill Roadmap and Evolving Infill Strategy (City of Edmonton, 2016). My research looked specifically at how Garage/Garden Suites are being used in Edmonton, who is using them, and if they serve as a form of affordable rental housing. Focus was given to the nature of the relationship between the owner and occupant of the Garage/Garden Suites to determine how, or if, the relationship influences affordability and function of the suite. The question of "voluntary affordable housing" (Brown and Palmeri, 2014) and the charging of ultra-low rents associated with ADUs based on the relationship between owner and occupant was a main focus.

Delimitations and Limitations

The major delimitation of this study was the exclusion of attached ADUs, including basement and illegal suites, from the study. This allowed for a more detailed and targeted analysis of Garage/Garden Suites and an investigation into the unique characteristics of detached

ADUs, including the potential for them to be more suitable, adaptable, and desirable to a wider range of owners and occupants given the level of accessibility, independence and privacy associated with them. Additionally, given the scope, time and resources available for this study, limiting the study population to Garage/Garden Suite owners was more feasible. This study provides the foundation for further research into other forms of infill and ADUs. It will also establish a baseline data set for Garage/Garden Suites in the Edmonton from which further research and comparisons between alternative forms of infill can be derived.

Limitations of this research mainly arise from difficulties in gaining access to the target population. A full list of municipal development permits for the City of Edmonton from 2009 to 2016 is accessible through the City of Edmonton's online Open Data catalogue and was filtered for permits issued for the development of Garage/Garden Suites. This filtered list was used for obtaining contact information for individuals who have had permits issued for the development of Garage/Garden Suites. Individuals were then contacted door-to-door to participate in the survey. Given that a secondary data set was used for contacting participants, trustworthiness and completeness of the data set has to be assumed. Given the sampling frame, direct conclusions drawn from the surveys are limited to owners of ADUs in Edmonton, Alberta between October 2016 and January 2017 – the period in which surveys were conducted. This being said, data collected and conclusions drawn from this research contribute to an emerging dialogue surrounding ADUs, which extends farther and broader than the exact context in which this study has been carried out. The goal of this research is to produce input into the conversation happening on ADUs, not to "generate ultimate, unequivocally verified knowledge" (Flyvbjerg, 2001, p. 139). As such, the findings of this study are still generalizable beyond the study

population and timeframe in that the results *can reasonably be used* to inform actions in other places and times. Limitations surrounding response rates must also be considered.

Significance of the Study

Understanding who lives in Garage/Garden Suites, their relationship to the owner of the suite, and their rental arrangements provides insight into how Garage/Garden Suites may act as an affordable housing option. With federal funding for affordable housing having decreased significantly since the 1990s, and private sector led small-scale development, enabled through liberal zoning strategies, is increasingly being embraced by municipalities (CMHC, 2015), infill housing such as Garage/Garden Suites, must be further examined for their purported utility. Additionally, the increase in condo developments and continued prioritization of homeownership over rentals starts in Canada, has led to a reduction in housing options for lower-income earners (Seasons, 2014; Bunting et al., 2004). The recent attention given to the need for more affordable rental housing by the federal government speaks to the realization Canada lacks an adequate number of rental housing units given current and future demands. This was reflected in the recent 2016 Federal Budget in which $208.3 million over five years was allocated towards an Affordable Rental Housing Innovation Fund to support the construction of up to 4,000 affordable housing rental units and $500 million was allocated for an Affordable Rental Housing Financing Initiative to provide low-cost loans to municipalities and housing developers to construct affordable rental housing (Federal Budget, 2016). Given the recent increase in federal investment in affordable rental housing, understanding how Garage/Garden Suites may serve as a form of innovative affordable rental housing will be a key piece of information moving forward. This study provides additional insight into the efficacy of market-based housing strategies in meeting

the needs of lower-income Canadians. It also contributes to an emerging body of literature on ADUs and functions as a foundation on which to build further studies.

Chapter 2: REVIEW OF THE LITERATURE

The bodies of literature covered by this review provide the background necessary for understanding Accessory Dwelling Units (ADUs), the current state of affordable housing in Canada, and Edmonton's policies on ADUs. The literature reviewed also informs this study by providing insight into the suggested benefits of ADUs, their unique characteristics, and how they may function as affordable housing. Situating ADUs within an affordable housing lens allows for a more comprehensive analysis of the concept of "voluntary affordability" (Brown & Palmeri, 2014). It also provides insight into how ADUs may be acting as a form of affordable housing due to relational factors between owners and occupants, but also as a response to the need to fill gaps created by the decline of traditional affordable housing. Currently, the majority of the literature on ADUs consists of policy summaries or claims about the potential of ADUs, and as of 2000, only three full scale, survey-style studies that generated original data on ADUs have been published. Of these studies, The *Portland Survey of ADU Owners*, interpreted by Brown & Palmeri (2014), helped provide the foundation for the questions posed by this study. The findings from the *Portland Survey of ADU Owners* and the work of Brown & Palmeri (2014) surrounding "volunteer" affordability and the importance of the relationship between owner and occupant in facilitating affordable housing has provided a good starting point for this research.

Given that there is limited academic literature directly addressing ADUs and Garage/Garden Suites specifically, sources have been grouped thematically into four general bodies of literature. The first group provides the contextual and historical background necessary for understanding affordable housing in Canada. This section also demonstrates how ADUs fit into the larger trajectory of a progressive offloading of responsibility for affordable housing from the government to the market, where corporations and individuals are expected to come up with

market solutions to the problem. The second body of literature focuses on the suggested benefits of ADUs. This section examines various works of literature on the social and environmental benefits of ADUs and how they may meet the needs of different demographics. The third section looks at how ADUs function as a form of affordable housing with a focus on voluntary affordability and the informal nature of ADU rental arrangements. It is within this section that I will largely situate my study, as there appears to be a lack of understanding on the role played by social relations in the production of voluntary affordability. The fourth and final body of literature in this review considers Edmonton's policies pertaining to Garage/Garden Suites and the current status of ADUs in Edmonton.

Affordable Housing in Canada

This section provides a brief overview of the affordable housing landscape in Canada, detailing the lack of investment by the federal government over the past two decades, up until the release of the 2016 Federal Budget in which affordable housing was identified as a priority. Literature related to core housing need and homelessness is also included in this section to show the outcomes associated with Canada's lack of affordable housing.

Looking back over the past 20 years at Canada's stance on affordable housing, it becomes evident that the federal government took an increasingly hands-off approach. Starting in the 1990's, with the withdrawal of investments in affordable housing, the federal government has continued to cut spending and download the responsibility of the provision of affordable housing onto provinces and municipalities (Gaetz et al., 2014; Seasons, 2014; Wellesley Institute, 2010). Over the past two decades, direct investment in affordable housing has declined dramatically, and market solutions to spur private sector development of affordable housing have been made a priority (Gaetz et al., 2014; Seasons, 2014; Wellesley Institute, 2010). This can be

seen in Figure 3 where a steady decline in federal funding for housing is clearly evident (Wellesley Institute, 2015). In their review on the state of homelessness in Canada, Gaetz et al. (2014) offer insight into the historical decline in federal support for affordable housing and provide an analysis of the current affordable housing supply existing in Canada. By utilising a variety of data from CMHC and other public sources, they demonstrate the connection between precarious housing and homelessness in Canada and suggest that ending homelessness depends on increasing investment in affordable rental housing.

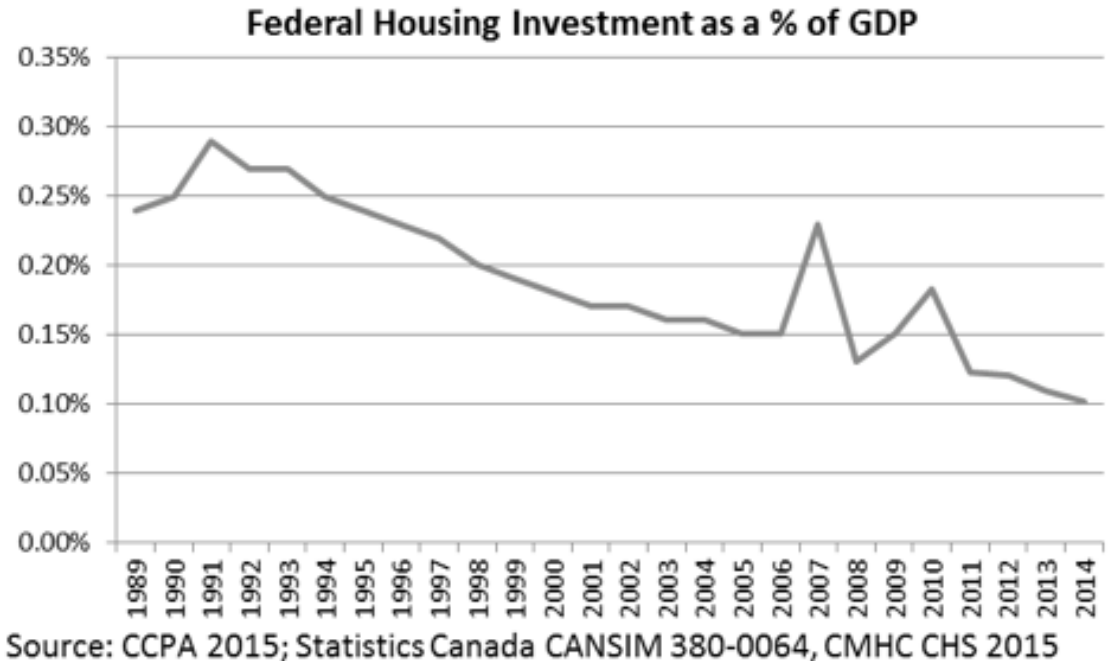


Figure 3: Decline in federal investment in housing from 1990s onward. Adapted Wellesley Institute. (2015). Access to Housing - HEIA in the Federal Election Retrieved from http://www.wellesleyinstitute.com/housing/access-to-housing-heia-in-the-federal-election/

Taxation policies favouring homeownership over rental units combined with the removal of rent control, has also contributed to reduced rental housing supply in Canada and caused rental rates to increase (Seasons, 2014; Bunting et al., 2004). Lack of adequate investment, alongside weak government policy has led to increasing numbers of Canadians falling into core housing need and being considered at risk for homelessness (Bunting et al. 2004). The prioritization of

homeownership over affordable rental housing through disproportionate investments has essentially created a dual housing system in Canada where ownership is prioritized over renting and market mechanisms are relied upon for the provision, allocation, and maintenance of housing (Hulchanski, 2007, Seasons, 2014). This has led to increased rates of homelessness, as well as deepening divisions between socio-economic groups (Hulchanski, 2007). Figure 4 demonstrates the dual-nature of Canada's housing system by showing housing starts by intended market (Government of Canada, 2015). This figure shows that rental starts have remained stagnant around 10%.

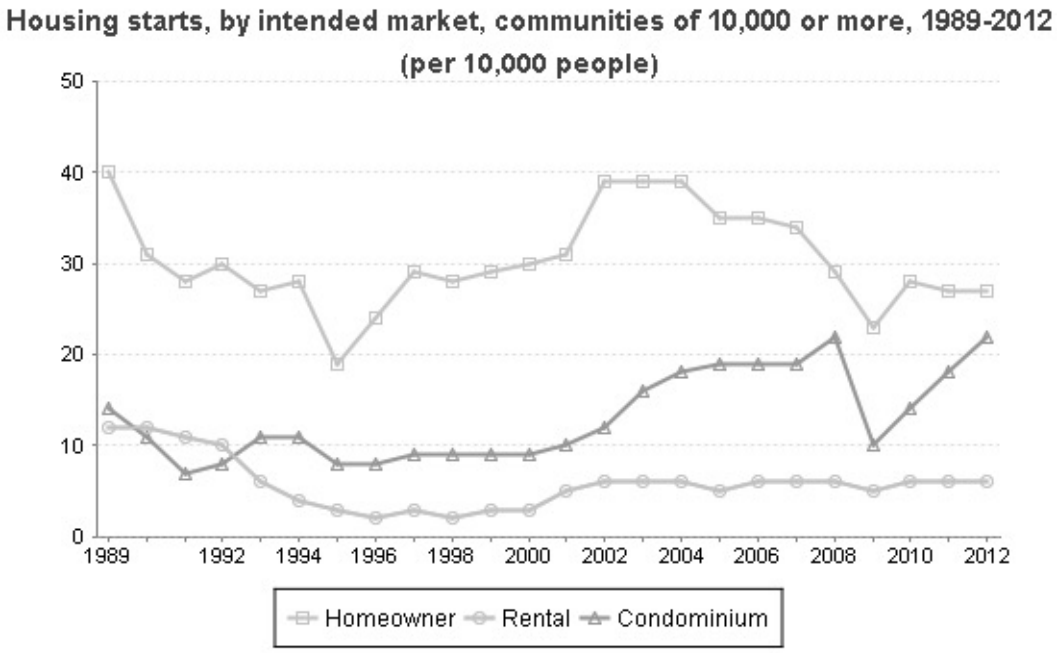


Figure 4: Housing starts by intended market from 1990s to 2012. Adapted Government of Canada. (2015). Employment and Social Development Canada. Housing - Housing Need. Retrieved from http://well-being.esdc.gc.ca/misme-iowb/.3ndic.1t.4r@-eng.jsp?iid=41#foottext_3

Hulchanski questions the growing inequality between rich homeowners and poor renters and suggests that reliance on market solutions to affordable housing are ineffective given that people who occupy low-income brackets are most in need of affordable housing and lack the

income necessary to generate effective market demand. He ultimately argues that Canada's housing system is discriminatory in the way it treats renters and owners. Decreased investment in affordable housing and the dismantling of social housing programs in the 1990s has led to increasingly precarious housing conditions and indirect costs associated with inadequate housing and homelessness (Hulchanski, 2007, Gaetz et al., 2014). The arguments made surrounding the duality and inequity of Canada's housing strategy are supported by CMHC (2014) data that shows who is most likely to be in core housing need. Renters are much more likely to be in need with 26.4% of renters in need compared to 6.5% of owners (CMHC, 2014). Given that 30% of Canadians are renters (CHRA, 2014) and that renting is the most viable option in terms of affordability for low-income earners (Seasons, 2014), there is consensus in the literature that a clear gap exists in the provision of housing where it is most needed, especially considering the fact that most new housing starts in Canada are being built for owners rather than renters (Wellesley Institute, 2010; Gaetz et al., 2014; Hulchanski, 2007).

With all the above being taken into consideration, it seems that the state of affordable housing in Canada has been in decline for several decades as the federal government continually downloaded the responsibility of affordable housing onto provinces and especially municipalities. In most cases, municipalities have been forced to assume greater responsibility for delivering affordable housing, yet have not been provided the financial resources to meet these responsibilities. As such, there has been greater reliance on the private sector, including large corporations, small-scale developers, and individuals, to make up this short fall. However, the 2016 Federal Budget signalled the incoming Liberal Government's prioritization of affordable housing. In the 2016 budget, $208.3 million over five years was allocated towards an *Affordable Rental Housing Innovation Fund* to support the construction of up to 4,000 affordable

housing rental units, and $500 million was allocated for an *Affordable Rental Housing Financing Initiative* to provide low-cost loans to municipalities and housing developers to construct affordable rental housing (Federal Budget, 2016). This presents an interesting turn in the recent history of affordable housing in Canada, as the federal government recognizes the need for more affordable housing, particularly rental housing, and appears prepared to fund it.

The body of literature presented in the above section provides the context necessary for making sense of ADUs within the Canadian housing landscape and suggests that ADUs may represent a "market solution," to affordable housing (Yates & Wullf, 2005, Season, 2014). With new funding available for innovative affordable rental housing solutions, there is potential for the Canadian government to fund and support the development of ADUs, thus representing a combination of public and private efforts towards solving the affordable housing crisis and extending the development of ADUs beyond people who have the initial social or financial capital to access them. This could have significant implications for the growth and spread of ADUs across Canada.

Taken together, these articles and data indicate that relying purely on market mechanisms for the procurement of affordable housing is not meeting the needs of Canadians. Market dependency and an overall lack of investment in affordable housing has created conditions in which large portions of the population are left in core housing need and where alternative housing solutions, such as ADUs, enabled through government policies, have been touted as potential solutions to the affordable housing crisis (Nichols & Adams, 2013; Seasons, 2014; Wegmann & Chapple, 2012; Yates & Wullf, 2005). With federal funding now potentially available to support the growth of ADUs, this research is being conducted at a critical time and could be influential in shaping Canada's rental market.

The Benefits of ADUs

This section reviews some of the common benefits associated with ADUs. It also explores how ADUs may meet the demands of diverse demographics. A number of benefits are said to be associated with ADUs including, "enhance[ing] the social stability and mix of neighbourhoods with little or no negative impact on the physical character of the neighbourhood" (Government of Massachusetts, 2017), reducing sprawl and conserving land, and increasing the efficiency of land, water, and energy use by utilizing existing infrastructure (Government of Massachusetts, 2017; Complete Communities, 2016; Raleigh Backyard Dwellings, n.d). Financial benefits are also provided to owners and renters of ADUs, local businesses, schools, and the municipalities in which they are exist. For homeowners, financial benefits are derived from additional rental income, and for renters, in the form of affordable housing and potential resource sharing with the owner (Complete Communities, 2016; Raleigh Backyard Dwellings, n.d.). Local businesses and schools benefits from an increase in population density and demographic diversity in the area, while municipalities benefit from not having to extend utilities and services into new suburban developments (Government of Massachusetts, 2017; Raleigh Backyard Dwellings, n.d). Municipalities also benefit from increased tax revenue (Government of Massachusetts, 2017). Social and community benefits are also associated with ADUs as they create living situations in which companionship, networks of care, and assistance can be fostered. For example, "homeowners and ADU occupants may choose to create arrangements in which childcare, light maintenance, or other services are provided in exchange for reduced rent...[this is] especially significant for seniors, as they can support aging in community" (Complete Communities, 2016).

Of the many supposed benefits of ADUs, much of the literature focuses on their ability to function as a flexible, adaptable form of housing that can transition through the life span and meet the needs of changing and diverse demographics (Chapman & Howe, 2001; Chapple et al., 2011). Sometimes referred to as "granny flats," or "elder cottages," ADUs have been recognized for their potential to function as senior housing that allows for aging in place (Chapman & Howe, 2001). However, more recently, ADUs are being considered for their potential to serve younger generations who may not be able to afford more expensive accommodations, and for their potential to serve middle aged people by providing an additional rental income (Nichols & Adams, 2013). This section helps explain why the characteristics associated with ADUs are seen as beneficial by showing how their function aligns with current demands, desires, and needs on the part of both governments and citizens. It includes an examination of articles by Skaburskis (2002), Nichols and Adams (2013) and Chapman & Howe (2001) related to demographic change, housing demand, and the ability of ADUs to meet these demands.

In Canada, demographics are currently shifting so that over the next 10 to 20 years we will witness increases in the number of seniors who will require appropriate housing and care services, young adults migrating to urban areas, and an influx of immigrants moving to cities (Walter-Joseph, 2015; Skaburskis, 2002, Infranca, 2014). A growing senior population combined with the rise of the so-called Millennial Generation – people born between 1980 to 1999 – and an increase in immigration can be expected to produce a demand for housing that is flexible, affordable, and adaptable to lifestyle needs across cohorts (Nichols & Adams, 2013; Skaburskis, 2002). When considering the Millennial Generation, certain trends can be observed. In terms of housing preferences, the preference of young people can be understood as a response to lifestyle changes, economic circumstances, and financial resources. Proximity to urban amenities,

employment opportunities, and transit, as well as freedom from house maintenance and increased security have been identified as a trend in Canadian housing preferences across younger demographics (Walter-Joseph, 2015; Moos, 2012; 2014, Moos et al, 2015). Young people also show housing preference towards increased density and multifamily units with factors such as decreased income, smaller household size, and affordability concerns largely driving these preferences (Moos et al, 2015, Bunting et al., 2004, Walks, 2009). For older demographics, including the Boomer Generation born between 1946 and 1964, housing preference and choice are dominated by lifestyle and health related factors and demonstrate a desire to stay in original homes and neighbourhoods (Skaburskis, 2002; Weeks, Keefe, & Macdonald, 2012). However, it should be noted that whether aging populations choose to age in place or downsize, depends on the choices made available to them through infrastructure provision and planning policies that shape housing markets (Moos, et al., 2015).

Importantly, Canada's shifting demographics can be expected to produce a demand for smaller housing units, due to an increasing number of seniors living alone and an increasing number of young adults delaying marriage, reducing family size, and choosing to live alone (Infranca, 2014). However, demand for affordable multi-generational housing can also be expected to increase due in large part to the rising immigrant share of the population who are more likely to desire multi-family living arrangements (Infranca, 2014). Projections suggest that migratory increase, primarily from immigration, is likely to account for more than 80% of Canada's population growth beginning in 2031 (Statistics Canada, 2015). A growing number of seniors who wish to have moderate care in the home while maintaining ties to family and a certain level of independence, will also increase demand for multi-family and multi-generational accommodations (Mann-Lewis, 2014). Overall, an increase in demand for housing that is

flexible and amenable to multi-generational adaptations whereby children, adults, and seniors can be all accommodated, can be expected over the next 30 years.

Nichols & Adams (2013) provide an examination of ADUs in terms of their ability to meet the financial, social, and personal needs and desires of a shifting and diverse population. They conclude that ADUs are a form of affordable, adaptable housing that meet needs and desires across the life span. They argue that restrictive zoning and the Not-In-My-Backyard (NIMBY) effect have made the wide adoption of ADUs difficult (Nichols & Adams, 2013). However, they note that municipalities are increasingly integrating ADUs into current and future housing strategies (Nichols & Adams, 2013) making the widespread adoption of ADUs a possibility in the future. Nichols and Adams (2013) expand upon the shifts in housing preferences alluded to by Skaburskis (2002) as they examine the ability of ADUs to provide flexible housing across demographics. In the case of aging Baby Boomers, they argue that homeowners may wish to age in place and to move into a smaller, more manageable sized unit such as an ADU. Similarly, they may have children who cannot afford to move into a home of their own and may use an ADU as a form of intra-generational housing in exchange for care services or help with maintenance (Skaburskis, 2002). Alternatively, homeowners may wish to have the benefit of an added rental income associated with an ADU and use it as a mortgage helper (CMHC, 2015).

The arguments provided by Nichols and Adams (2013) suggest that ADUs have the potential to function as an adaptable form of housing that is responsive to changing needs and demographics and that they may serve multiple purposes at different points in time. Potential functions of ADUs across the life cycle can be seen in Figure 5. However, the authors note that, "[ADUs are] not a magic bullet to conquer an impending affordable housing crisis, provide ideal

housing for aging in place…but [they] can represent a sustainable response to a growing shortage, increasing the supply of affordable housing, prevent sprawl, and conserve undeveloped land" (Nichols & Adams, 2013, p. 47). Although these arguments provide a good understanding of the way in which ADUs can *potentially* function, questions surrounding how they are actually used remain, and importantly, questions surrounding affordability go largely unanswered.

This section has outlined some of the major benefits associated with ADUs. It has also explored the present circumstances surrounding demographic trends and the ways in which ADUs have been positioned as a viable option to meet demands.

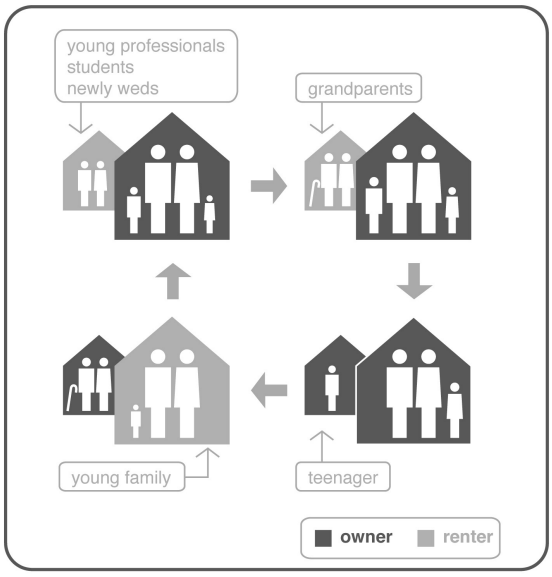


Figure 5: Life Cycle Diagram showing how ADUs function as flexible, adaptable housing across the life-course. Adapted Intentionally Small-Raleigh Backyard Cottages. (2012). Retrieved from http://intentionallysmall.com/tag/adu/

Accessory Dwelling Units and Affordable Housing

This section examines the affordability question, looking at literature that attempts to quantify whether ADUs are functioning as a form of affordable housing and literature that presents the idea of ADUs and voluntary affordability. Only three large-scale studies with original data on ADUs and affordability have been published between 2000 and 2014: Wegmann and Chapple (2012), Chapmann and Howe (2001), and Brown and Palmeri (2014). Ultimately, the findings of these studies suggest that affordability is based on a more nuanced relationship between owner and occupant and diverges from traditional notions of affordable housing. Findings from these studies prompt the question of how social relations between owners and occupants of ADUs influence affordability.

Studies by Wegmann and Chapple (2012) and Brown and Palmeri (2014) used methods of rental rate comparisons to determine whether or not ADUs are affordable relative to other housing options in the same area. Wegmann and Chapple (2012) conducted original research on ADUs in the San Francisco Bay Area and Brown and Palmeri (2014) evaluated and interpreted a survey conducted by the State of Oregon Department of Environmental Quality on ADUs. While Wegmann and Chapple (2012) concluded that ADUs are being rented for 19% less than non-ADU alternatives, making them a more affordable alternative (Wegmann & Chapple, 2012), Brown and Palmeri (2014) concluded that 80% of ADUs are going for market rate and that on average, ADUs were no more or less affordable than comparable apartments in multifamily developments. Although these studies present somewhat different findings, a closer analysis can trace the divergence to a difference in methods and analysis, in that the ADUs included in the Wegmann & Chapple (2012) study were smaller than the comparison rentals included, whereas Brown and Palmeri (2014) attempted to equalize size as much as possible through bedroom

count. A key finding from these studies is that both found a pattern of free or ultra-low rents associated with ADU development. Wegmann & Chapple (2012) found that 17% of ADUs were occupied for no cash rent (Wegmann & Chapple, 2012) and Brown and Palmeri (2014) found that 18% of ADUs included in their study were rented at ultra-low or zero rent, of which 85% were rented to family members or friends of the owner. These findings present an interesting case for ADUs as a form of unconventional, market-based, affordable housing. They suggest a more subtle relationship between owner and occupant and a divergence from traditional notions of affordable housing, leading to questions of ADUs and their functionality as a form of affordable housing. These findings demonstrate that the homeowner-developers behind ADUs are not acting like professional real-estate developers, and instead are choosing to prioritize something other than financial returns (Accessory Dwellings, 2014). These two studies further the claims made by Nichols and Adams (2013) in that they suggest that the relational link between owner and occupants of ADUs produces a type of affordable housing where ultra-low rents are combined with other services such as childcare or housework to create an informal, affordable housing arrangement based on non-monetary reciprocal exchanges (Wegmann & Chapple, 2012; Brown and Palmeri, 2014; Nichols & Adams, 2013).

Research conducted by Chapman and Howe (2001) is based on a combination of survey data from owners and occupants of ADUs in Seattle, Washington and existing literature. The focus of this study was to determine the extent to which ADU benefit the elderly. Questionnaires were sent out to 101 owners of ADUs in Seattle and included questions on why the unit was built, how much it cost, size, rent charged, and demographic details on who lives in each unit. Findings suggested that the average age of homeowners who added an ADU to their property was 50 and that the majority of units were added due to affordability arguments, including the

desire to receive extra rental income, to help with mortgage payments, and to increase the value of their home. In terms of occupants, Chapman and Howe (2001) state that the age of occupants in ADUs was "strongly bimodal, with 42% of the tenants age 30 or under, no tenants between the ages of 57 and 69, and 12% over the age of 65" (p. 644). The authors make note that tenants did not necessarily live in the ADU and that 14% lived in the primary dwelling with the owner living in the ADU. Although the authors claim a strong bimodal relationship, further examination of the data and figures presented suggests this may be an overstatement as close to 20% of tenants are ages 40 to 49. Findings related to reciprocal relationships between occupants and owners were also identified by this study. In line with the suggestions made by Nichols and Adams (2013) and Wegmann and Chapple (2012), Chapman and Howe (2001) found that 35% of participants reported that some assistance was exchanged between household such as vacation care, feeding pets, yard work, or getting mail. The flexibility and adaptability of ADUs to meet changing family needs across the life cycle was consistently noted across the literature (Nichols and Adams, 2013, Chapman & Howe, 2001). The ability of ADUs to overcome the NIMBY effect by maintaining neighbourhood character was also consistently noted (Nichols and Adams, 2013, Chapman & Howe, 2001). Chapman and Howe (2001) concluded that the suitability of ADUs for older people wishing to age in place depends on the community and type of ADU and that basement suites may be inappropriate and inaccessible for the elderly.

The findings of Chapman and Howe (2001) and Wegmann and Chapple (2012) were further supported and built upon in a paper by Brown and Palmeri (2014), which interprets and evaluates survey data from the Portland Survey on ADU Owners done by the State of Oregon. Using comparative and supplemental data from the American Housing Survey and US Census data in combination with survey data from the Portland Survey, Brown and Palarmi (2014)

addressed a wide range of topics and claims made about ADUs including whether ADUs provide affordable housing, serve older persons, are in demand, have a low environmental impact, or benefit the community economically. As outlined in the previous section, ADUs present a unique situation for affordable housing due to their tendency to be rented for ultra-low rents as a form of "volunteer" affordable housing, often to friends or family members. These findings coincide with the suggestions made by Wegmann and Chapple (2012) and Nichols and Adams (2013) that ADUs may be unique in that the relationship between owner and occupant creates different conditions for rental payments and relational exchanges. In terms of ADUs serving older people, results were similar to those found by Chapman and Howe (2001), with the authors suggesting that, "ADUs do serve older persons, both as places to live and as assets to own, but not to a greater extent than other forms of housing" (Brown and Palmeri, 2014, p. 2). However, Brown and Palmeri (2014) note that, "many Portland ADUs are owned by 55-64 year olds, who will be 65+ in a decade" (p. 2). These findings are very much linked to the arguments made by Skaburskis (2002) and Nichols and Adams (2013) on demographic shifts and subsequent shifts in housing needs and preferences, thus leading to the assumption that in a decade's time, the beneficial effect of ADUs for older persons will likely increase. Consistent with the majority of the literature (Nichols and Adams, 2013; Chapman and Howe, 2001), Brown and Palmeri (2014) claim that financial gain through rental income is the most common motivation for building an ADU, followed by a desire to house a family member or friend. Of the barriers to developing an ADU, construction cost, design constraints including zoning restriction and development specifications, and financing were cited as the most common barriers (Brown & Palmeri, 2014; Infranca, 2014).

The research by Brown and Palmeri (2014) serves as a foundational paper from which major research gaps can be identified. Specifically, as evidenced in the previous sections, the question of ADUs as a form of affordable housing remains largely theoretical and attempts to prove these claims remain limited. Given the unique nature of ADUs and the tendency for rental rates and affordability to be dependent on relational ties between owner and occupant, as well as the tendency for non-monetary services to function as a form of payment, ADUs may hold the potential to serve as a private sector form of affordable housing. In support of this claim, the authors state that, "the affordability experienced by tenants of low-rent ADUs can be concrete. In our anecdotal experience, some ADUs are housing individuals that might otherwise need government assistance – for example, a grandmother on a fixed income" (p. 38). Additionally, Brown and Palmeri (2014) suggest, "ADUs are a unique resource in terms of affordable housing: a form of development that produces some undeniably economical units, which nonetheless do not fit conventional expectations of 'affordable housing'" (p. 37).

Viewed in light of the state of affordable housing in Canada (Hulchanski, 2007; Gaetz et al., 2014), it seems reasonable to ask whether Canada's lack of affordable housing and transfer of responsibility for the procurement of affordable housing from the public to private sector is prompting people to turn to these informal types of housing arrangements. Understanding how the relationship between occupants and owners of ADUs impacts housing affordability may aid in developing an affordable housing strategy for Canada. With trends in zoning suggesting an increasingly important role for the private sector in the provision of affordable housing, and with demographic, economic, and social trends suggesting a need for flexible, adaptable housing that meets people's needs across the life span, pursuing policies that encourage the development of ADUs may be a positive step for housing in Canada. However, findings may suggest the need for

further government investment in affordable housing due to the inability of informal, private sector housing arrangements to meet housing needs. Much work needs to be done in understanding the on-the-ground impacts of ADUs and the policies that enable them. Research into who lives in ADUs, how they are being used, whether they are truly affordable, and whether they act as a form of market-based affordable rental housing is the aim of this thesis.

Garage/Garden Suites in Edmonton

This section of the literature review aims to establish the Edmonton-specific context in which this research takes place, and to provide background on policies surrounding Garage/Garden Suites in Edmonton. Compared to other municipalities across Canada, the City of Edmonton has adopted a fairly progressive stance towards the development of Garage/Garden Suites along with municipalities such as Ottawa (Thaker, 2015), Vancouver (City of Vancouver, 2016), and Victoria (City of Victoria, 2016). As of April 2015, the City of Edmonton removed location restrictions for Garage/Garden Suites, allowing them to be built on almost all residential lots in the city (City of Edmonton, 2015b). Height restrictions and site width requirements were also changed, making it significantly easier for Edmontonions to build Garage/Garden Suites. These changes were in line with Edmonton's Municipal Development Plan, titled *The Way We Grow*, in which the city committed to a goal of 25% new development occurring in existing neighbourhoods through infill, rather than new suburbs (City of Edmonton, 2010).

Infill in existing mature neighbourhoods has been an ongoing conversation in Edmonton and has largely been guided by a policy known as the *Mature Neighbourhood Overlay (MNO)*. The MNO provides direction as to the location and design of residential infill and is part of a zoning bylaw that guides development in mature neighbourhoods (City of Edmonton, 2016c). Along with the MNO, the Residential Infill Guidelines "provide direction to developers,

communities, City staff and City Council on how infill development in mature neighbourhoods should occur" (City of Edmonton, 2016). These two key pieces of policy are the most directly related to the Development of Garage/Garden Suites, however, the Municipal Governance Act (MGA), one of Alberta's largest pieces of legislation, also has an influence over infill. The MGA provides the foundation for how municipalities operate and how municipal and regional planning and development take place (Government of Alberta, 2016). This piece of legislation could have an impact on municipal growth strategies and the autonomy of the City of Edmonton to pursue infill specific strategies. Finally, the last key policy piece to consider in Edmonton is T*he City of Edmonton Cornerstones 2: Edmonton's Plan for Affordable Housing.* Cornerstones is a granting program originally created in 2006, "dedicated to increasing the supply and improving the condition of affordable housing" by facilitating upgrades to existing secondary, garage or garden suites or the construction of new suites (City of Edmonton, 2016b). This granting program operated from 2006-2011 and was renewed for a second term from 2012-2016. Cornerstones demonstrates the progressive stance the City of Edmonton has taken on policies related to Garage/Garden Suites and affordable housing.

With all these policies taken into consideration, it is important to determine the impact they have had on the growth of Garage/Garden Suites in Edmonton. Figure 6 shows the growth of Garage/Garden Suites from 2009 to 2016 and was created using the City of Edmonton's Open Data Catalogue. Figure 6 shows the exponential growth of Garage/Garden Suites in Edmonton over the past eight years and suggests that this trend will continue. With Garage/Garden Suites becoming increasingly popular, new policies in place to make building them easier, and federal funding potentially available for supporting their development, it is critical to gain a better

understanding of how Garage/Garden Suites are being used, who is using them, and what the relationship between owner and tenant has to do with affordability.

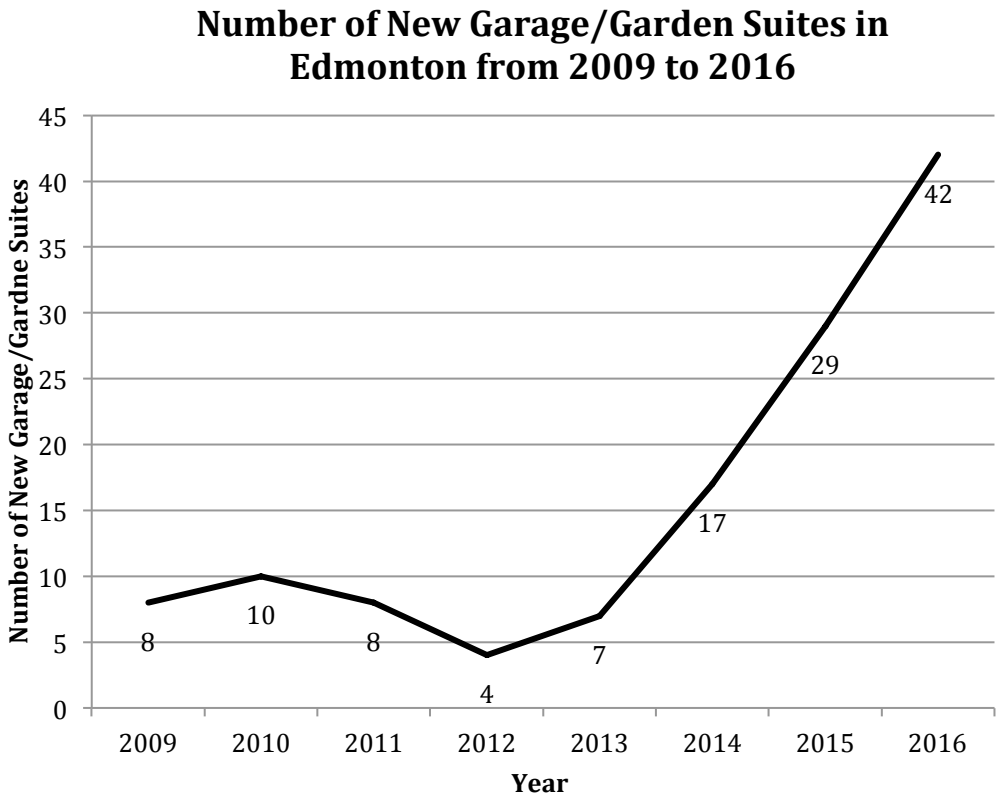


Figure 6: Edmonton Open Data Catalogue. (2016, October 22). General Building Permits filtered for Garage/Garden Suites.

The bodies of literature covered in the above section provide valuable insight into the current state of affordable housing in Canada, Edmonton's policies on ADUs, and previous research done surrounding ADUs. The literature also informs my study by detailing the suggested benefits of ADUs, their unique characteristics, and how they may function as affordable housing according to Brown and Palmeri's (2014) concept of "voluntary affordability." This literature review provides a strong foundation for exploring ADUs in Edmonton and demonstrates the need for further research on ADUs.

Chapter 3: METHODS

Research Design

This research follows a concurrent nested design, also referred to as an embedded design, whereby a mainly quantitative questionnaire includes several qualitative questions to allow for further exploration of topics. This design provides a numeric description of trends, beliefs, and opinions of a population (Creswell, 2014) while allowing for qualitative descriptions of specific behaviors and attitudes. In this study, a thirty-four-question survey was distributed to all people who own Garage/Garden Suites in Edmonton. Twenty-two questions in the survey were closed-ended so as to allow for easy comparisons and quantification, while twelve questions were open-ended to allow for more qualitative explanations to closed-ended questions.

Given the limited amount of research done on Garage/Garden Suites in Edmonton, and the lack of research done on ADUs in general, census survey methods have been deemed most appropriate for this study. Census survey methods allow for "the enumeration of an entire population…unlike a sample, which comprises a count of some units in a population, a census relates to all units in a population" (Bryman, 2015, p. 688). This method is suitable for gaining a broad understanding of Garage/Garden in an Edmonton context and will allow for comparisons between other municipalities. The survey instrument used for this research was adapted from the "Accessory Dwelling Unit Survey for Portland, Eugene, and Ashland, Oregon" (Horn, Elliot, & Johnson, 2013), as this is the only other major study done on ADUs in North America. The survey instrument used by Horn et al. (2013) was also selected because it includes all the necessary questions for a holistic analysis of Garage/Garden Suites in Edmonton. Several questions used in the survey by Horn et al. have been omitted due to their lack of relevance to an Edmonton context and questions 12 and 15 (see Appendix A) have been added to reflect a focus

on the relationship between owner and occupant. Survey questions are broken into four main categories: Garage/Garden Suite Use, Occupancy, Construction, and Demographics. The final survey instrument used for this research can be found in Appendix A. In total, 125 Garage/Garden Suites were included in the initial list of suites retrieved from the City of Edmonton's Open City Database, however, this total was brought down to 122 as 3 suites were excluded due to inaccurate addresses where no Garage/Garden Suite existed. In addition, 10 suites were excluded because they were entirely new builds where residents were not living on the property. This brings the total number of surveys distributed to 112. These surveys were distributed between October 30, 2016 and January 30, 2017 in Edmonton.

Assumptions and Rationale

Survey methods are best suited to the purpose of this research as the goal of this research is to contribute to a growing body of literature on ADUs, to better understanding Garage/Garden Suites in Edmonton, and to produce an original dataset. While interviews or focus groups may have produced more detailed, descriptive data, given how new this topic is, establishing baseline data for future studies and immediate comparison has been prioritized. The rationale behind using survey methods is to overcome the limitations of a purely qualitative approach and to provide greater breadth to a largely unexplored topic. Although there have been some quantitative studies that suggest a link between voluntary affordability and ADUs, (Brown & Palmeri, 2014; Wegmann & Chapple, 2012) further analysis in a different municipal context is necessary to provide greater understanding and to confirm these findings.

Edmonton was chosen as the location for the study because it is one of few Canadian municipalities to allow ADUs on almost all residential lots. As of April 2015, Edmonton amended its zoning bylaws to allow Garage/Garden Suites to be built on almost all residential

lots in the city. As of October 22, 2017, according to the City of Edmonton's Open City Database, a total of 125 permits for Garage/Garden Suites have been granted since 2009, making the total study population a manageable yet significant size and a census style survey possible. It must be assumed that participant responses are accurate and honest and that the sample frame is inclusive of the entire population being studied. It should also be noted that the City of Edmonton's Open City Database, the platform from which a completed list of Garage/Garden Suites was obtained, was assumed to be accurate and inclusive of all Garage/Garden Suites in Edmonton. That being said, during data collection, there was three addresses included in the Open City Database that were not ADUs, and were therefore excluded from the survey.

Data Collection Procedures

A complete list of Garage/Garden Suites permits in Edmonton was obtained from the City of Edmonton Open City Database (City of Edmonton, 2016d) on October 22, 2016. This list was created by filtering and sorting general building permits for Garage/Garden Suite permits. This database contains the addresses of people who have applied for Garage/Garden Suite permits from 2009 to current and was used to contact all participants. In total, at the time of the survey there were 125 permitted Garage/Garden Suites included in the list and in this research, thus making it a census survey. To allow for efficient data collection, all addresses were input into Google Maps and the most efficient route for delivering surveys was determined. A total of 13 zones of Garage/Garden Suites were mapped out using Google Maps in each of which approximately 10 Garage and Garden Suites were clustered. This ensured that a zone could be completed in an efficient and timely manner.

Surveys, along with an introduction letter and consent form, were delivered in person to residents living in the main home of properties with a Garage/Garden Suite. The assumption was

that the person living in the main dwelling was the owner of the Garage/Garden Suite, however, it was found that renters sometimes occupied the main dwelling and did not have information on the Garage/Garden Suite. In this case, renters were asked to give the survey package to the owner of the Garage/Garden Suite. Contact information was included in the survey package so that participants could contact the researcher once they completed the survey.

If no one was home at the time the survey package was delivered, a second contact attempt was made by returning another day. If at this point, if no one was home, the survey was left in the mailbox with instructions on how to complete the survey and to contact the researcher once the survey is complete to arrange a time to pick it up.

Data Analysis

Data analysis is presented in Appendix B in a similar format to that of the Accessory Dwelling Unit Survey for Portland, Eugene, and Ashland, Oregon. Appendix B presents a full data report that includes descriptive statistical tables for all survey questions. This allows for simple descriptions of the data to be presented and for information in the data to be summarized in a simple yet meaningful way. The header above each table includes the text from original survey questions, and an "n" value, which represents the applicable sample size for each question. It should be noted that several survey questions asked participants to "check all that apply" and that it was common for participants to choose more than one answer even for single response questions. To capture these multiple responses, all response options are included in the data table along with relative frequencies and percentage of respondents who chose each option. These specific tables do not include figures for "total" frequency and percentage because they sum to total larger than "n" and greater than 100%. All other tables include "total" figures for frequency and percentage.

As mentioned, some survey questions were open-ended or gave respondents the opportunity to give open-ended responses to an "other" category. Most of these questions are presented in text form in their original wording, however, some text was edited to protect participant's identity, to group slightly differently worded responses under the same wording, and to shorten long answers.

Given that this study aims to produce baseline data on Garage/Garden Suites, presenting data in statistical tables will be sufficient for establishing basic trends and patterns, and will allow for future analysis using crosstabs and multivariate analysis. In addition to the data tables, an interpretation of survey results is also provided in the Results and Analysis section along with highlights of important figures pertaining to voluntary affordability. In this section, responses to open-ended survey questions will be analyzed using a thematic analysis whereby patterns within the data are identified and reported. A posteriori coding was used for these questions as this leaves room for unexpected themes to emerge. This type of analysis, combined with a full data report, provides a comprehensive overview of Garage/Garden Suites in Edmonton while foregrounding the topic of voluntary affordability.

Chapter 4: RESULTS AND ANALYSIS

Description of Data Collected

At the outset of this research 125 permitted Garage/Garden Suites were included in the list of suites to be surveyed, however, during the data collection phase, ten suites were removed from the list as they were either incomplete or under construction at the time of the survey. An additional three were removed because they were not actually Garage/Garden Suites. Thus, the total population for this census survey was 112. Six potential participants refused to participate in the survey, and 34 surveys were delivered, but never returned, bringing the total number of completed surveys to 72. The overall response rate for this research was 64.29%.

This section details the results of the Garage and Garden Suite Questionnaire and includes a 'Highlights" section, as well as a high-level analysis of the data collected. It should be noted that while this section focuses on findings and results pertaining to how the relationship between owners and occupants of Garage/Garden suites may facilitate voluntary affordability, other interesting and noteworthy results have been included as well. Given that one of the purposes of this research was to create an original dataset for Garage/Garden Suites in Edmonton, all data collected for this research is presented in a full data report in Appendix B. In summary, the data show that Garage/Garden Suites are primarily being used as an alternative form of rental housing, distinct from other forms of rentals such as apartments, where the relationship between owner and occupant is directly correlated to the amount of rent charged. Specifically, owners of Garage/Garden suites choose to charge low to ultra-low rents to occupants who are family members, while occupants who are strangers are charged at or above market rate, thus demonstrating how Garage/Garden suites serve as a form of unregulated "volunteer" affordable housing dependent on relationship.

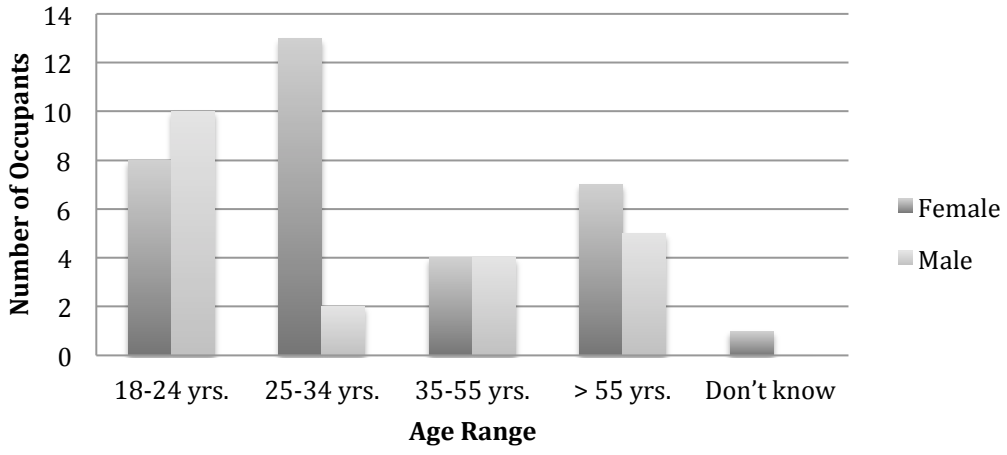
Highlights from the Garage/Garden Suite Survey

The following section provides highlights from the Garage/Garden Suite Survey. The data show that:

- When asked whether their relationship to the occupant of the suite influences how much rent they charge, 51% of respondents said yes. Of those who said yes, 15 out of 21 respondents made reference to charging less for a family member or someone they know compared to what they would charge a stranger.
- The total average monthly rent for a Garage/Garden Suite, regardless of the relationship between owner and occupant was $926. The average monthly rent for family members was $504. The average monthly rent for strangers was $1,154. In the survey, "family" was not defined and it was left to participants to categorize occupants accordingly.
- 73% of respondents are renting their Garage/Garden Suite as a primary residence, while 18% are using it as an extra space or workroom for occupants of the main dwelling.
- 44% of respondents said that their primary motivation for building their Garage/Garden Suite was to obtain additional rental income, 31% said their primary motivation was to have a separate living space for a household member or helper (adult child, senior parent, nanny, etc.), and 11% said they were motivated by the flexibility of the space and potential to be used in different ways in the future.
- The median cost to build a Garage/Garden Suite was $135,000.
- The average annual household incomes of respondents was on the high end with 45% of respondents having a household income of $150,000 or more, followed by 27% having an income $100,000 - $149,000. This can be compared to the City of Edmonton in which 33% of households earn above $100,000 annually (City of Edmonton Municipal Census, 2016).

- 36% of occupants of the suite were family, 12% were friends, and 52% were strangers. It should be noted that these categories were not defined in the survey and that respondents were allowed to classify people however they wanted.
- Garage/Garden Suites are associated with an average of 1.05 cars/dwelling, compared to the average for Alberta of 1.87 cars/dwelling (Government of Canada, 2008). This average pertains only to the occupants of the Garage/Garden Suite, not the principal dwelling.
- 42% of respondents said they completed some or all of the physical labour construction on their Garage/Garden Suite, while 44% said they designed the suite themselves.
- In total, 45% of respondents mentioned they financed the construction of their Garage/Garden Suite with cash savings, and 36% mentioned using a home equity line of credit.
- The average age of occupants shows a slight bimodal distribution as seen in Figure 7. No children were listed as occupants of Garage/Garden Suites in Edmonton.

Figure 7: Demographic Characteristics of Garage/Garden Suite Occupants

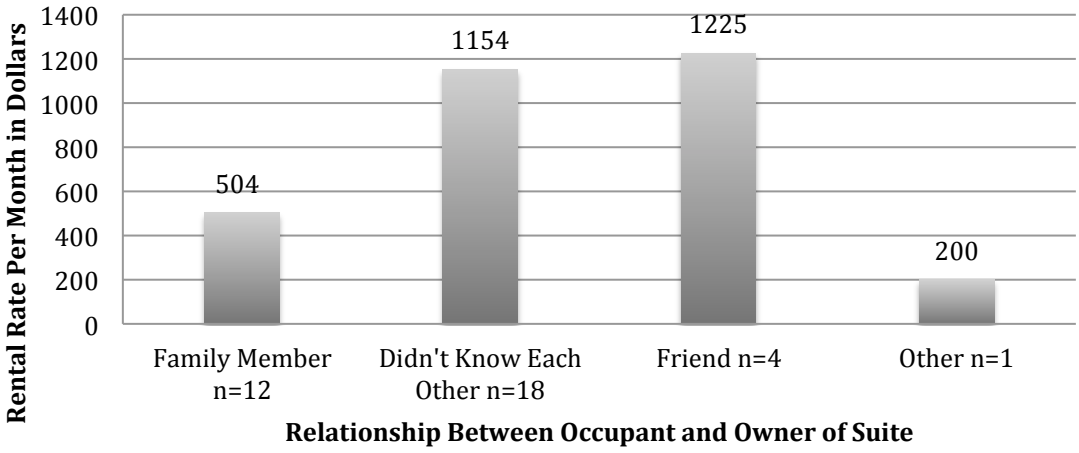


- Some of the top challenges identified by respondents were lot setbacks and height restrictions, design constraints, permitting process, minimum parking requirements, utility connections, and cost of construction.
- The neighbourhoods with the most Garage/Garden Suites are Griesbach and Ritchie, followed by Highlands and Bonnie Doon.

Data Analysis

The data suggest a clear association between rental rates and the relationship between owner and occupant of the Garage/Garden Suite. As demonstrated by Figure 8 and Figure 9, it is evident that lower rent is associated with Garage/Garden suites that are rented to family members, while higher rent is associated with suites rented to strangers. Note that in Figure 8, "Other" is a nanny who provides childcare services.

Figure 8: Relationship Between Owner & Occupant of Suite Versus Monthly Rental Rate

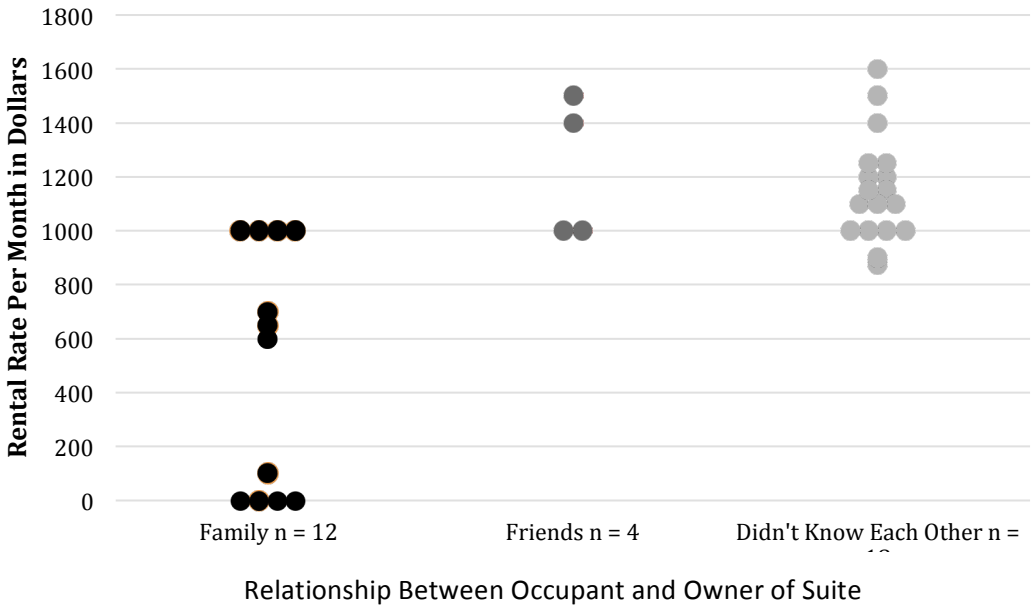


The average monthly rent charged to family members was $504, while the average monthly rent charged to people the owners did not know was $1,154. It should be noted of the

owners who rented to family, four of them charged $0 in rent, thus bringing the average monthly rent down from $672 to $504.

By combining the zero- and very-low-rent units, it was found that 25% of Edmonton's Garage/Garden Suites are <$700/month, which are considered affordable rents in Edmonton by many definitions. The data also indicated that 89% of the occupants of these free-or-clearly-below-market rentals are family members of the owner. A nanny who provides childcare services makes up the other 11%. Finally, using a one tail T-test, it was found that there is a statistically significant difference ($p < 0.01$) between renting to family and renting to strangers. The results of the T-test can be found in Appendix C.

Figure 9: Relationship Between Owner & Occupant of Suite & Monthly Rent



In comparison to CMHC's 2016 Rental Market Report for Edmonton, the average rent for a 1-bedroom unit in Edmonton was $1,000 (CMHC, 2016). 1-bedroom units are the closest available comparison for Garage/Garden Suites. This suggests that Garage/Garden Suites rented to family are rented at rates close to half the cost compared to the average rent for a comparable 1-bedroom unit in Edmonton, while Garage/Garden Suites rented to strangers show no significant difference in rental rate compared to the average rent for a similar unit. With data clearly suggesting that familial relationships are facilitating affordability in Garage/Garden Suites in Edmonton, it is also important to look at the affordability of Garage/Garden Suites as a whole, without looking at specific sub-sets based on relationships. It was found that the total average rent of Garage/Garden Suites in Edmonton is $926, which is slightly below avergage for a comparable 1-bedroom unit.

When asked whether their relationship to the occupant influences how much rent they charge, 51% of respondents said yes. Of those who said yes, 15 out of 21 respondents made reference to charging family or someone they know less than they would charge a stranger. Interestingly, although respondents said that they would charge less to someone they know, the data shows that friends were actually charged *more* than family and strangers. This being said, it should be noted that the sample size for "friends" was only n=4. This could suggest that the data on rental rates for friends may be less accurate and unusually high in comparison to family and strangers. When looking at the survey data, a number of responses to Question 15a ("In what way does your relationship with the occupants influence how much rent you charge?") specified familial relationships as a factor in charging less rent. This is seen in the following answers:

- "Mother in-law is disabled and wishes to remain living with family so this was the option."

- "I'm not going to charge my father who's a senior a lot for rent due to having a fixed income (plus he's a family member)."
- "We charge her nothing. If this was an unrelated we would charge at least $1,300 or $1,500 including utilities."
- "It is just enough to be mutually beneficial but I believe it is some what under for what an actual landlord would charge, considering the cost of basement apartments."
- "Student, family member, very respectful of the space and takes great care of it."

This data supports the idea put forward by Brown & Palmeri (2014) surrounding voluntary affordable housing as owners of Garage/Garden suites, who act as landlords, voluntarily choose to charge lower rent to occupants based on relationship alone.

Nearly half of the owners of Garage/Garden Suites surveyed here said their primary motivation for building their suite was to obtain additional rental income (44%), while the second most common reason was to provide a separate living space for a household member such as an adult child or elderly family member (31%). The third most common reason for building was to have additional living space to provide flexibility for future use (11%).

There is also a trend towards care networks being embedded in people's decision to build. A number of respondents stated they were motivated primarily by Garage/Garden Suites utility as an independent, yet close-by living space for a loved one who needs some form of care. This is demonstrated by the following answers to Question 23 ("Regardless of how the Garage/Garden Suite is currently being used, what was your primary reason for building the Garage/Garden Suite or purchasing the property with an existing Garage/Garden Suite?):

- "Separate living space for aging parent."
- "Built for adult child with developmental disability."
- "Was initially for parents but the stairs are too narrow and high so used for rental."

- "Built for friend (who has since moved out)."

In terms of care and reciprocity, only three respondents said they received some form of service from occupants in exchange for part or all of their rent (childcare and house/outdoor maintenance), suggesting that reciprocal behaviour plays a small role in the rental arrangements of Garage/Garden Suites in Edmonton.

When looking at who is occupying Garage/Garden Suites, there is a trend towards housing elderly parents in them. As seen in Figure 10, of the respondents who are renting to family, 55% of these occupants are parents of the homeowner, while 15% are the owner's adult children. The tendency for elderly parents to be housed in Garage/Garden Suites was supported in a response from one participant as they explained that, "[they] built the suite for [Mary's] mom, not for rental purposes, and it gave her a very affordable option ($160K plus no condo or resident fees)." Furthermore, when looking at responses to how owners plan on using their suite in the future, "other " responses suggested that owners plan on housing adult children, nannies, or caregivers in their suite.

Figure 11: Familial Relationship Between Owner & Occupant of Garage/Garden Suite

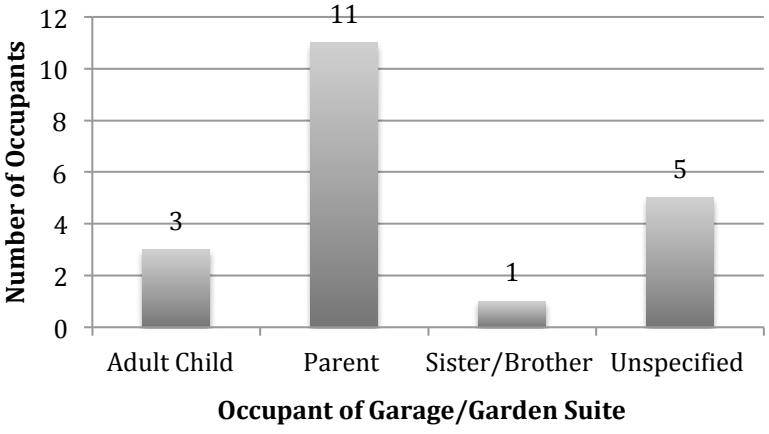
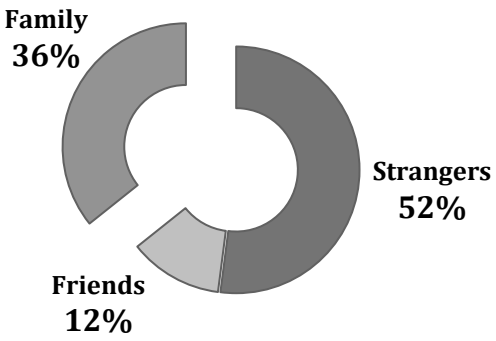
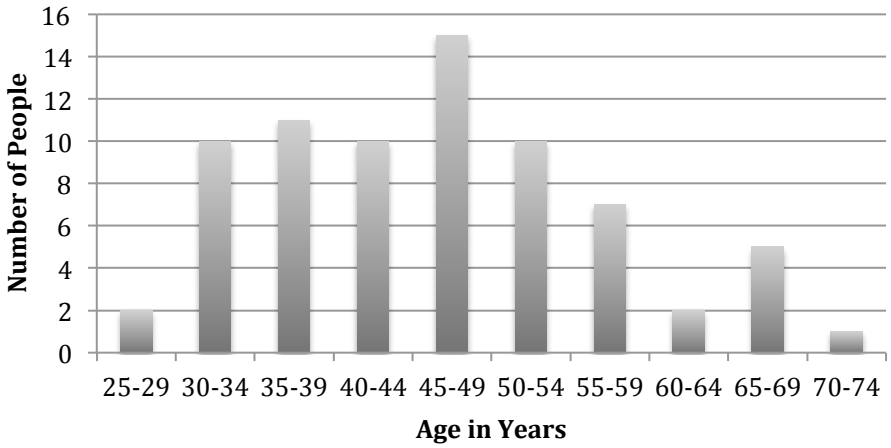


Figure 10: Relation Between Occupant & Owner of Garage/Garden Suite



Given the demographic of owners, as seen in Figure 12, the data shows that most people decided to build their garage suites in their mid- to late-forties, suggesting they may be thinking about the future use of the Garage/Garden for aging parents or adult children. This is seen in several open responses from participant's as they stated that, "if personally had a family i.e. children in the future, could be used as a nanny suite (far in the future)" or as the "primary residence for caregiver or child when in post secondary school." However, as stated earlier, additional rental income was the primary motivation for building for most respondents, followed closely by accommodations for family members, so it can be assumed that owners across age ranges are also thinking about Garage/Garden suites as a mortgage-helper after buying a home so that they can "pay down [their] mortgage faster in the long run."

Figure 12: Age of Owners of Garage Suite

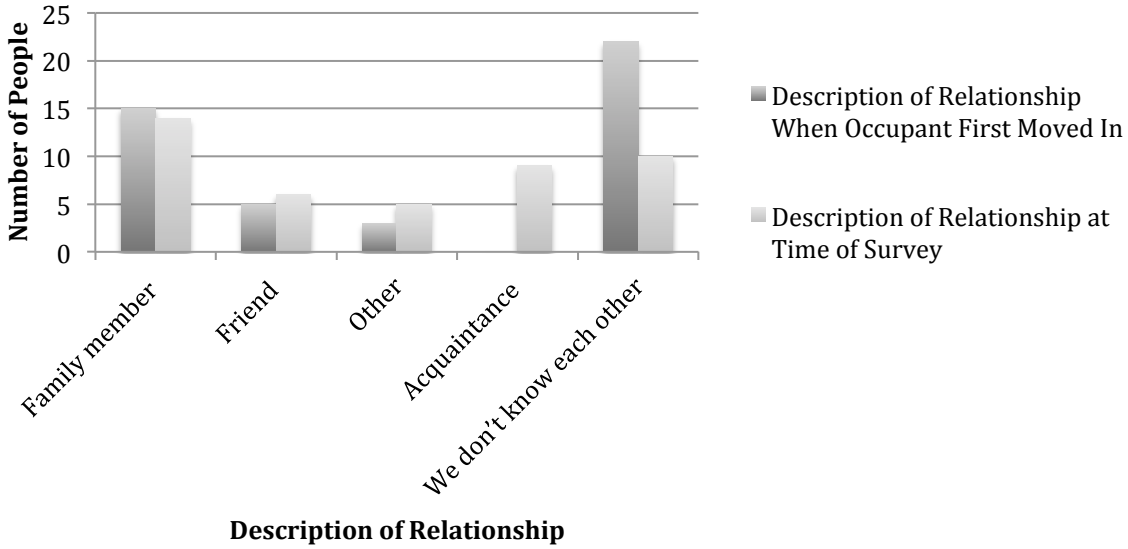


It is also important to note that the people building Garage/Garden Suites in Edmonton occupy a higher income bracket than the average Edmontonion, with 45% of respondents having a household income of $150,000 or more, followed by 27% having an income of $100,000 - $149,000. Furthermore, when asked how they financed their suite, 45% said through cash saving, and 36% said a home equity line of credit. To provide context, in the City of Edmonton, 33% of

households earn above $100,000 annually (City of Edmonton Municipal Census, 2016). Of the individuals who construct Garage/Garden suites, 72% earn greater than $100,000 annually. This suggests that it is unlikely that someone who occupies a middle-income bracket would be able to easily reap the social and economic benefits associated with Garage/Garden suites.

Data on the change in relationship between owner and occupant at time of move-in versus at the time of the survey suggests that Garage/Garden Suites may be encouraging relationship building. As seen in Figure 13, the number of acquaintances increased dramatically from time of move in to time of survey. This data shows that people who were considered strangers at time of move in have become acquaintances to the owners of the Garage Suite, thus suggesting a certain level of sociability embedded in the physical design and set up of Garage/Garden Suites.

Figure 13: Description of Relationship Between Owner & Occupant of Garage/Garden Suite at Time of Move-In Versus Current



Chapter 5: DISCUSSION

As explained in the literature review, ADUs, and in the Edmonton context – Garage/Garden Suites – are a topic in need of further research. Limited previous research points to a number of social, economic, and environmental benefits associated with ADUs. The present study focused on the supposed social and economic benefits of ADUs in Edmonton in order to better understand how they are being used, who is using them, how they function as affordable housing, and how relations between owners and occupants influence affordability.

This research explored the question of "voluntary affordability" with results supporting the findings of Brown and Palmeri (2014). For example, the households surveyed for this research rented their Garage/Garden Suites at low- to ultra-low rent to family members. Brown and Palmeri's (2014) research found that 18% of ADUs included in their study were rented at ultra-low (< USD$500) or zero rent, of which 85% were rented to family members or friends of the owner. Similarly, Wegmann & Chapple's (2012) research found that 17% of ADUs were occupied for no cash rent. For my study, by combining the zero- and very-low-rent units, it was found that 25% of Edmonton's Garage/Garden Suites are <$700/month, which are considered affordable rents in Edmonton by many definitions. The data also indicated that 89% of the occupants of these free-or-clearly-below-market rentals are family members of the owner. A nanny who provides childcare services makes up the other 11%.

When considering owners primary motivations for building their Garage/Garden suite, the data suggests that many Garage/Garden Suite owners are taking on the role of homeowner-as-developer and homeowner-as-landlord, in order to create alternative living spaces for family members who would otherwise have to find housing elsewhere in the city, likely at a higher

rental rate. Data also suggests that owners value the flexibility afforded to them through a Garage/Garden Suite as it can be used for multiple purposes at different points of time across the lifespan. This supports the research findings of Nichols and Adams (2013) related to ADUs and their ability to function as flexible housing across the lifespan.

Data on motivation for building Garage/Garden Suites also presents an interesting finding related to family typology and shifting family forms, as Garage/Garden suites seem to be facilitating multi-generational living. Owners are choosing to "rent" to their parents or adult children at a reduced rate, rather than renting to a stranger for a higher rate in order to keep family close to home. This suggests the prioritization of familial social relationships over financial gain, and supports the findings of Brown and Palmeri (2014) that some ADU owners are not acting like traditional landlords or developers, and are instead choosing to prioritize something other than financial returns. It also supports the findings of Nichols and Adams (2013) on the flexibility of ADUs and their ability to promote multi-generational living.

Related to the topic of multi-generational living is the connection between Garage/Garden Suites, care networks, and sociability. This data shows that in terms of elder care, Garage/Garden Suites may be serving as an alternative form of seniors housing where seniors can remain close to family as opposed to living in an assisted care facility. Similarly, several respondents stated that they have family members with a disability living in their Garage/Garden Suite who may otherwise be living in some sort of care facility. This not only saves families the cost of housing their family member in an assisted living facility, but it helps reduce the occurrence of urban isolation by ensuring seniors and people with disabilities remain tied to familial social networks.

The data presented here show that owners of Garage/Garden Suites are among the City of Edmonton's highest earners and have access to the financial capital necessary for construction. This suggests that it is unlikely that someone who occupies a middle or lower-income bracket would be able to easily reap the social and economic benefits associated with Garage/Garden Suites. With this in mind, the data shows that only certain kinds of people with certain kinds of social and economic capital will be able to leverage Garage/Garden Suites as an affordable housing option.

Over half (61%) of the *occupants* in this study were between the ages of 18-34, while 22% were over 55. This suggests that *overall*, Garage/Garden Suites were mostly serving the housing needs of younger, single people, without children. However, isolating the subset of Garage/Garden suites that were rented at affordable rates, it was found that the owner's parents were the main occupants, thus suggesting that seniors are benefitting from their adult children's investment in a Garage/Garden Suite. Taking this into consideration, findings suggest that Garage/Garden Suites, and ADUs in general, occupy two distinct spaces and serve two different purposes. First, they serve as a form of rental housing for young single individuals. This group of renters has no relation to the owner of the suite and is charged at or just below market rate. Second, they serve as a form of affordable housing for seniors and adult children *if* the owner and occupant are related. This occurs through the practice of voluntarily affordability. This research demonstrates that in many cases, owners are choosing to sacrifice higher rental returns in exchange for housing a family member close to home. It also demonstrates that if current trends continue, approximately 36% of Garage/Garden Suite stock in Edmonton will house the owner's family members at affordable rates, while the remainder would contribute to

Edmonton's rental stock, comparable to 1-bedroom units rented just below, or equivalent to market-rate.

In conclusion, under current rules and regulations, the costs associated with building a Garage/Garden Suite are limiting the development of Garage/Garden Suites to residents who occupy upper income brackets. In order for these suites to function as a widespread form of affordable housing that moves beyond its current niche market, initial costs to build must be reduced and the process to build must be simplified. That being said, for those who are financially well off enough to build a suite, the rental unit is serving to benefit occupants who otherwise would have to live somewhere else in the city. When it comes to the affordability of Garage/Garden Suites, it seems that the occupant's social capital plays a direct role in how much they are charged, with family charging family significantly less than they would charge someone they don't know. With this in mind, it is unlikely that someone who occupies a lower income bracket and has lower social capital would benefit from Garage/Garden Suites without government intervention, thus they are serving the needs of an already stable population rather than those of people who are in desperate need of affordable housing. As such, programs such as Cornerstones should be continued as they reduce the initial cost to build the suites, therefore making them more attainable for more Edmontonions, while ensuring that lower-income renters are being housed in the new suites.

Should the city of Edmonton wish to increase the amount of Garage/Garden Suites, there are several policy options that should be considered to reduce barriers to development. Reducing development and permitting fees would encourage individuals who otherwise could not afford to build a suite to build. Design restrictions should also be minimized and made less prescriptive in order to lower the number of variance applications required, thereby simplifying the

development process. Finally, due to the difficulties and challenges identified by participants associated with the permitting process, the formation of a specialized team of infill development officers who are familiar with infill development would expedite the process.

Overall, when looking at the larger picture of the shift toward neoliberal housing practices in our cities, this research suggests that Garage/Garden Suites, as a market solution to affordable housing, do not currently meet the needs of middle to low income Canadians. Instead, a large proportion of the people benefitting from these suites have close ties to family that are in upper and upper middle-income brackets. Thus, if one has a family wealthy enough to build a suite, they are more likely to see benefit. If one does not have family ties to someone who owns a Garage/Garden Suite they may still benefit if they can afford to rent it at slightly below market rate. Otherwise, if rented at market rates, the additional units increase overall rental housing stock, reducing rental rates in the aggregate. If one does have lower social capital and no family ties to someone financially capable of building a suite, and they can't afford market rate rent, they will not benefit from Garage/Garden Suites in the current policy context in Edmonton. Thus, Garage/Garden Suites cannot be uncritically accepted as innovative, market-based solutions to scarcity in affordable rental housing. That being said, Garage/Garden Suites represent one piece of the infill puzzle that is being put together in Edmonton. Overall, a diversity of housing typologies is necessary for environmentally, socially, and economically sustainable urban growth. Garage/Garden Suites are not a "silver bullet" with which to resolve Canada's affordable housing crisis, but they do hold potential to provide affordable housing for the middle class under certain policy conditions. In addition, the market alone leaves a large subset of the population wanting when it comes to affordable housing. Public sector leadership and participation, in addition to progressive infill policies that recognize the socio-economic

realities of Garage/Garden Suites can help address this shortfall.

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Appendix A

Garage and Garden Suite Questionnaire

1. Is your Garage/Garden Suite currently completed or still under construction?

○ Completed *(Go to #2)* ○ Under construction *(Go to #4)*

Section A: GARAGE/GARDEN SUITE USE

2. How is your Garage/Garden Suite currently being used?

○ As someone's primary residence, and is currently occupied

○ As someone's primary residence, but is currently vacant

○ For short-term housing (less than 1-month stays)

○ By the occupants of the main house as an extra room or workspace

○ Not currently being used for anything

○ Other: _____

3. How have you used your Garage/Garden Suite in the past?

○ As someone's primary residence

○ For short-term housing (less than 1-month stays)

○ By the occupants of the main house as an extra room or workspace

○ Other: _____

4. How are you planning on using your Garage/Garden Suite in the future?

○ As someone's primary residence

○ For short-term housing (less than 1-month stays)

○ By the occupants of the main house as an extra room or workspace

○ Other: _____

If your Garage/Garden Suite is currently…

Used as someone's primary residence, and **currently occupied**	Used as someone's primary residence, but **currently vacant**	Under construction or **NOT** used as someone's primary residence
Go to Section B: GARAGE/GARDEN SUITE OCCUPANCY	**Skip to #13**	**Skip to Section C: CONSTRUCTION**

Section B: GARAGE/GARDEN SUITE OCCUPANCY

5. If your Garage/Garden Suite is currently occupied, how many adults age 18 or older live there? _____ adults

6. How many children under age 18 live there? _____ children

7. How many of the current Garage/Garden Suite occupants are female and male in each age range?

	18-24 yrs.	25-34 yrs.	35-55 yrs.	> 55 yrs.	Don't know
Female					
Male					

8. How long has the current occupant been living in the Garage/Garden Suite? If there is more than one occupant, please think about the person who has lived there the longest.

- ○ Less than 1 year
- ○ 1 to less than 2 years
- ○ 2 to less than 3 years
- ○ 3 years or more
- ○ Don't know

9. If there were not a Garage/Garden Suite on your property, where would the current occupant(s) most likely live? *(Check one)*

- ○ In the main house
- ○ In housing somewhere else in the city
- ○ Other: _____
- ○ Don't know

10. In total, how many cars do the current occupant(s) own? _____ cars *(If none or don't know, skip to #11)*

10a. If they do own cars, where do they park?

- ○ On the street
- ○ Off the street (e.g. garage, driveway, parking pad)
- ○ Other: _____
- ○ Don't know

11. Which of the following options best describes your relationship to the current occupant when they first moved into the Garage/Garden Suite? *(Check one)*

- ○ Family member _____
- ○ Friend
- ○ Other: _____
- ○ Acquaintance
- ○ We didn't know each other
- ○ Garage/Garden Suite is occupied by another property owner
- ○ Garage/Garden Suite is occupied by myself (Skip to #16)

12. Which of the following options best describes your relationship to the current occupant today? *(Check one)*

- ○ Family member _____
- ○ Friend
- ○ Other: _____
- ○ Acquaintance
- ○ We don't know each other
- ○ Garage/Garden Suite is occupied by another property owner

If your Garage/Garden Suite is currently vacant, answer questions #13 to #14a based on what you typically do when the Garage/Garden Suite is occupied. If it is occupied, continue to question 13.

13. Do you charge the current occupant(s) of your Garage/Garden Suite rent?

- ○ Yes
- ○ No *(Skip to #14)*
- ○ Don't know *(Skip to #14)*

13a. How much rent do you receive monthly for your Garage/Garden Suite? $_____

13b. If rent includes utilities, how much is the rent without utilities? $ _____

14. Do you receive any services from the Garage/Garden Suite occupant(s) in exchange for all or part of the rent (e.g. childcare, lawn maintenance)?

- ○ Yes
- ○ No *(Skip to #15)*
- ○ Don't know *(Skip to #15)*

14a. What service(s) do you receive?

15. Does your relationship with the occupants of the Garage/Garden Suite influence how much rent you charge?

- ○ Yes
- ○ No (Skip to #16)
- ○ Don't know (Skip to #16)

15a. In what way does your relationship with the occupants influence how much rent you charge?

Section C: CONSTRUCTION

16. Which of the following best describes how you acquired you Garage/Garden Suite? I purchased the house….

- ○ with the Garage/Garden Suite already completed *(Skip to #21)*
- ○ without any intent to build the Garage/Garden Suite, but decided to build it later
- ○ with the specific intent to build a Garage/Garden Suite
- ○ Other: _____

If your Garage/Garden Suite is under construction, answer the following questions based on what you expect when the Garage/Garden Suite is complete. If it is complete, continue to question 17.

17. Who did the actual physical labour construction on your Garage/Garden Suite? *(Check all that apply)*

- ○ A paid contractor
- ○ An unpaid contractor
- ○ A paid friend or relative
- ○ An unpaid friend or relative
- ○ Myself or another owner of the property
- ○ Other: _____
- ○ Don't know

18. Who designed your Garage/Garden Suite? *(Check all that apply)*

- ○ A paid contractor
- ○ An unpaid contractor
- ○ A paid friend or relative
- ○ An unpaid friend or relative
- ○ A paid architect or designer
- ○ An unpaid architect or designer
- ○ Myself or another owner of the property
- ○ Other: _____
- ○ Don't know

19. How much did you or someone else pay for your Garage/Garden Suite to be constructed? (Please include the costs for design, labour, materials, and permits).
Your best estimate is fine. $_____

20. How did you finance the construction cost? *(Check all that apply)*

- ○ Cash savings
- ○ Home equity line of credit
- ○ Refinance and cash out option based on main home value only
- ○ Refinance and cash out option based on main home and future Garage/Garden Suite value
- ○ Purchased main home and constructed Garage/Garden Suite with cash out option based on future property value
- ○ Loan from family member(s)
- ○ Credit card(s)
- ○ Construction loan from bank
- ○ Personal loan from bank
- ○ Trade of services
- ○ Other: _____

21. What is the approximate square footage of your Garage/Garden Suite? _____ square feet

22. How many bedrooms does your Garage/Garden Suite have?

○ 0 (studio) ○ 1 ○ 2 ○ 3 or more

23. Regardless of how the Garage/Garden Suite is currently being used, what was your primary reason for building the Garage/Garden Suite or purchasing the property with an existing Garage/Garden Suite? *(Check one)*

○ Potential rental income allowed us to buy a house we could not otherwise afford

○ Extra income from Garage/Garden suite rent

○ Separate living space for household member or helper (e.g. adult child, nanny, or elderly family member)

○ Planned on building additional living space and decided to permit space as Garage/Garden Suite to provide flexibility for future use

○ Existing Garage/Garden Suite was not a factor in our decision to buy the property

○ Other: _____

24. Which of the following best describes the type of Garage/Garden Suite you have?

○ Detached garage conversion

○ Addition above or beside an existing detached garage

○ Addition above or beside a new detached garage

○ Stand-alone detached unit

25. What were the two biggest challenges you faced in building your Garage/Garden Suite? *(Check up to two)*

○ Obtaining financing

○ Paying for the cost of construction

○ Permitting fees

○ Other: _____

○ Lot setbacks or height limits

○ Utility connections

○ Minimum parking requirements

○ Design constraints or challenges

○ Don't know

Section D: DEMOGRAPHICS

26. What is your gender? _____

27. What is your age? _____ years

28. How many people, including adults and children, live in the main house on the property?

_____

29. What was your approximate annual household income for 2016? Your best estimate is fine.

- ○ $0 - $14,999
- ○ $15,000 - $24,999
- ○ $25,000 – $34,999
- ○ $35,000 - $49,999
- ○ $50,000 - $74,999
- ○ $75,000 - $99,999
- ○ $100,000 - $149,000
- ○ $150,000 or more

30. What neighbourhood do you live in? _____

Additional comments about this survey or Garage/Garden Suites:

Appendix B

Garage and Garden Suite Survey Data Report

Q1: Is your Garage/Garden Suite currently completed or still under construction? (n=72)

	Frequency	Percent
Completed	53	73.61%
Under construction	19	26.39%
Total	72	100%

Section A: GARAGE/GARDEN SUITE USE

Q2: How is your Garage/Garden Suite currently being used? (n=55)

	Frequency	Percent
As someone's primary residence, and is currently occupied	40	72.73%
As someone's primary residence, but is currently vacant	4	7.27%
For short-term housing (less than 1-month stays)	5	9.09%
By the occupants of the main house as an extra room or workspace	10	18.18%
Not currently being used for anything	2	3.64%
Other	2	3.64%

Q2: "Other" responses. (n=2)

	Frequency
Guestroom occasionally	1
Studio	1

Q3: How have you used your Garage/Garden Suite in the past? (n=54)

	Frequency	Percent
As someone's primary residence	32	59.26%
For short-term housing (less than 1-month stays)	6	11.11%
By the occupants of the main house as an extra room or workspace	11	20.37%
Other	12	22.22%

Q3: "Other" responses. (n=12)

	Frequency
[Guestroom/family and friends visitor]	2
Studio	1
Garage	1
[New construction/recently completed]	7
Rental	1

Q4: How are you planning on using your Garage/Garden Suite in the future? (n=69)

	Frequency	Percent
As someone's primary residence	53	76.81%
For short-term housing (less than 1-month stays)	5	7.25%
By the occupants of the main house as an extra room or workspace	13	18.84%
Other	7	10.14%

Q4: "Other" responses. (n=7)	Frequency
If personally had a family i.e. children in the future, could be used as a nanny suite (far in the future)	1
Son and girlfriend	1
Guest house short stay	1
It is set up so it can be converted to living space or perhaps home office, extra room	2
We are not sure yet	1
Primary residence for caregiver or child when in post secondary school	1

Section B: GARAGE/GARDEN SUITE OCCUPANCY

Q5: If your Garage/Garden Suite is currently occupied, how many adults age 18 or older live there? (n=42)

	Frequency	Percent
One	29	69.05%
Two	12	28.57%
Three	1	2.38%
Total	42	100.00%

Q6: How many children under age 18 live there? (n=42)

	Frequency	Percent
Zero	42	100%
Total	42	100%

Q7: How many of the current Garage/Garden Suite occupants are female and male in each age range? (n=41)

						Totals by gender	
	18-24 yrs.	25-34 yrs.	35-55 yrs.	> 55 yrs.	Don't know	Frequency	Percent
Female	8	13	4	7	1	33	61.11%
Male	10	2	4	5	0	21	33.89%
Total	18	15	8	12	1	54	100%

Q8: How long has the current occupant been living in the Garage/Garden Suite? If there is more than one occupant, please think about the person who has lived there the longest. (n=42)

	Frequency	Percent
Less than 1 year	24	57.14%
1 to less than 2 years	9	21.43%
2 to less than 3 years	5	11.90%
3 years or more	4	9.52%
Don't know	0	0%
Total	42	100.00%

Q9: If there were not a Garage/Garden Suite on your property, where would the current occupant(s) most likely live? *(Check one).* (n=43)

	Frequency	Percent
In the main house	4	9.30%
In housing somewhere else in the city	34	79.07%
Other	1	2.33%
Don't know	4	9.30%
Total	43	100.00%

Q9: "Other" responses. (n=1)	**Frequency**
Hotel	1

Q10: In total, how many cars do the current occupant(s) own? (n=43)

	Frequency	Percent
Zero	4	9%
One	31	72%
Two	4	9%
Three	1	2%
Missing/Refused	3	7%
Total	43	100%

Q10a: If they do own cars, where do they park? (n=39)

	Frequency	Percent
On the street	11	28%
Off the street (e.g. garage, driveway, parking pad)	31	79%
Other	0	0%
Don't know	1	3%

Q11: Which of the following options best describes your relationship to the current occupant when they first moved into the Garage/Garden Suite? *(Check one).* (n=43)

	Frequency	Percent
Family member	15	35%
Friend	5	12%
Other	3	7%
Acquaintance	0	0%
We didn't know each other	22	51%
Garage/Garden Suite is occupied by another property owner	1	2%
Garage/Garden Suite is occupied by myself	0	0%

Q11: "Other" responses. (n=3).	Frequency
Nanny	1
Students	1
Business partner	1

Q12: Which of the following options best describes your relationship to the current occupant today? *(Check one).* (n=42)

	Frequency	Percent
Family member	14	33%
Friend	6	14%
Other	5	12%
Acquaintance	9	21%
We don't know each other	10	24%
Garage/Garden Suite is occupied by another property owner	0	0%

Q12: "Other" responses. (n=5)	Frequency
Tenant	3
Students	1
Business Partner	1

Q13: Do you charge the current occupant(s) of your Garage/Garden Suite rent? (n=38)

	Frequency	Percent
Yes	33	87%
No	4	11%
Don't know	1	3%
Total	38	100%

Q13a: How much rent do you receive monthly for your Garage/Garden Suite? $_____

	N	Min.	Max.	Mean	Median	Mode	Std. Deviation
How much rent do you receive monthly for your Garage/Garden Suite?	36	$0	$1,600	$926	$1,000	$1,000	$456

Q13b: If rent includes utilities, how much is the rent without utilities?

	N	Min.	Max.	Mean	Median	Mode	Std. Deviation
If rent includes utilities, how much is the rent without utilities?	22	$0	$1450	$807	$950	$0	$445

*10 responses excluded because they were non-numeric

Q14: Do you receive any services from the Garage/Garden Suite occupant(s) in exchange for all or part of the rent (e.g. childcare, lawn maintenance)? (n=39)

	Frequency	Percent
Yes	3	8%
No	36	92%
Don't know	0	0%
Total	39	100%

Q14a: What service(s) do you receive? (n=3)

	Frequency
Childcare	1
Outdoor/Home Maintenance	2

Q15: Does your relationship with the occupants of the Garage/Garden Suite influence how much rent you charge? (n=41)

	Frequency	Percent
Yes	21	51%
No	18	44%
Don't Know	2	5%
Total	41	100%

Q15a: In what way does your relationship with the occupants influence how much rent you charge? (n=21)

	Frequency
Business partner able to bill clients for room rent	1
Family and friends no charge, other visitors $75-80/night, $450-500/week	1
Good tenant, no point to ask more money	1
I think I could charge $200 to 300 per month more to a stranger	1
[Would charge more to a non family member/would charge less to a friend or relative]	6

I'm not going to charge my father who's a senior a lot for rent due to having a fixed income (plus he's a family member)	1
If I feel comfortable with the person I am willing to lower rent	1
If I know them	1
If the tenant is good we wouldn't raise the rent. If the suite is vacant and friends or family need accommodation (repairs to their house or extended vacation) the rent would vary	1
It is just enough to be mutually beneficial but I believe it is some what under for what an actual landlord would charge, considering the cost of basement apartments	1
More likely to let space for free for those we know	1
Mother in law is disabled and wishes to remain living with family so this was the option	1
Reduced	1
She was out nanny, we would rather have someone we know and trust close by if we need an extra hand & we want to help her out	1
Student, family member, very respectful of the space and takes great care of it	1
We charge her nothing. If this was an unrelated we would charge at least $1300 or $1500 including utilities.	1

Section C: CONSTRUCTION

Q16: Which of the following best describes how you acquired you Garage/Garden Suite? I purchased the house…. (n=69)

	Frequency	Percent
With the Garage/Garden Suite already completed	7	10%
Without any intent to build the Garage/Garden Suite, but decided to build it later	31	45%
With the specific intent to build a Garage/Garden Suite	26	38%
Other	6	9%

Q16: "Other" responses. (n=6)

	Frequency
House purchased with deteriorating 1 car garage on property, had "idea" to build garage suite when house purchased but no intent special at the time that drove purchase of house)	1
Built house and suite together	1
Built it after 15 years of living in the house	1
During building/construction we decided to put in the garage suite)	1
My father and I are builders and built this house w/garage suite	1
[No response]	1

Q17: Who did the actual physical labour construction on your Garage/Garden Suite? (Check all that apply) (n=65)

	Frequency	Percent
A paid contractor	57	88%
An unpaid contractor	3	5%

A paid friend or relative	7	11%
An unpaid friend or relative	6	9%
Myself or another owner of the property	27	42%
Other	2	8%
Don't Know	0	0%

Q17: "Other" responses. (n=2)	Frequency
We hired sub-contractors for most of the work	2

Q18: Who designed your Garage/Garden Suite? (Check all that apply) (n=66)

	Frequency	Percent
A paid contractor	17	26%
An unpaid contractor	3	5%
A paid friend or relative	1	2%
An unpaid friend or relative	2	3%
A paid architect or designer	32	48%
An unpaid architect or designer	5	8%
Myself or another owner of the property	29	44%
Other	4	6%
Don't Know	1	2%

Q18: "Other" responses. (n=4)	Frequency
A neighbour who appealed our design met with our architect and made changes to our original design)	1
Builder	1
Had a friend who makes plans for living print our plans and we paid him	1
I had engineers and drafts person to assist me	1

Q19: How much did you or someone else pay for your Garage/Garden Suite to be constructed? (Please include the costs for design, labour, materials, and permits). Your best estimate is fine.

	N	Min.	Max.	Mean	Median	Mode	Std. Deviation
How much did you or someone else pay for your Garage/Garden Suite to be constructed?	55	$27,000	$310,000	$145,185	$135,000	$120,000	$57,048

*One response excluded as it was an extreme outlier and was based on criteria other than the criteria listed in the question.
*Four responses excluded because respondents did not know the cost or provided a non-numeric response

Q20: How did you finance the construction cost? (Check all that apply). (n=66)

	Frequency	Percent
Cash savings	30	45%
Home equity line of credit	24	36%
Refinance and cash out option based on main home value only	4	6%
Refinance and cash out option based on main home and future Garage/Garden Suite value	4	6%
Purchased main home and constructed Garage/Garden Suite with cash out option based on future property value	1	2%
Loan from family member(s)	5	8%
Credit card(s)	6	9%
Construction loan from bank	15	23%
Personal loan from bank	3	5%
Trade of services	0	0%
Other	18	27%

Q20: "Other" responses. (n=18)

	Frequency
City of Edmonton Cornerstones grant)	4
Mortgage	1
Sweat equity	1
Refinance of mortgage	1
Line credit, inheritance, mortgage, city of Edmonton Cornerstone	1
Mortgage for main home and other options	1
The suite portion included heating and electrical I paid. The structure was paid from an insurance claim	1
Personal lines of credit - not home equity related	1
Investments	1
Mom - future resident - sold her property and used some of the equity	1
Builders mortgage	1
Built with the main house from builder/there at move-in	2
Home mortgage	1
Part of the house mortgage during construction	1
Mother paid for it	1

Q21: What is the approximate square footage of your Garage/Garden Suite? (n=67)

	Minimum	Maximum	Mean	Std. Deviation
Approximate square footage of Garage/Garden Suite	427	1000	645	135.5

Q22: How many bedrooms does your Garage/Garden Suite have? (n=70)

	Frequency	Percent
Zero (studio)	19	27%
One	44	63%
Two	7	10%
Three or more	0	0%
Total	70	100%

Q23: Regardless of how the Garage/Garden Suite is currently being used, what was your primary reason for building the Garage/Garden Suite or purchasing the property with an existing Garage/Garden Suite? (Check one) (n=70)

	Frequency	Percent
Potential rental income allowed us to buy a house we could not otherwise afford	3	4%
Extra income from Garage/Garden suite rent	31	44%
Separate living space for household member or helper (e.g. adult child, nanny, or elderly family member)	22	31%
Planned on building additional living space and decided to permit space as Garage/Garden Suite to provide flexibility for future use	8	11%
Existing Garage/Garden Suite was not a factor in our decision to buy the property	1	1%
Other	13	19%

Q23: "Other" responses. (n=13)	**Frequency**
Separate living space for aging parents	1
To pay down mortgage faster in long run	1
Building new 3 car garage, decided to put suite on top	1
Built for adult child with developmental disability	1
Was initially for parents but the stairs are too narrow and high so used for rental	1
Built for friend, who has since moved out	1
Looked fun to do/wanted a bigger garage	1
Main reason: pay for repairs primary residence	1
Office space, first to be used as rental space	1
To build a net-zero building that had garage space	1
To increase the value of the property. The utility of other uses.	1
We bought our home because we liked the location, when we decided to rebuild our garage that was falling apart, we heard of the plan to allow more garage suites	1
Work space/hobby space/art and music space	1

Q24: Which of the following best describes the type of Garage/Garden Suite you have? (n=70)

	Frequency	Percent
Detached garage conversion	7	10%
Addition above or beside an existing detached garage	3	4%
Addition above or beside a new detached garage	44	63%
Stand-alone detached unit	18	26%

Q25: What were the two biggest challenges you faced in building your Garage/Garden Suite? (Check up to two) (n=69)

	Frequency	Percent
Obtaining financing	5	7%
Paying for the cost of construction	9	13%
Permitting fees	3	4%
Other	30	43%
Lot setbacks or height limits	21	30%
Utility connections	10	14%
Minimum parking requirements	8	12%
Design constraints or challenges	18	26%
Don't know	5	7%

Q25: "Other" responses. (n=30)	Frequency
Restrictions by city for location	1
[Inspectors, timeline]	3
A 100-year-old caveat in place forbidding it to be a rentable living space. Had to canvas neighbourhood for approval and stand before a city housing comm. To fight for right to build.	1
[Contractor delays/inexperience building garage/garden suites]	4
Cost	1
Dealing with the city - very long process-different officer w/different opinion everything you go in to see them	1
Fire during construction and space allotment (we would have to include balconies except they are considered part of "living" space)	1
Getting exterior stairs to pass, we did need to reduce footprint because of lot coverage but that is reasonable	1
[Neighbourhood complaint/opposition /appeal]	5
None, it was easy not challenging	1
Overall complexity of build	1
Permitting process	8
The absolute un-cooperation of civic officials - all their resistance and reasons are now being allowed roughly 4 years later	1

The city chose a hybrid strategy with permitting/process, lots of communication and bylaw challenges	1
Unexpected fire, separation requirements and landscaping requirements from city	1
[No answer from respondent]	1

Section D: DEMOGRAPHICS

Q26: What is your gender? _____ (n=71)

	Frequency	Percent
Female	31	44%
Male	37	52%
Female & Male	3	4%
Total	71	100%

Q27: What is your age? _____ years. (n=71)

	Min.	Max.	Mean	Std. Deviation
Respondents age.	28	70	45	10.7

Q28: How many people, including adults and children, live in the main house on the property? (n=70)

	Min.	Max.	Mean	Std. Deviation
How many people, including adults and children, live in the main house on the property?	0	8	3.27	1.493

Q29: What was your approximate annual household income for 2016? Your best estimate is fine. (n=66)

	Frequency	Percent
$0 - $14,999	2	3%
$15,000 - $24,999	0	0%
$25,000 – $34,999	0	0%
$35,000 - $49,999	1	2%
$50,000 - $74,999	5	8%
$75,000 - $99,999	10	15%
$100,000 - $149,000	18	27%
$150,000 or more	30	45%
Total	66	100%

Q30: What neighbourhood do you live in? (n=68)

	Frequency	Percent

Aspen Gardens	1	1%
Avonmore	1	1%
Belgravia	3	4%
Belvedere	1	1%
Belview	1	1%
Bonnie Doon	4	6%
Calder	1	1%
Capilano	1	1%
Dovercourt	2	3%
Eastwood	1	1%
Garneau	1	1%
Glastonbury	1	1%
Glenora	2	3%
Glenwood Park	1	1%
Griesbach	9	13%
Hardisty/Fulton	1	1%
Hazeldean	3	4%
Highlands	4	6%
Holyrood	2	3%
Kenilworth	1	1%
King Edward Park	1	1%
Magrath, Larch Park	1	1%
Mill Creek, Strathcona, Edmonton	1	1%
North Glenora	2	3%
Old Glenora	1	1%
Old Strathcona	2	3%
Park Allan	1	1%
Parkdale	1	1%
Parkview	1	1%
Queen Alexandra	2	3%
Richie	7	10%
Sherbrooke	1	1%
Terwillegar	2	3%
West Jasper Place	1	1%
Westmount	2	3%
Windsor Park	1	1%
Total	68	100%

Appendix C

	Family	*Didn't Know Each Other*
Mean	504.1666667	1154.166667
Variance	202935.6061	38106.61765
Observations	12	18
Pooled Variance	102860.8631	
Hypothesized Mean Difference	0	
df	28	
t Stat	-5.438191826	
P(T<=t) one-tail	4.19124E-06	
t Critical one-tail	1.701130934	
P(T<=t) two-tail	8.38247E-06	
t Critical two-tail	2.048407142	

	Friends	*Didn't Know Each Other*
Mean	1225	1154.166667
Variance	69166.66667	38106.61765
Observations	4	18
Pooled Variance	42765.625	
Hypothesized Mean Difference	0	
df	20	
t Stat	0.619648176	
P(T<=t) one-tail	0.271242545	
t Critical one-tail	1.724718243	
P(T<=t) two-tail	0.542485089	
t Critical two-tail	2.085963447	

	Family	*Friends*
Mean	504.1666667	1225
Variance	202935.6061	69166.66667
Observations	12	4
Pooled Variance	174270.8333	
Hypothesized Mean Difference	0	
df	14	
t Stat	-2.990770821	
P(T<=t) one-tail	0.004863912	
t Critical one-tail	1.761310136	
P(T<=t) two-tail	0.009727825	
t Critical two-tail	2.144786688	