"Building a Climate Refuge through the Scaling-up of Community Housing"

by

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Abstract

The climate crisis has become one of the most critical and highly discussed issues that humanity is currently facing. As the impacts of climate change are becoming more severe, it is anticipated that internal and external migration will continue to increase drastically (IDMC, 2023. IPCC, 2023, UNHCR, 2022). One suggested strategy to increase the adaptive capacity for the displacement of individuals is the implementation of planned relocation strategies, providing voluntary relocation options to impacted individuals (McAdam, 2012; Piggott-McKellar & Vella, 2023), what has been referred to as a 'climate refuge.'

The impetus for this research is the prediction that over the next century climate-induced migration to Canada will heavily impact the need for affordable housing. In light of this prediction, this thesis asks: *How can Canada plan for the long-term goal of becoming a climate refuge? What existing barriers to change need to be addressed in the current housing regime? What role is there for the community housing sector?* To explore the prospects of building a climate refuge in Canada, this thesis considers the climate and housing affordability crises as a polycrisis (Cascade Institute, n.d.). This research attempts to investigate the interaction processes of this polycrisis, by looking at the impacts that Climate is having on the Canadian Housing System, mainly through climate-induced migration. Keeping these intersecting contexts in mind, the thesis examines the current housing regime through the lens of transitions theory (i.e., scaling, path dependency, and the multi-level perspective). This theoretical lens provides insight into the dynamics shaping societal change and has been used widely in sustainability studies.

To address the above questions, this research used arts-based research methods to synthesize existing climate change impacts, immigration patterns and Canada's housing sector. More specifically, this research proceeded through the development of a four-part narrative podcast series. I utilized an arts-based methodology centred on a narrative podcast that sought to weave together expert knowledge using a storytelling approach. By employing podcasting as the methodology, rather than more traditional qualitative forms of analysis, this thesis endeavours to foster a broader awareness and understanding of the complexity of climate change adaptation and the centrality of housing. The impacts that future climate-induced migration is to have upon the housing system consist of many complex relationships. This research understands that this is considered a 'wicked problem', as it does not have a clear solution. The research adopts Geels' Multi-level Perspective (MLP) to view this polycrisis as a socio-technical transition. The research highlights the role of these crises as landscapes that exert pressure on the housing system, necessitating the analysis of stabilizing forces and lock-ins caused by path dependency that make the housing system resistant to change. Niche developments are explored, with an understanding that appropriate solutions will vary geographically. The importance for policymakers to acknowledge the connection between affordable housing and immigration is highlighted, ensuring that effective strategies are implemented to address the housing needs of newcomers as well as marginalized and low-income communities.

Preface

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1.   Introduction

1.1   Climate Change

The climate crisis is now one of the most critical and highly discussed issues humanity currently faces. The past eight years have been the eight warmest years on record (WMO, 2023), with July 2023 now officially the warmest month on record, since official record keeping began in 1880 (O'Shea, 2023). Extreme weather events are being brought on by climate change more frequently and more severely (IPCC, 2023). In Canada, the Donnie Creek wildfire in June 2023 became the largest wildfire in British Columbia's history (Griffiths, 2023), and August 2023 saw Palm Springs, California placed under a tropical storm warning for the first time (Loomis, 2023). The extreme impacts that climate change is having on weather systems is being felt globally, with Antarctic sea ice "hitting a record low by a wide margin" (Erdenesanaa & Abraham, 2023, n.p.). The response to these rapid changes to climate has largely focused on slowing the projected environmental impacts through sustainable mitigation and adaptation strategies. Mitigation strategies are efforts to "[reduce] emissions of and [stabilize] the levels of heat-trapped greenhouse gases in the atmosphere" (NASA, 2022, n.p.), whereas adaptation strategies seek to develop ways to be better suited to changes that have occurred in our environment. The United Nations has recently said that Climate Plans (which largely are mitigation targets) are currently insufficient, and "more ambitious action [is] needed now" (UNFCCC, 2022, n.p.). Currently, "the world is not on track to meet its international climate targets" (Harvey, 2023, n.p.).

1.2   Climate-Induced Migration

An important feature of the discussion surrounding climate change is the growing concern over the reduction of habitable land, and the forced displacement of populations (IDMC, 2023; Institute for Economics & Peace, 2020; IPCC, 2023; McAdam, 2012; McLeman, 2013; OHCHR, 2012; and UNHCR, 2022). It is suggested that by 2070, approximately 19% of the land surface of the earth could become an uninhabitable hot zone (Lustgarten, 2020), forcing displaced populations to seek refuge in other countries. UNHCR reported that in 2020, 1% of humanity was displaced, and that there are twice as many forcibly displaced people compared to 2011, with these numbers increasing yearly (UNHCR, 2021).

It is difficult to predict the number of migrants who currently are, or will be forced to relocate due to climate-related impacts as these impacts often act as a multiplier for other pre-existing stressors (McAdam, 2012; McLeman, 2013). In some instances, the correlation is obvious, such as the need to relocate immediately after a disaster such as a fire, flood, or tornado, while in other cases, the impacts are more subtly felt, such as a farmer deciding to sell his land and relocate following years of drought (McLeman, 2013). Because of the complexity of migration decisions and the interconnectedness of environmental, economic, social, and political factors, it is virtually impossible to provide an accurate estimate of people who move as a direct result of climate related impacts (Baldwin, 2016). This has led some to refer to them as the "forgotten victims of climate change" (Ida, 2018, n.p.). Estimates for the number of people who will be forcefully displaced by climate-related impacts by 2050, range from 218 million (IDMC, 2015) to 1.2 billion (Institute for Economics & Peace, 2020).

Currently, most displaced individuals on a global scale are internally displaced within their own country (IDMC, 2023). However, it is speculated that with the impacts of climate change becoming more severe, there will likely be a growing shift to displaced individuals who need to leave their home country, known as externally displaced individuals or external migrants (IPCC, 2023). This demand will likely change the demographics of immigrants from more economically driven migrants to those who are emigrating out of need (IDMC, 2023. IPCC, 2023, UNHCR, 2022).

1.3   Canadian Impacts

1.3.1   Internally Displaced Canadians

The impacts of severe climate-related events have already become a significant challenge within Canada (Public Safety Canada, 2022). Weather events such as wildfires and floods have forced many communities to evacuate their homes in search of emergency housing; this equated to approximately 60,000 Canadians who were internally displaced due to extreme weather events in 2021 (IDMC, 2023). One of the most challenging aspects for the housing system, in terms of its ability to assist internal migrants, is the temporal variance of their relocation needs. Some displaced communities may only need to evacuate for a short period of time until the weather event has passed. For others, where there is a more substantial loss of infrastructure that can

result in the need for permanent relocation for several years or longer. An example is the town of Lytton, BC, which was destroyed during a wildfire in the summer of 2021. Despite funding from both the provincial and federal governments, the rebuilding of Lytton has yet to begin, nearly two years later (Brunoro, 2023; Government of Canada, 2023). This instability can result in compounding vulnerabilities for individuals and their communities, and a prolonged recovery period.

The need for emergency housing after a severe weather event puts additional pressure on the housing system, as there are already substantial waiting lists for emergency and affordable housing in many parts of the country due to the lack of supply. When a disaster occurs, the recipients of emergency housing could be given priority for shelter, potentially bumping someone else on the waitlist down, prolonging their wait (Homeless Hub, n.d.).

1.3.2   Canadian Immigration and External Migrants

Currently, Canada is the recipient of many immigrants from source countries that are experiencing the devastating impacts of climate change. The majority of immigrants who come to Canada are classified as "economic migrants" (IRCC, n.d.). As additional changes in the climate have further impacts on these source countries, there will likely be an increase in migrants who seek Canada as a refuge through those diasporic connections established by previously immigrated family members.

The Canadian government has made immigration a high priority since the mid 1990s, and since then it has become the main source of population growth for the country (Statistics Canada, 2022e). With the federal government planning on increasing the number of permanent residents coming to Canada yearly to 500,000 per year by 2025, there has been some skepticism on the government's forethought on increasing housing in tandem with this growth (Fox, 2022, Zeidler, 2023). Currently, Canada's population is growing at a rate that is far outpacing the construction of new houses, and without a plan to further increase the development of houses at a rapid pace, it is likely that the housing issues Canada is currently facing will become amplified (Fox, 2022, Zeidler, 2023). A Canadian lobby group, The Century Initiative, aims to increase the population of Canada to 100 million by 2100 (Century Initiative, n.d.), but has not clearly outlined a plan for

increasing housing to meet this target. While there has been heavy pushback to this target, and scapegoating of immigrants as the cause of the housing crisis (Zeidler, 2023), immigration is not the sole cause of the housing crisis within Canada. Rather, the policy priority to increase immigration without a plan for adequately adjusting housing infrastructure in tandem is a huge oversight in policy. Immigration and housing will be discussed further in section 2.2.1.4.

1.4   Planned Resettlement: Towards the Concept of Climate Refuge

Disaster and emergency management scholars largely agree that building adaptive capacity is crucial in reducing vulnerabilities (Hagemeier-Klose et al., 2014). One suggested strategy to increase the adaptive capacity for the displacement of individuals is the implementation of planned relocation strategies, such as providing voluntary relocation options to impacted individuals (Ferris & Weerasinghe, 2020; McAdam, 2012; Piggott-McKellar & Vella, 2023). Recovery from a disaster event has been argued as the most crucial and least understood aspect of disaster management (Mannakkara & Wilkinson, 2014), but can be effectively reduced through adaptation (Ahmed, 2011, Ballano, 2017, Bertana, 2019, Comerio, 2016, Davis, 2011, Jha, 2010, McClanahan & Cinner, 2011; Peacock et al., 2007; and Peacock et al., 2018). The Cancún Adaptation Framework recognized that climate change induced displacement, migration and planned relocation are all considered crucial elements of climate adaptation (UNFCCC, 2010). A planned resettlement at a scale that would be able to accommodate even a fraction of the predicted number of displaced migrants has yet to be clearly defined, but has most commonly been referred to as a 'climate asylum', 'safe haven', or 'climate refuge' (Mar, 2021; Mortillaro, 2019), with the last of these terms being frequently used to define changing migratory patterns and resettlement for wildlife (for example: Adams, 2023; Law et al., 2023; and Santidrián Tomillo et al., 2023). For clarity purposes, this research will adopt the term "climate refuge" exclusively.

1.5   This Research

What role can Canada play to address climate-induced migration in the remaining decades of the 21st century? It has been suggested that Canada would be an ideal candidate to establish this form of planned relocation strategy, due to its current population density, current reliance on immigration, abundant resources, cultural diversity, and an anticipated increase of habitable land

through northern Canada, as a direct result of climate related impacts (Hett, 2021; IPCC, 2014; IPCC, 2021; IPCC, 2023; McLeman, 2013; Mortillaro, 2019; Rose, 2019; and Van Evra, 2021). Many argue that there is also a moral obligation that Canada has in this response, due to its ongoing contribution to greenhouse gas emissions responsible for climate change (Hett, 2021, Mortillaro, 2019, and Van Evra, 2021). However, before Canada could successfully establish itself as a climate refuge, this research theorizes that it will need to address the substantial housing issues it is already facing, as Canada is currently experiencing a housing affordability crisis (Perrault, 2022, Rose, 2019, and Sutter, 2016).

One of the key areas that warrants more attention when discussing the current and predicted impacts climate change will have on the housing system, is how inherently linked housing is to migration (IPCC, 2023; UNHCR, 2019; UNHCR, 2022). The perspective for contextualizing the outcomes of climate impacts on housing is predominantly viewed through an economic lens, focusing on the decreasing value of housing in risk-prone areas, such as coastal regions (Stroud, 2023), alongside the destruction of critical infrastructure during extreme weather events (Canadian Climate Institute, 2020). As the long-term outcomes from climate change alter the landscape of Canada, and increase the risks of extreme weather events, availability for insurance may become unobtainable for homes in risk-prone areas such as coastal regions and northern communities (Canadian Climate Institute, 2020; Stroud, 2023). The Canadian Climate Institute (2020) suggests that the costs of extreme weather events are "growing faster than the rate of economic or population growth" (p. iv), proposing "all orders of government […] significantly scale up public funding for implementing adaptation" (p. vi) as their number one recommendation.

These impacts may cause additional movement of populations away from high-risk locations but need to be considered in tandem to other displacements of individuals from both within and outside of Canada. This research theorizes that the migratory increases Canada will experience from both internal and external sources of individuals displaced by climate-related impacts, will heavily impact the need for housing within Canada.

To theorize the ideal long-term implementation of building a climate refuge, an understanding of the climate crisis provides background context to address the core issue of housing affordability in Canada. This research predominantly looks at solutions to the housing affordability crisis through government intervention, looking at the best long-term options to maintain affordability and plan for expanding future needs.

This research uses an arts-based approach to view the complexity of the housing domain through an interdisciplinary analysis. As climate is becoming an increasingly apparent force on migration (IDMC, 2023; UNHCR, 2022), the aim of this research is to analyze the interconnectivity of how different systems, such as migration and climate change, impact the current housing affordability crisis. Towards this end, this research developed a narrative podcast that problematizes climate change as a key-driver for Canada's future housing needs, while theorizing ideal solutions and discussing existing barriers to change. While this research has problematized long-term outcomes from climate change as being a catalyst for increasing migration to Canada, the immediate issues that have led to the housing affordability crisis in Canada will be the primary focus of this research. The current challenges and barriers to change needs to be overcome to potentially implement a long-term planned relocation strategy such as building a climate refuge. This research understands that this is, by definition, a "Wicked Problem" a term coined by Rittel & Webber (1973), noting that it "[has] no definitive formulation" (p. 161), "[has] no stopping rule" (p.162), and that its "solutions [...] are not true-or-false, but good-or-bad" (p.162). Rittel & Webber (1973) argue that, when it comes to wicked problems, "there are no 'solutions' in the sense of definitive and objective answers" (p.155), and therefore are tied to subjectivity in defining the effectiveness of their implemented solutions. In this research, the outcome of housing affordability and a planned relocation for future migrants is the intended and targeted solution.

Establishing podcasting as the methodology for this research allows for the exploration of a relatively new form of producing and distributing knowledge (Birch & Weitkamp, 2010; Kinkaid et al., 2020; Rogers et al., 2020). The dissemination of information through podcasting, instead of traditional academic routes of knowledge-sharing, may enable a broader awareness to the relatively new concept of Canada as a Climate Refuge, with an intended outcome of concretely

defining the normative discourse surrounding these emerging issues. Podcasting has been praised for its ability to reach wider audiences than traditional academic literature (Chan-Olmstead & Wang, 2020; Kinkaid et al., 2020; Rogers et al., 2020), with the ability to "[open] up the so-called 'ivory tower' of academia" (Rogers et al., 2020, p. 436) and enrich the transfer of knowledge by using the speakers' voices (Birch & Weitkamp, 2010; Cook, 2020). This research utilizes existing quantitative data from sources such as Statistics Canada, CMHC, and IPCC, to contextualize the current climate crisis and housing issues in Canada. These sources were used as the foundation for understanding the current states of both the housing and climate crises, and provided a foundation for developing a list of potential podcast participants who could speak to these issues, as well the semi-structured interview questions that were curated for each interviewee. Further discussion regarding this research's methodology is discussed in Chapter 4.

This research aims to address the following questions: *How can Canada plan for the long-term goal of becoming a climate refuge? What existing barriers to change need to be addressed in the current housing regime? What role is there for the community housing sector?*

This research attempts to explore this through the following three objectives:

1. To develop a deeper understanding of the forces climate and migration play on the Canadian housing system;

2. To explore the housing affordability crisis in Canada, looking at root causes and systemic barriers to change.

3. To identify strategies for how Canada could "scale up" its community housing, with a long-term goal of establishing Canada as a climate refuge.

By contextualizing the current climate crisis through the lens of a housing problem, this research aims to explore ways to increase Canada's absorption capacity for climate migrants through the transformation of the current housing regime (Clapham, 2019). More specifically, this research explores the possibility of increasing Canada's absorption capacity for climate migrants by "scaling-up" community housing. This concept of "scaling-up" is a goal of the National Housing Strategy's Solution Lab (National Housing Strategy, 2017), which "will be

funded to bring experts and a range of housing stakeholders together to rapidly incubate and scale potential solutions to housing affordability pressures" (p. 21). By expanding the supply of non-market housing solutions that are planned for and designed with the needs of migrants and refugees in mind, Canada could possibly address many of the issues within the housing system that currently exist, which will be introduced in Chapter 2. The results of this research can help inform policymakers on effective ways to implement planned relocation strategies to establish Canada as a climate refuge.

In the next chapter, this thesis begins by examining the history of the Canadian housing system, alongside how the housing affordability crisis is understood through academic literature. Chapter 3 clearly defines this research's use of the concept of scaling, as well as two other conceptual frameworks that will be utilized in its analysis: Path Dependency and the Multi-Level Perspective. Chapter 4 outlines the arts-based methodological approach to this thesis, data collection methods, analysis of the data, as well as presenting the stages of development of the podcast through its various steps of production. Chapter 5 examines the results of research through the brief synopsis of each episode of the podcast alongside links to episode audio files. Chapter 6 discusses how this research relates to both the conceptual framework outlined in chapter 3, as well as existing literature. Lastly, Chapter 7 explores limitations, presents recommendations, and provides a summary of the research alongside concluding remarks.

2. Background

The impetus for this research is the anticipated need to house future migrants displaced by climate change impacts. Thus, it is important to look at the current state of the Canadian housing system to address the barriers to housing affordability that exist within that system, which could impede the long-term implementation of a planned relocation strategy. The current housing system is many years in the making: it is the compounding result of policy choices and market forces acting over the past century (CHEC-CCRL, 2023; Sutter, 2016). To understand the housing crisis Canada is facing, it is important to consider the impact that market forces and policy decisions have had in shaping this crisis, particularly in how they have guided the urban growth in Canada since the early 20th century.

This chapter will begin by looking at the current characteristics that make up the Canadian housing system. It will then look historically at government involvement in all aspects of the housing system, followed by how these policies have led to a problematic, but deeply entrenched system that is both difficult to change, and responsible for the crisis. While this chapter does not provide a comprehensive analysis of every policy in the realm of housing, it does aim to provide a summary of major turning points that are relevant to affordable housing in Canada.

2.1 The Canadian Housing System

This research adopts the definition of a 'housing system' as "a method of ensuring (or not) that enough good-quality housing is built, that there is fair housing allocation system, and that the stock of housing is properly maintained" (Hulchanski, 2006, p. 222). In Canada, the housing system is composed of both market and non-market activities, with non-market being primarily tied to "public sector roles and outcomes in both housing and homelessness" (Pomeroy, 2021, p. 1). This includes the outcomes and activities in community (or social and affordable) housing (Pomeroy, 2021).

In his book 'Remaking Housing Policy', Clapham (2019) builds upon the notion of the housing system to conceptualize what is referred to as a 'housing regime'. Clapham defines this as "the set of discourses and social, economic and political practices that influence the provision,

allocation, consumption and housing outcomes in a given country" (Clapham, 2019, p. 34). This mirrors what Stephens & Van Steen (2011) refer to as the 'housing system' but adds a consideration of the "power structures and institutional patterns that are associated with it" (Clapham, 2019, p. 34).

When we look at the involvement of the Canadian government in housing compared to the housing regimes of other countries, it has "policies that [tend] to favour individuals rights and homeownership (over social renting) and where market-based provision of housing has dominated production" (Pomeroy, 2021, p.1). This regime style is known as a 'Liberal Welfare Regime' (Clapham, 2019; Esping-Anderson, 1990; Lund, 2006; Pomeroy, 2021). The Canadian government has historically supported many initiatives in social or community housing (Begin, 1999; Sutter, 2016), but has predominantly implemented policies that favour homeownership over social forms of housing, beginning in the 1930s (Begin, 1999). This has created an increasingly exclusive homeownership society.

Canada is similar to most other countries of the world, where "housing is primarily produced and distributed through market mechanisms" (Clapham, 2019, p. 1). However, the Canadian housing system is currently one of the most market-dominated in the world (Rose, 2019). Approximately two thirds of Canadian houses are privately owned and occupied by their owner (Pomeroy, 2021; Statistics Canada, 2022b) with nearly the entire additional third being privately owned rental units (Pomeroy, 2021; Statistics Canada, 2022b). Less than 5% of all housing is community housing, existing outside of the market-sector (OECD, 2020; Pomeroy, 2021; Statistics Canada, 2022b).

This level of homeownership was not always the case in Canada, and is largely a result of "federal government housing policies and programs, past and present" (Hulchanski, 2006, p. 223). Post war sprawling subdivisions were targeted at home-owners with municipal governments "[providing] the necessary serviced land and zoning regulations that permitted the construction of relatively cheap housing in post war subdivisions [...] which rarely included provision for rental housing" (Hulchanski, 2006, p. 223). Insurance institutions and mortgage lending were both created by federal and provincial governments (Bacher, 1993; Hulchanski,

2006, p. 223), through "statutes, regulations, and subsidies" (p. 223). Since the 1970s, there have been a "steady stream of house purchase assistance programs [that have been] necessary simply to maintain Canada's ownership rate at about two-thirds" (p. 223). Home-ownership also rapidly increased through the late 1990s and early 2000s which will be explored further in section 2.3.4 The bias in home-ownership over social housing can be traced back to the first housing policies in Canada (Hulchanski, 1986), which will be discussed further in sections 2.3.3 and 2.3.4.

2.2   Canada's Housing Affordability Crisis

It is important to clearly identify the difference between the terms "housing affordability", and "affordable housing". The term "affordable housing" is commonly understood as a type of housing that is provided at below market cost, usually through some form of public subsidy. "Housing affordability" refers to "the challenge each household faces in balancing the cost of its actual or potential housing, on the one hand, and its nonhousing expenditures, on the other, within the constraints of its income" (Stone, 2006, p. 151). In other words, it is defined as the mismatch between the cost of housing and what people can afford to pay. Stone (2006) suggest that the meaning of the term affordability needs to be considered through the following questions: who it is affordable for, what the standard of affordability is, and for how long?

In Canada, housing is considered to be affordable "when a household spends less than 30% of its pre-tax income on adequate shelter" (CMHC, 2019). Households that spend more than 30% of their income on shelter are considered to be in "core housing need" (CMHC, 2019), with those who spend 50% on shelter or more to be in "severe housing need" (Homeless Hub, n.d.). This is one of three housing standards identified by CMHC (Canada Mortgage and Housing Corporation) that can indicate core housing needs. The other two standards are Adequate Housing: when a home is not in need of major repairs, and Suitable Housing: when there are enough bedrooms for the size and make-up of resident households, in accordance with the National Occupancy Standard requirements (CMHC, 2019). In 2021, one in every 10 Canadian households was in core housing need (Statistics Canada, 2022a).

A report published in July 2023 has determined that currently in every province in Canada, the cost of renting is more than 30% of a minimum wage worker's net income, if they work a standard 40-hour week (Macdonald & Tranjan, 2023). This is a trend that has been seen in homeownership as well, as home purchase prices have been escalating faster than incomes, resulting in the 'pricing out' of individuals who traditionally would be buyers. This 'pricing out' has kept more individuals in the rental sector, which has led to a larger demand for rental units. Rental supply has not effectively kept up to this increase in demand, leading to sharp increases in rental prices, and a reduction of affordable rental units (Pomeroy, 2021; Thomas, 2019).

2.2.1 Factors Contributing to the Housing Affordability Crisis

The root cause of the housing affordability crisis is not limited to just one specific issue. Instead, a number of factors contribute to the housing affordability crisis and will be explored in the following subsections.

2.2.1.1 Home Purchase Prices

The first factor is the increase in home purchase prices. Home purchase prices have been escalating faster than incomes, resulting in the 'pricing out' of individuals who traditionally would be buyers. In 1999, the average cost of a Canadian home was ~$154,000, compared to an all time high reached in February 2022, when the average cost rose to $841,400 (CREA, n.d.). This equates to a growth of approximately 5.46x. By comparison, the median household after-tax income in 1999 was an estimated $47,900 (CMHC, 2018), compared to a median household income of $69,300 in 2019 (CMHC, 2021), equating to an increase of only 1.45x.

This growing affordability gap has largely been attributed to the financialization of housing on a global scale (OHCHR, n.d.). The financialization of housing is defined as the shift to "considering housing as a commodity and a financial instrument instead of a public good" (Zhu et al., 2021, p.3). Pomeroy (2021) theorizes that it is the "combination [of] rising income, declining and low mortgage rates and the windfall gain in equity from large price increases [that] have had a substantial impact to drive up home prices" (p. 35). Shifting housing to a globally traded commodity allows for its value to adjust independently of a country's economy. This shift of housing to be used as a "vehicle for wealth and investment - rather than a social good"

(OHCHR, n.d., n.p.), is misaligned with the notion that housing is a basic human right, a key component of Canada's *National Housing Strategy Act* (2019), alongside the United Nations officially recognized rights (OHCHR, 2009). The OHCHR (n.d.) states that because of the financialization of housing "the vast amount of wealth has left governments accountable to investors, rather than to their international human rights obligations" (n.p.).

2.2.1.2 Supply

The second factor addressed here is the most fundamental issue, and the problem that is highlighted most consistently in discussing the housing affordability crisis in Canada: supply. The demand for housing has been rapidly increasing over the past few decades, which supply has not been able to keep up with (CHMC, 2021; Jones, 2023; Pomeroy, 2021; Sutter, 2016). Issues in supply have largely been attributed to availability of land and land worth, a shift of units becoming exclusively short-term rentals, government housing funding cuts (which will be explored in more detail in section 2.4), rising construction costs, as well as other construction capacity constraints (Jones, 2023). Much of the new housing that is currently being built by developers is predominantly designed to exist within the higher end of the market, in terms of its affordability, and at a pace that continues to lag behind the growing demand (CMHC, 2022b).

The 'pricing out' of individuals who historically would have been buyers with an increase in housing costs, has led to a larger demand for rental units. However, rental supply has not effectively kept up to this growth, leading to sharp increases in rental prices, and a reduction of affordable rental units (Pomeroy, 2021; Thomas, 2019). Similarly, the costs of rents have also not kept up with the increase in household incomes (Statistics Canada, 2023). Some barriers to the development of rental housing have been discussed by Thomas (2019) who indicated barriers as:

> difficulties coordinating partnerships/lack of communication, […] lack of funding from federal and provincial governments, and inflexible government funding programs, […] administrative burden associated with policies, programs and strategies, […] a lack of community support for densification and multifamily housing outside core area[s], [and a] lack of data on rental housing supply (Thomas, 2019, p. 17).

Another factor purported to impact the increase in rental rates is financialization. This brings to the fore the role of rentiers and REITs. Rentiers are individuals who "[accumulate] income from access to assets, as opposed to producing actual goods. In the traditional Marxist sense, this referred to extracting rents from buying and selling real estate or financial assets" (Jenkins, 2022, p. 253). Real estate investment trusts (REITs), "companies that own or finance income-producing real estate across a range of property sectors" (Nareit, 2023, n.p.), have benefited greatly from the financialization of housing. Many REITs are publicly traded, similarly to stocks (Chen, 2023), and are designed to maximize profits, another misalignment to the idea of housing as a basic human right (OHCHR, 2009). As there are many factors at play leading to rental unaffordability, there has been a growing call for governments to implement rental control policies, as currently most provinces only have very moderate limits in place, dictated by provincial Residential Tenancies Acts (CCHR, n.d.).

2.2.1.3 Demographics

The demographics of Canadian households has significantly shifted over the past century. Post-war Canada saw an average Canadian household size of 4.3 people, compared to 2021, where the household average has fallen to approximately 2.4 members (Hogue & Freestone, 2022). Since 2016, "one-person households have become the most common, with nearly 30% of Canadians now living alone" (Hogue & Freestone, 2022, n.p.). This has raised the number of households requiring housing by a substantial amount, while the size of houses has not adjusted downwards as rapidly (Hogue & Freestone, 2022).

2.2.1.4 Immigration

Immigration has played a large role in the housing sector for the past few decades as Canada has become reliant on immigration to help grow both its economy and population; a trend seen since the mid 1990s (Statistics Canada, 2022e). Canada's population is growing at a quicker rate than most countries, and "at almost twice the pace of other G7 countries from 2016 to 2021" (Statistics Canada, 2022d). In Canada, there are four main classifications for immigration: economic immigrants, immigrants sponsored by a family, refugees, and other immigrants (IRCC, n.d.) Immigration has had a large impact on driving the housing affordability crisis, largely from economic migrants coming to Canada with large amounts of capital and purchasing expensive, or

multiple homes (Carter, 2005; Hiebert, 2011). Canada's three largest population centres: Toronto, Montreal and Vancouver, have attracted immigrants in higher numbers than other cities, and therefore the impacts immigration plays on housing can be felt there strongest (Carter, 2005; Hiebert, 2011; Moos & Skaburskis, 2013). Hiebert (2011) found that "immigrants reach high levels of home ownership, especially in Toronto and Vancouver, and probably have a significant impact on the housing markets of the two cities" (p. 52), however there is a disparity between these wealthy economic migrants and many other immigrants who do not migrate with such substantial monetary amounts. Nearly half of all new permanent residents are classified under economic immigrants, but most do not arrive with substantial savings. Apart from the very wealthy immigrants, "many individuals and families pay very high proportions of their income for shelter" (p. 53), which can lead to compounding issues for newcomers. "Housing is one of the immediate needs of newcomers arriving in Canada, and […] the quality of housing is a decisive factor in the entire integration process" (Carter et al., 2009; Hiebert, 2011).

These challenges are highly evident with many immigrants, as well as refugees who may be reliant on the Canadian Resettlement Assistance Program (RAP) to help them become settled in Canada. Many refugees who are reliant on RAP are not able to afford housing costs without sacrificing other essentials (McLeman, 2013; Rose, 2019). This is because the income support received under RAP is tied to provincial income support rates, which are set so low as to make very little housing affordable to its recipients. Currently, the most pressing housing issues faced by immigrants in Canada have been identified as: a lack of affordable housing, limited housing for larger families, and a mismatch between where housing and services are available (Rose, 2019).

2.2.1.5 Zoning

A key area outside of affordable housing policies that is integral to the current crisis, is the history of zoning within most Canadian cities. Since the industrial revolution, cities have had a surge in population (Britannica, n.d.; Neiderud, 2015) as individuals moved from the countryside, looking to take advantage of the massive increase of labour needs. This resulted in densely populated urban centers that became heavily crowded and polluted as more and more individuals came to the city (Belshaw, 2017; Neiderud, 2015). This triggered an increase of

individuals looking to escape this congestion, looking for a cleaner or quieter place to live on the edges of the city (Belshaw, 2017). Through expansions in transportation, including the development of automobiles, commuters were able to travel further distances for work, allowing them to live farther away from the core of the city, allowing for additional expansions of cities to these outskirts without limiting demand (Belshaw, 2017; Britannica, n.d.; Jacobs, 1961; Montgomery, 2013). This easing of transportation made suburban life more feasible and desirable for workers, which perpetuated the growth of these new residential developments on the outskirts of the city core, which were given the name "suburbs" (Britannica, n.d.; Belshaw, 2017). As automobiles became more frequent, they brought the flexibility of suburban life to more and more individuals. This 'suburban lifestyle' became the ideal for most North Americans becoming a symbol of social status and success (Jacobs, 1961). The single-detached home became the standard ideal for most North American cities, which dictated their pattern of growth around these newly structured residential areas. As cities continued to grow, they needed to be structured and planned, which introduced many ideas of urban planning, such as zoning policy (Jacobs, 1961; Montgomery, 2013). As single-detached homes were considered the ideal, much of the zoning policy was designed with prioritizing this model of expansion. Most North American cities continued to develop in this fashion for decades with little resistance.

> Suburban zoning and development codes grew so powerful and so entrenched by the end of the twentieth century that the people who financed and built most of suburbia had all but forgotten how to make anything but car-dependent sprawl (Montgomery, 2013, p. 68-69).

The limitations that zoning placed on what could be built, and where, have since locked-in a system of city landscapes that are the foundation on which many aspects of the housing crisis have been built. This method of low-density city sprawl has since become a considerable issue, especially when addressing the concepts of sustainability and densification (Montgomery, 2013, Suttor, 2016). This has essentially locked-in many cities to a built system that has become entrenched into the social fabric of modern society. This is explored further in the discussions of Chapter 6.

2.2.1.6 The Financialization of Housing

There has been a shift from the liberal welfare state to an even more market-driven system, which has been reinforced since the 1990s through a dramatic shift in housing policies driven by Neoliberalism, "characterized by the state's retreat from various welfare provisions and support and the assertion of the superiority of the free-market mechanism of distribution" (Zhu et al., 2021, p. 1). These policies have placed higher priority on deregulation, privatization, and homeownership (Jacobs, 2019; Zhu et al., 2021), shifting "from supply-side interventions to demand-side policies" (Zhu et al., 2021, p. 1).

In the early 1990s, the federal government aimed to shift the responsibility of many social services, including affordable housing from the federal level to the provincial and municipal levels. This 'down-loading' of responsibilities, known as defederalization, was conducted without any additional funding for these levels of government, leading to many of these services being cut back substantially. This defederalization has been seen by many as a pivotal point in the housing system in Canada, as it "signified a fundamental shift in the housing policy discourse that began considering housing as a commodity and a financial instrument instead of a public good" (Zhu et al., 2021, p. 3). The financialization of housing, defined as "the phenomenon [...] when housing is treated as a commodity - a vehicle for wealth and investment - rather than a social good" (OHCHR, n.d., n.p.), has been argued as one of the core reasons for the current housing crisis (Leijten & de Bel, 2020; OHCHR, n.d.; and Shadpour, 2023).

2.2.1.7 The Loss of Naturally Occurring Affordable Rental Housing

While a third of Canadian households are currently renters, the majority of new housing builds are "intended for the ownership sector, both traditional detached homes as well as increasingly condominium apartments" (Pomeroy, 2021, p.36). This disparity was most largely seen through 1995-2015, where "fewer than 10% of all new construction was planned as rental" (Pomeroy, 2021, p. 36). Another major factor that was discussed in section 2.2.1.1 is the growing shift for rentals to become short-term, through the implementation of digital platforms such as Airbnb (Pomeroy, 2021). This shift has contributed to more competition between renters for the fewer units available for long-term rental, driving up rental costs (Pomeroy, 2021). This increase in rent

levels has enticed developers to return to constructing rental units in the past few years, but largely for higher-end units, priced "well above affordable levels" (p. 38).

The existing affordable rental stock is also dwindling at an alarming rate, with an estimated loss of 60,000 rental units available for under $750/month, every year occurring between 2011 and 2016 (Pomeroy, 2021). This monthly rate of $750 is the cost of a rental that would be considered affordable for a household making $30,000 (Pomeroy, 2021). This loss of units is "four times greater than the planned annual production of affordable housing under the [National Housing Strategy]" (p. 39).

2.2.1.8 The Withering of Community Housing

Since the mid 1990s, there has been a substantial decrease in the development of Community Housing throughout Canada (Pomeroy, 2021; Sutter, 2016). This form of housing operates differently than the market-driven private housing, and is mandated to remain affordable (CHRA, 2023). According to the CMHC (2022a, n.p.), "to restore affordability, an additional 3.5M affordable housing units are needed by 2030". This is in addition to the 2.3 million units already projected to be built in that time (CMHC, 2022a). Reaching this goal would equate to an average of 440,000 new units needed to be built per year. This would be a substantial increase from the all-time high of housing starts Canada has seen, which was approximately 273,000, in 1976 (Statistics Canada, 2022b). This is a crucial element of the housing affordability crisis and warrants exploration through the causes and impacts its reduction has on the entire housing sector. Community Housing will be both defined and further explored through the next two sections.

2.3   Community Housing

This research adopts the same definition for community housing that is used by the CMHC and the National Housing Strategy. They define community housing as "an umbrella term that typically refers to either housing that is owned and operated by non-profit housing societies and housing co-operatives, or housing owned by provincial, territorial or municipal governments" (CMHC, 2022b, n.p.). Community housing may also be referred to as social housing, or housing that is "offered at below market rates so that it is more affordable" (CHRA, 2023, n.p.). The

organizations that provide community housing are typically mandated to offer affordable housing, with rents subsidized by governments (CHRA, 2023). Rather than fluctuating rents with market forces, "rents are usually calculated using a 'rent geared to income' model that calculates rent as a manageable proportion of a tenant's income" (CHRA, 2023, n.p.).

2.4   Community Housing and Canadian Housing Policies

This section will look at the historical "turning points" (Sutter, 2016) that government policies have had in the housing system as they relate to community housing.

2.4.1   The 1930s and Post War Policies

In the 1930s, the Canadian government passed three Federal Acts that were intended to stimulate the private housing market: The *Dominion Housing Act* (1935), *Federal Home Improvement Plan* (1937) and the *National Housing Act* (1938) (Begin, 1999, Oberlander et al., 1992). It has been argued that these three Acts, and their inherent bias toward homeownership set the precedent for housing policy that followed (Hulchanski, 1986).

All three of these acts were developed as a response to the Great Depression, where many Canadians "were living in poor-quality, aging, and overcrowded housing" (Hulchanski, 2009, p.2) and when "very little new housing was built" (Hulchanski, 2009, p. 2). The *Dominion Housing Act* (1935) was "the first national housing legislation" (Begin, 1999, n.p.), and "provided $20 million in loans that helped to finance 4,900 units over a three-year period" (Begin, 1999, n.p.). The 1937 *Federal Home Improvement Plan*, was introduced to subsidize interest rates on loans for housing rehabilitation (Begin, 1999, n.p.), while the *National Housing Act* "helped to enable the creditworthy to buy houses, make low-income housing sanitary, and modernize existing housing stock" (Begin, 1999, n.p.).

In his book '*Still Renovating: A History of Canadian Social Housing*', Greg Suttor (2016) outlines the main turning points and periods in Canadian community housing (what Suttor refers to as social housing) policy to begin with the "Early postwar turning point" (Sutter, 2016, p.9), characterized by the selling off of wartime housing, and the creation of CMHC in 1946 (Sutter, 2016), responsible for administering the revised *National Housing Act* (revised in 1944), which

was primarily concerned with "providing homes for returning war veterans" (McAfee, 2009, n.p.).

2.4.2   The 1960s – 1990s

Returning to Greg Suttor's main turning points, he highlights the Mid-1960s as the next turning point for social housing policy. This was caused by further amendments to the *National Housing Act* in 1964, where the production of social housing was drastically improved, to approximately 10% of total housing production at that time (Suttor, 2016).

This was followed by the government refocusing on mixed-income non-profit and co-op housing in the 1970s, as the government expanded their role "in all housing sectors" (Suttor, 2016, p. 9). "During the 1970s, affordability became a major factor in the home buying process. To help make housing more affordable, builders reduced lot sizes and increased the density of developments" (CMHC, 2014). The CMHC introduced the Assisted Home Ownership Program (AHOP) in 1971, which was targeted at first-time buyers, helping low-income people attain homeownership (CHRA, n.d.; CMHC, 2014).

In the mid-1980s, social housing began to decline, with "no more all-low-income public housing" (Sutter, 2016, p. 9), and where co-op and non-profit housing became "more income-targeted" (Sutter, 2016, p. 9). This marked the end of a "two-decade-long commitment to building a non-market social housing sector" (Hulchanski, 2004, p. 2), leading to a "decade-long decline in the allocation of new federal money for housing assistance" (Hulchanski, 2004, p. 2).

2.4.3   The 1990s and Defederalization

In 1993, the Brian Mulroney Progressive Conservative government announced in their final budget that the federal government would no longer be creating new social housing (Begin, 1999), marking a full withdrawal from the non-market social housing sector. This defederalization of community housing initiatives also transitioned the role of CMHC from a homebuilder to a mortgage insurer, further placing a prioritization of home ownership. With the CMHC now providing increased mortgage protection alongside low interest rates (having dropped from the highs of the 1980s) and the reduction of down payment requirements for home

owners from 20% to 5% (CMHC, 2014), there was a sharp increase in the number of home buyers throughout the remainder of the 1990s and into the early 2000s.

2.4.4   The Early 2000s

The shift that defederalization had on the housing sector was met with some pushback, as cities were faced with homelessness, and residents in core housing need, without many resources to help (Gaetz, 2010; McAfee, 2009). This led to the return of the federal government's involvement in affordable housing, but at a much smaller scale (Sutter, 2016) through partnerships with the provincial governments and the formation of the Affordable Housing Initiative (AHI) that operated from 2001 to 2011 (CMHC, 2014). The mandate for the AHI was to "[improve] access to affordable, sound, suitable and sustainable housing" (CEAP, 2011). This return was seen as "modest" (Pomeroy, 2021; Sutter, 2016) and insufficient to fixing the issues being faced.

Following the 2008 Global Financial Crisis, Canada's housing market did not crash to the extreme levels of the United States (Rozworski, 2019), largely due to efforts from The Bank of Canada to keep interest rates low (Rozworski, 2019). Instead, home-ownership levels kept rising until 2011 when they hit a peak of 69% (Statistics Canada, 2022c).

2.4.5   2010s to Now

The 2010s saw rising inequality on a global scale, leading to activist movements such as the 'Occupy Wall Street' movement that took place in the fall of 2011 (OccupyWallSt, 2019). This inequality was felt throughout the housing sector of Canada, with the rising costs of housing far outpacing the increases in wages, effectively 'pricing out' many potential housing buyers, leading to an increase in renters in Canada (Statistics Canada, 2022c). In addition to this rise, the construction and rehabilitation of affordable rentals became unable to keep up pace with affordable units that were lost to demolition (Luck et al., 2022).

In response to the growing housing affordability crisis, the Government of Canada announced the *National Housing Strategy* (NHS) in 2017, followed by the *National Housing Strategy Act* in 2019, a 10-year strategic policy which "recognizes that the right to adequate

housing is a fundamental human right affirmed in international law" (National Housing Strategy, 2023, n.p.) and a goal to "ensure everyone in Canada has access to housing that meets their needs and that they can afford" (National Housing Strategy, 2023, n.p.). However, despite the introduction of the NHS, 2022 saw affordability in Canada reach an all-time-low for many census metropolitan areas – i.e., urbanized regions (Routhier, 2022).

2.5   Chapter Conclusion

Each of these elements that have been contributing to the housing affordability crisis will be outlined further in Chapter 6, delving into their interconnectivity to broader systems. While this is not a complete list of the factors that are contributing to the crisis, they stand as a starting point for discussion. In the next Chapter, the conceptual frameworks of Scaling, Path Dependency and the Multi-Level Perspective will be explored, as this research utilizes all three to understand transitional theory, and barriers to changing the existing housing regime.

3.   Conceptual Framework

To understand better the complexity of scaling-up the supply of community housing, this research aims to employ three conceptual frameworks in its analysis: Scaling, Path Dependency, and the Multi-Level Perspective. While all three of these frameworks overlap in some aspects, it is constructive to clearly identify and define them independently to better understand how they uniquely interact with, and create barriers to change, within the current housing system. This chapter will first explore the various definitions of the term scaling, before turning to the Multi-Level Perspective and Path Dependency. The chapter concludes by outlining how these can be utilized within research on community housing.

3.1   Defining 'Scaling'

The term "scale" or "scaling" is used in various contexts and disciplines, and its meaning can differ depending on the specific context. This research utilizes the term scaling to focus attention on scaling processes that lead to outcomes. Understanding the unique processes that allow for transitions to take place is crucial in understanding how a system operates. An analysis of the literature on scaling concludes there is no consensus on the operational meaning of the term 'scaling' (Bloom & Ainsworth, 2010; Cooley & Kohl, 2006; Subramanian et al., 2011; Wigboldus, 2018), and that the term varies wildly in its application across disciplines. While this chapter will not touch on every single definition of the term, it will look at the three most common definitions that stem from the physical sciences, social sciences, and economics.

In its most basic sense, the term scale refers to the size or magnitude of a system, phenomenon, or measurement. This is how it is most commonly utilized in the physical sciences. It usually represents the dimensions or proportions of an object or phenomenon, such as the scale of a map, representing the relationship between the *actual* distances in the physical world, and the distances illustrated on the map.

Inherently, scale is a comparative term, emphasizing the differences of any two measurable things. This relation between two varying objects or phenomena is the fundamental basis of the term that lends itself to nearly every faculty of its use (Wigboldus, 2018). Scale is often defined with a leading adjective to give more specificity to its intended usage. The

relational quality of the subjects being compared are often what provides an adjective to the definition of the scale. For example: spatial scale defines a size variance, compared to temporal scale compares a time variance. Scaling up (or upscaling) is the transition from finer scales to broader scales, where scaling-down (or downscaling), is transition from broader to finer (Bierkens et al., 2001).

In the social sciences, the term "scale" is used to describe the level of analysis or observation applied to study social phenomena, human behavior, and societal issues (Wigboldous, 2018). Social scale is not about physical size but about the scope of investigation or analysis. Researchers in the social sciences often focus on different scales to gain insights into various aspects of society. Micro-scale examines individual behaviors and interactions, macro-scale looks at large-scale social structures and institutions, while meso-scale analyzes intermediate-sized social units like communities or organizations.

In economics, scale can be defined as the growth of an intended outcome, playing importance on the transitional properties that occur during that shift. This definition relates scaling economies to efficiencies and profit maximizing outcomes. For example, the *economies of scale*: defined as the cost advantages gained by increasing production, leading to lower average costs per unit. Opposingly, another common term used is the *diseconomies of scale*: where increasing production leads to higher average costs due to inefficiencies or other factors. The *scale of production* is also used, referring to the level of output produced by a firm or industry, indicating the size of their operation (Kenton, 2022; Wigboldus, 2018). These three economic understandings of scaling share a common emphasis on 'growth,' and in this regard, "the terms growth and scaling are often used interchangeably" (Wigboldus 2018, p. 17).

The economic definitions of scaling are similarly applied when referring to scaling innovations. The pairing of scaling with innovation frames innovation as a "key mechanism and model for achieving societal goals" (Wigboldus, 2018, p. 4), and links the outcomes of both scaling and innovation, with 'more' equating 'better'. Economics uses a less precise definition of the term than in either social or physical sciences, as "the terms growth and scaling are often used interchangeably" (Wigboldus, 2018, p.17). It is also less precise in that it is fundamentally used as a predictive model.

Accurate predictions of the outcomes of scaling processes (growth, for example, in the economic definition), are the target outcome of most scaling models. Wu and Li (2006) argue that "scaling is inevitable in research and practice whenever predictions need to be made at a scale that is different from the scale where data are acquired" (p.11). However, traditional theories of change "sometimes [lead] to questions of upscaling being reduced to an oversimplified focus on the growth of specific indicators" (Bögel et al., 2022, p. 171), and should be adapted to better understand the interconnectivity of factors that relate to change.

Contemporary critiques of scaling, understood in economic terms, have led to a recent desire to understand 'scaling science' (Gargani & McLean, 2017; Wigboldus, 2018), which asks more than just "how to make scaling happen" (Wigboldus, 2018, p. 205), but also involves understanding the causal relationships between different scaling phenomena (West, 2017; Wigboldus, 2018). Wigboldus argues that the generation of new innovations, and the processes that lead to their wider use and application "involve two distinctly different types of dynamics, which are the dynamic of *generating* innovations and the dynamic of *scaling* innovations" (Wigboldus, 2018, p.5-6).

This research utilizes the term scaling to focus attention on understanding scaling processes that lead to outcomes in different systems. In this regard, understanding the nature of scaling is important. Wu and Li (2006) draw attention to the challenges of prediction "as scale changes, new patterns and processes may emerge, and controlling factors may shift even for the same phenomena. Thus, observations made at fine scales may miss important patterns and processes operating on broader scales" (p.12). A major challenge with the defining of scaling is how these concepts are "based on a variety of different underlying ontologies, epistemologies and also practice-based approaches" (Bögel et al., 2022, p. 171), which makes them difficult to integrate into broader bodies of knowledge (Augenstein et al., 2020; Bögel et al., 2022). Yet, the processes that allow for transitions to take place are crucial in understanding how a system operates and better predicting realistic outcomes. Within the context of wicked problems, this is crucial for establishing appropriate judgement, for where there is no single solution to a problem, but instead "resolved over and over again" (Rittel & Webber, 1973, p. 160).

In the context of community housing, this research aims to understand the complexities of interconnected systems that operate alongside the current market-dominated housing regime that could impact the ability of community housing to scale up in a predominantly private, market system.

3.2   Path Dependency

The second conceptual framework that this research utilizes is "path dependency", which refers to the idea that historical events and choices can have a significant influence on the future development of a system or process. It suggests that once a certain path or course of action is chosen, it becomes increasingly difficult to deviate from it in the future, as subsequent decisions and developments tend to reinforce and perpetuate the initial path (Castro et al. 2014; Ruttan, 1996). This is referred to as "lock-in" (Liebowitz & Margolis, 1995), where the previous decisions are so deeply entrenched that they limit the ability to adapt to changing circumstances or to implement better alternatives (Liebowitz & Margolis, 1995), and has been argued to be generated by a 'positive feedback' (Arthur, 1994; David, 2000; Pierson, 2004), becoming self-reinforcing. This can often lead to the predisposition to repeat previous decisions, believing them to have the same outcome, even if circumstances surrounding those decisions have changed (Liebowitz & Margolis, 1995). Path dependency approaches highlight the factors that contribute to the stability of a system.

Path dependency arises from several mechanisms (Pierson, 2004), one of which involves the concept of increasing returns, where the benefits and advantages of a chosen path become greater over time. As investments, learning, and expertise accumulate along a particular trajectory, it becomes more difficult and costly to switch to a different path (Pierson, 2004; Wigboldus, 2018). Third, path dependency is influenced by the role of institutions and societal norms. Once a particular path is established and embedded in institutional structures, regulations, and cultural practices, it can create inertia and resistance to change. Institutional and normative factors can reinforce and stabilize the existing path, making it even more difficult to transition to alternative paths. Relating this framework to the Multi-Level Perspective, Path Dependency can lead to regimes that are less influenced by changing landscape pressures.

Path dependency highlights the importance of understanding the historical context and early decisions in shaping current outcomes and possibilities (Pierson, 2004; Wigboldus, 2018). Recognizing path dependency can help policymakers and decision-makers anticipate and navigate the challenges of changing existing systems, as it underscores the need for deliberate and strategic interventions to overcome lock-in effects and create new trajectories that align with desired goals. One criticism of path dependency theory is that it does not "lend itself to questions of justice" (Eadson & van Veelen, 2023, p. 218). In addressing solutions or 'fixes' to these path dependencies through 'path development' (Eadson & van Veelen, 2023; Trippl et al., 2020), Eadson & van Veelen (2023) advocate for "Green and Just Path Development (GJPD)" (p.218), which keeps equitable outcomes and sustainable development as the focus of new outcomes.

3.3   The Multi-Level Perspective

To further understand the processes of scaling and path-dependency, this research utilizes the Multi-Level Perspective to help analyze and understand those transitional processes. The Multi-Level Perspective (MLP) is a theoretical framework used in the field of sustainability transition studies to analyze and understand socio-technical systems and the dynamics of transformative change (Geels, 2005; Kemp & Rotmans, 2009; Kemp et al., 1998). Geels (2005) defines socio-technical systems as "a cluster of elements, including technology, regulation, user practices and markets, cultural meaning, infrastructure, maintenance networks and supply networks" (p. 446), and transitions as "multi-actor processes that involve interactions between many social groups" (p. 446). The MLP framework therefore aims to provide a structured approach for examining the interplay between different levels of analysis, including the micro-level (individuals and households), meso-level (organizations and institutions), and macro-level (socio-political and economic structures) in transformative change.

The MLP framework is comprised of three key levels:

a. **Niche Level:** This level represents the space for experimentation and innovation. It focuses on the emergence and development of new ideas, technologies, and practices that challenge the dominant regime. Niches often operate at a smaller-scales and are characterized by space for experimentation, learning, and the formation of niche communities. Wigboldus (2018) indicates that Novelties (or innovations) that are developed at the niche level "can

benefit from sheltered conditions that favour their emergence (and scaling), for example through dedicated project funding" (p. 88).

b. **Regime Level:** The regime level refers to the dominant socio-technical system that is established and supported by existing institutions, regulations, and practices. These may also be referred to as "institutional logics" (Fünfschilling & Truffer, 2014). Regimes represent the status quo and are resistant to change. The regime level is characterized by stability, lock-in effects, and the power of existing actors and vested interests. Regimes are often not deliberately shaped, but rather form as a result of interdependencies which developed between actors and processes over time (Holtz et al., 2008, Fünfschilling & Truffer, 2014).

c. **Landscape Level:** The landscape level encompasses the broader socio-political, economic, and cultural context within which transitions occur. It includes factors such as policies, regulations, market conditions, social norms, and cultural values. Changes in the landscape can create opportunities or constraints for niche innovations to emerge and challenge the existing regime.

At its core, the MLP recognizes that transitions occur when innovations, such as new technologies or practices (niches), interact and transform existing socio-technical systems (regimes) and emphasizes the interactions and dynamics between these levels. Transitions are seen as the result of interplay and alignment between niche innovations, regime dynamics, and landscape pressures (Geels, 2005). Transformative change occurs when niche innovations gain momentum, challenging and eventually displacing the existing regime, leading to a transition to a new socio-technical system. Geels (2005) defines this transitional process by outlining it as three phases. The first phase occurs when a "radical innovation [emerges]" (p. 451), often existing outside of the existing regime. The second phase occurs when "the new innovation is used in small market niches, which provide resources for technical development and specialization" (p. 451). At this phase, niches can remain stuck for long periods of time if they "face a mis-match with the existing regime" (p. 451). The stability of the existing regime can result in niches being unable to take hold for long periods of time. Eventually, if the niche is able to break through the established regime, this becomes the third phase as the niche becomes more

widely accepted and increasingly competes with the existing regime (Geels, 2005). In relation to this research, the MLP helps to conceptualize the factors that both contribute to and hinder the process of scaling.

Geels (2005) argues that "transitions come about when these processes link up and reinforce each other" (p. 452). This transition begins when "elements in the socio-technical regime de-align [...] because of internal tensions and pressures from the landscape level" (p. 472). This causes instability within the regime allowing for niche developments to emerge. "When these innovations promise solutions to the regime problems or link up positively with wider landscape changes, they will easily receive attention and funding" (Geels, 2005, p. 472). As de-alignment results in an unstable regime, often many niches may be developed simultaneously to fix these issues. Eventually, as one takes hold, options become narrowed down, where a single niche "becomes dominant" (p. 473), resulting in stability for the new regime.

However, there are instances where unstable regimes can continue to resist niche development, and have been argued that additional support should be implemented to help foster their development (Lang et al., 2019; Lessard, 2021; Moore, 2018). An example of this is highlighted by Lessard (2021), who draws attention to the tiny-home movement. Due to rigid systems within the existing housing regime, tiny homes, which were developed for high density, sustainable growth, were not able to break free of the current housing standard of low-density building, resulting in tiny homes becoming "increasingly aligned to the rules of the incumbent housing regime" (p. 637). Moore (2018), argues for "Strategic Niche Management" (p. 110) that can "provide protection to niches [allowing them to] develop rules, expectations, and stability to test and evaluate new alternatives" (Moore, 2018, p. 110). Lang et al. (2019) suggest the use of 'intermediaries', who help represent niche development and can help foster growth.

3.4   Applying the Conceptual Framework to Community Housing

This research aims to explore the processes of scaling-up community housing. The exploration of these scaling dynamics can be further explored by utilizing the multi-level perspective to understand the varying societal pressures that can determine the successful implementation of

niche innovations, and the barriers that can be created through the process of path dependency that resist change.

Returning to section 3.2 on Path Dependency, Eadson & van Veelen's (2023) implementation of a Green and Just Path Development may require implementation of intermediaries or niche management systems (Lang et al., 2019; Moore, 2018). What are considered preferred outcomes in relation to their equitable and sustainable outcomes may not be the most effective niche developments to challenge the existing regime. Keeping these preferred outcomes in mind, it is critical to manage the development and implementation of niches that will help correct the core issues of the housing regime, rather than creating more problems in the future.

The Canadian housing system is currently an unsustainable regime, resulting in a housing affordability crisis that continues to grow. These three frameworks are utilized in this research to consider the implementation of community housing initiatives, at the niche level, that can potentially challenge the current housing regime. As outlined in section 3.1, it is the *processes* of those scaling initiatives that will remain the focus of this research, to better understand their impacts on larger systems. The barriers to changing this socio-technical system can be difficult due to "organizational commitments and vested interests of existing organizations" (Geels, 2005, p. 450).

Path Dependency can be seen throughout the housing sector as historic policy choices that have led to deeply entrenched systems that are revealing themselves to be very difficult to change. The Multi-Level Perspective can be used to better understand these barriers, by looking at the interactions between landscape pressures and niche developments as they act upon this unstable, but resilient regime. This will be discussed in more detail in Chapter 6. The next chapter will outline the methodology used to implement this conceptual framework. Utilizing an arts-based methodology, this research is used to create a four-episode narrative podcast that will help to disseminate this information to a wide audience.

4.   Research Methodology

This chapter outlines the methods used in obtaining and analyzing the data for this research. This research aimed to explore the potential of scaling-up community housing in Canada, to meet the increase in need for affordable housing, problematizing a long-term need caused by increased forced migration from climate-related impacts. Due to the interdisciplinary nature of this thesis topic, I engaged with experts from various disciplines, inviting them to speak on how their field relates to climate change, forced migration and the larger goal of scaling community housing. I utilized an arts-based methodology centered on a narrative podcast that sought to weave together expert knowledge using a storytelling approach. In creating the narrative podcast, I endeavored to listen to all voice equitably to "deconstruct unequal power dynamics in research relationships" (Day et al., 2017, p. 204), allowing the interviewees to participate throughout the research and decision-making process (Castleden et al., 2008; Cunsolo Willox et al., 2012; Day et al., 2017). Building upon the multiple voices of the participants, my aim was to enhance current understandings of the system dynamics that connect climate change and migration to the need for safe, adequate and affordable housing.

It has been suggested that climate change solutions in the public sector can be hindered by the existence of information silos (Hailstone, 2016; Leiren, 2018). This is exacerbated when synergies between fields of expertise are not recognized or are poorly understood, limiting the ability to implement appropriate solutions. Podcasts are a valuable tool for narrative communication which Shaw et al. (2022) argue "[supports] individuals to process new information" (p. 3494) describing podcasts as "more engaging" (Shaw et al., 2022, p. 3494), and help to "communicate authenticity [and] validity" (p. 3497). A goal of this research is to use podcasting to "[disseminate] career-specific information that is often unwritten and hidden to those outside academic and social knowledge networks" (Quinatan & Heathers, 2021, p. 3), allowing their knowledge to be shared more freely. The act of "sharing knowledge and wisdom through collective dialogue" (Day, et al. 2017, p. 205), aligns itself with Indigenous ways of learning, by sharing knowledge orally. Podcasts have been recognized as "potentially a great way to communicate research and increase its potential for impact" (Garrington, 2017), as they "provide an engaging and informative medium for bringing research to a wide audience" (Day et

al., 2017, p. 218). This has been hailed as rich data, that can be analyzed in unique ways, providing far reaching knowledge mobilization.

4.1 Researcher Context/Positionality

I obtained a Bachelor of Arts degree in 2013 from Red Deer College, where I studied Motion Picture Art Production. This knowledge provided me with a vast skill set in the realm of multimedia production, which I continued to foster over the last decade. In exploring new ways to share knowledge through various mediums, I furthered my skills in audio production, seeing the value of utilizing podcasting as a methodology. Having grown up in Edmonton, Alberta, I have seen the impacts of the housing crisis within my own community and among my friends and colleagues. I have also heard first-hand the deep-rooted resistance that long-standing, incumbent regimes can present when actors attempt to enact policy change within the city. My own interdisciplinary background of knowledge led me to question the interconnectivity of different systems, to better understand how they are linked to climate change, migration or housing. As climate change and the housing affordability crisis being two of the largest issues facing Canadians, I aimed to extend the information collected to a broader audience than sometimes academia will allow. Rogers et al. (2020) state the ability that podcasts have in this regard, in being able to "[open] up the so-called 'ivory tower' of academia and the paywalled protection of academic knowledge by allowing academics to broadcast directly to wider publics" (p. 436).

This concept of interconnectivity has been a key theme throughout the development of this research, and an integral aspect of utilizing an arts-based methodology to create a podcast. Day et al. (2017) suggest that:

> as a method of knowledge mobilization and dissemination, podcasting provides an engaging and informative medium for bringing research to a wide audience, accessible across literacy levels (so long as technical/context-specific jargon is avoided), and available at any time through 'on-demand' streaming or download via the internet (p. 218).

I strongly believe that this form of knowledge sharing is integral to this research, which I will discuss in the next section.

4.2   Podcasting as a Research Methodology

Using podcasting as a qualitative research methodology is still very new within the academic community, and it has been critiqued by some scholars who are "uncomfortable with the use of 'unscholarly' forms of analysis" (Cook, 2020, p. 2). Yet, even critics, such as Cook (2020), acknowledge that using podcasts can allow for a "unique opportunity to critique our own methodologies" (p. 2). Use of podcasting as a methodology has allowed for new creative ways to gather and disseminate information (Kinkaid, Brian & Senanayake, 2019). Moreover, podcasting can generate research insights that can not "[be] produced through written text" (Kinkaid, Brian, & Senanayake, 2019, p. 2). In this regard, podcasting can be a "great way to communicate research and increase its potential for impact" (Garrington, 2017, n.p.), and "[provides] explorative and situational insights at a specific moment in time from each contributor" (Rogers et al., 2020, p. 449).

When it comes to research, podcasting can be considered as one approach nested within the broader category of 'arts-based research'. This form of research is a form of qualitative inquiry that "uses the arts, in the broadest sense, to explore, understand and represent human action and experience" (Savin-Baden & Wimpenny, 2014, p. 1). It can utilize a variety of different artistic forms, making it hard to define concretely as it "takes distinct forms and is used in diverse contexts" (Savin-Baden & Wimpenny, 2014, p. 1). Barone & Eisner (2012) state that "arts-based research is an effort to extend beyond the limiting constraints of discursive communication in order to express meanings that otherwise would be ineffable" (p.1). The goal of arts-based research is to "broaden the conceptions not only of the tools that can be used to represent the world but even more to redefine and especially to enlarge the conceptual umbrella that defines the meaning of research itself" (Barone & Eisner, 2012, p.2).

An issue that arises from arts-based research is what the term 'based' means. Barone & Eisner (2012) insist that the artistic materials "[provide] a starting point for further inquiry" (p. 3), and that "the aim is to create an expressive form that will enable an individual to secure an empathic participation in the lives of others and in the situations studied" (p. 9). This connection has been highlighted as a key strength in utilizing podcasting specifically for arts-based research, where Shaw et al. (2022) observed that many of their participants "connected deeply with the

content due to the power of the voice, the narrative format, and including storytellers who were experts-by-experience" (p. 3498). This is reinforced by Fisher's Narrative Theory (Fisher, 2009), where hearing someone tell their story adds to an individual's "knowledge and understanding of the world" (Shaw et al, 2022, p. 3494). Hearing a first-hand account of a story gives "credibility and validity" to it (Shaw et al., 2022, p. 3494), making it more "personal" (p. 3497).

4.2.1 Podcasting Popularity: Outside and Within Academia

Podcasts are still a relatively new medium, first gaining public awareness in 2004 (Day et al. 2017). It was not until 2016 that The Economist wrote that "the podcast [had come] of age" (K.S.C., 2016, n.p.); seeing the value of its use against other 'new forms' of communication and media, such as Twitter and Facebook. One of the primary factors driving the growing popularity of podcasts in recent years is their accessibility for both new creation and consumption, some going as far to argue that during the COVID-19 pandemic, podcasting was 'pandemic proof' (Chan-Olmstead & Wang, 2020; Faison, 2020; & Stitcher, 2020). In the context of the pandemic, the additional down time at home led to 'cognitive surplus' (Shirky, 2011), where many were looking for new sources of learning, and outlets to share their knowledge (Ruby, 2023). While several other forms of media dwindled in their ability to provide new content due to limitations from the pandemic and social distancing measures, there was still a large demand for knowledge that podcasts were able to fill (Ruby, 2023).

The value of podcasting has not been lost on academia and researchers, and it is increasingly being adopted as a research methodology (Birch & Weitkamp, 2010; Chan-Olmstead et al., 2020, Cook, 2020; Day, et al., 2017; Ifedayo, et al., 2020; Kinkaid, Brian, & Senanayake, 2019; Quinatan & Heathers, 2021; Shaw et al., 2022). Day et al. (2017) justify podcasts as a methodology, stating: "as a communication medium, podcasts offer a great deal of flexibility in terms of how audio material is presented" (p. 206), and are "credited with bringing a greater diversity of voices and perspectives to public audiences" (p. 206). They argue that Podcasting "can be more than a communication tool: podcasting can be a method of qualitative data collection and analysis, critical inquiry, and knowledge mobilization" (p.207).

While celebrated by many, podcasting still has limitations and constraints. Day et al. remind us that "access to technology to produce and receive podcasts is still a privilege" (p. 206), however, there are more people now than ever before who have access to a microphone in their pocket and the ability to upload, download and share information all from the same device. This reduced barrier of start-up cost, from a production side, has allowed podcasts to grow into one of the largest forms of communication media, with over 464.7 million listeners globally, listening to over 4 million podcasts (Ruby, 2023). Even prior to the pandemic, those who had taken advantage of this growing medium were also very loyal to it, listening for an average of 6.1 hours/week, with 62% of these saying, "they listen to all or most of their downloads" (Garrington, 2017, n.p.).

Constraints aside, there is an obvious appeal to podcasts over other forms of media and knowledge sharing on both the creation and consumption sides. For learners, they provide a convenience to decide "where, when and how to learn" (Day et al., 2017, p. 206), with the 'on-demand' aspect allowing listeners to replay sections they missed or want to hear again. With fewer restrictions for creators than other traditional audio formats such as for a radio program, they allow for more "niche topics" and specified discussion, where the audience size is no longer a crucial factor.

One of the largest strengths of utilizing podcasting as a methodology is how it enables "geographically disparate individuals [to] become close" (Birch & Weitkamp, 2010, p. 890), creating a new kind of 'local community' (Birch & Weitkamp, 2010; Postill, 2008). The strength of bringing polyvocal conversations together, can turn into an "intimate bridging medium" that Cook (2020) defines as: "a means of communication that generates closeness between listener and podcast guests and producers, despite the lack of physical proximity" (p. 5).

4.3 Data Collection Methods

Adopting the same approach as Day et al. (2017) I aimed to follow their 6-step process for Collaborative Podcasting. The 6-steps are as follows:

1. Audio collection - this process involves the interviews themselves, recording the conversation between myself (the researcher) and the participant (the interviewee).

2. Review and Analysis - in this step, the interviews are transcribed and coded, looking for themes and key messages from each conversation. This step will be discussed further in section 4.4

3. Structuring and Sequencing - this step divides the interviews into smaller segments, and places segments from every interview together into broad storytelling themes, in order to build the basis of the episodes.

4. Sound Editing - Once each episode has been structured, this stage looks at the audio quality of each recording, and uses audio production techniques to ensure the best possible experience for the listener. Here, audio transitions, music, and voiceover narration separately recorded by me will be added, resulting in a finished episode.

5. Participant Review - Here, the podcast episodes are sent back to the interviewees to allow for any suggestions or edits to their segments. This is also referred to as 'member checking'.

6. Public Release - After the approval of all participants, the podcast is uploaded to host sites and pushed to streaming apps and websites via RSS feeds.

Each interview was approximately 20-30 minutes in duration, allowing the participant ample room to shift the emphasis to where they felt it was most needed.

4.3.1   Advisory Committee Consultation

To help frame the narrative of the podcast, I divided the topic into key areas of inquiry, relating to the multi-level perspective introduced in the previous chapter: the Canadian Housing System (the current regime), climate-related migration and the housing affordability crisis (the changing landscapes), and Technological Innovation (niches) respectively. I formed an Advisory Committee to help outline important perspectives and recommend potential experts to collaborate with who would spark the conversations needed to bring more awareness to the intersecting issues of climate and affordable housing. The podcast production advisory

committee was composed of Dr. Damian Collins, Dr. Robert Shields, Esther de Vos, and Dr. Joshua Evans. Together, we outlined potential interviewees and additional considerations.

4.3.2 Participant Recruitment

Using the list of potential participants generated from the advisory committee, I employed the use of opportunity sampling in my recruitment process. Initial contact was established with participants in this research by either email or telephone, depending on the contact information that was publicly available on affiliated websites. Throughout the actual interview process, I intentionally left an opportunity to allow for snowball sampling methods, where participants could recommend other potential interviewees who may be interested in speaking on this subject. For recommendations that were provided through snowball sampling, interviewees were often eager to introduce the potential participant to myself, and would coordinate the first email correspondence.

Many participants were eager to lend their insights and expertise but were unsure how their knowledge would fit into the larger topic of the research. Before conducting the interview, I allowed interviewees to meet with me for a separate initial discussion, to help outline the research topic further if they needed clarification and to answer any questions they may have had. Several potential participants requested to have an initial conversation to orient themselves better to the research, as well as providing both the interviewee and I an opportunity to field questions, request clarification, and build rapport.

In total, I attempted contact with 92 potential participants for this study. Over half of the emails resulted in an automated or no response (48), with many additional participants being unavailable due to their busy schedules. Few potential participants rejected the project completely, but it became clear that the podcast methodology was a barrier for some potential participants who were hesitant to have their voice made public or to commit to being on a podcast. This is elaborated on further in the limitations section of Chapter 7.

4.3.3 Interviews

Participants were given the choice to meet in person (if in the Edmonton area), over the phone or on a digital meeting platform such as Zoom, Discord, Microsoft Teams, etc. All interviews for this research were conducted on the online communication application 'Zoom'. Of the digital meeting platforms available, Zoom provides the option to have individual audio tracks recorded for each member of a hosted meeting, making it an ideal choice from my side as a researcher as well. This was an important consideration for the podcast, as the individual audio files would allow for easier manipulation in the audio production stage, in efforts to make the output as clear as possible, and therefore more enjoyable for listeners. Table 1 below lists the participants who were involved in this project.

Table 1. Research Participants

NAME	POSITION / JOB TITLE
Dr. Robert McLeman	Professor of Environmental Studies Wilfred Laurier University
Dr. Greg Suttor	Housing Policy Analyst and Researcher
Anne Stevenson	Ward Councillor O-Day'min City of Edmonton
Johnathan Lay	Vice President of Projects HomeEd
Esther de Vos	Executive Director of Research BC Housing
Jennifer Breakspear	Associate Vice President in Operations BC Housing
Dr. Robert Summers	Director of the School of Urban and Regional Planning Academic Director of the University of Alberta Sustainability Council

My background in audio production forced me to engage with these interviews from more of a journalistic standpoint, using semi-structured interviews. Journalists frequently say that you should not send out questions beforehand, arguing that "if you send questions before an on-camera interview, you will never have the opportunity to see an emotional response" (Spark, 2017, n.p.). I intentionally attempted to limit concrete questions to interviewees prior to our

discussion; instead outlining generalized questions and topics that would be the focus of the conversation. I insisted on the interviews being more casual in nature, attempting to reduce the stress that an interview can have on participants. Ensuring participants understood that the conversation would both be edited down into a narrative structure and that the podcast would be sent back to participants for approval prior to being made public, alleviated many hesitations that some participants had. Many participants voiced that they felt less pressure with this style of interview, which resulted in more personal, emotional, candid and conversational responses.

While each set of questions was unique for each participant, they did include similar framing with several significant questions. Questions such as: "can you describe the successes and challenges you have experienced in your area of expertise (in relation to affordable housing, climate change, or migration)" and "what are the largest challenges or barriers to change that you foresee in your field" were often the starting points to other questions that would evolve through discussion.

4.3.4   Ethics

An unconventional element to this research, was that the identities of the participants were an integral part of the resulting podcast, and therefore were to be made publicly known. This meant that the ethics application and resulting handling of data needed to be approached differently. Each potential participant was made aware of the eventual distribution of the podcast and was given the opportunity to listen to the final version of the podcast prior to its public release.

4.4   Data Analysis

4.4.1   Coding and Narrative Structuring

Both inductive and deductive coding approaches were employed in the analysis of the collected data (Creswell & Creswell, 2018). The research encompassed a deductive validation of the climate and housing affordability crises concepts, while also aiming to generate new knowledge by exploring relationships and systems inductively through qualitative data analysis. Although theories pertaining to the climate and housing crises were evident, initially, the interviews were subjected to open coding, allowing for the emergence of new ideas. I began by listening to the recorded audio, while simultaneously reading the transcriptions, highlighting key 'soundbites', a

term that has long been used in media to refer to a short clip of memorable audio often taken from a larger audio recording that captures the essence of what the speaker was trying to say. In qualitative data analysis, this step roughly corresponds to open coding or thematic coding (Creswell & Creswell, 2018). From this initial analysis, the three areas of inquiry established for this research with the advisory committee were the basis on which the interviews were next linked to a broad narrative structure. This led to a deductive approach, utilizing the multi-level perspective as a theoretical framework to take these three areas of inquiry, applying them to the multi-level perspective, categorizing concepts into landscape, regime, and niche. Subsequently, inductive coding was employed to examine how these broader systems interrelated, uncovering novel themes within the data. How this structure determined the overarching narrative will be discussed further in 4.4.2.

After each soundbite was highlighted, I then applied the same deliberation to a standard plot-analysis if this would best be situated in the Beginning, Middle, or End. Traditional plot diagrams are a useful tool in developing a narrative structure, and classifying integral aspects of a story's dynamic. This research utilized Gustav Freytag's dramatic structure (also known as Freytag's pyramid) (Freytag, 1863) to build the fundamental outline of the podcast. This pyramid is commonly used in contemporary plot analysis, dividing a story's plot into five parts:

1. Exposition (or introduction)
2. Rising Action
3. Climax
4. Falling Action
5. Resolution

Thematically, I looked at where to best place each soundbite within these five parts, and looked at how the points addressed in one would lead to the other.

4.4.2 Episodic Development

I began the process of episode development by looking at the themes that were formed through the interviews, and which themes were linked concretely through all five plot points. This allowed me to best understand the information through four key stages, which became the basis for the four episodes. To begin, I understood that I would have to introduce and contextualize the

issue, giving a broad overview of the problem. Next, I would explore the reasons behind those problems, looking at wider systems and broadening the understanding of the issue. The third stage was to take that wider perspective and apply it locally, looking at how the forces applied by these broad systems were working at smaller scales, and lastly, by looking at the potential solutions to these local problems, and seeing if those solutions could be applied to the larger systems as well.

I found that this related to the Multi-Level Perspective conceptual framework and could be used to help broadly establish the episodes for the podcast (figure 2). The problematization of the issue would tie well to the Landscape level of the MLP. This would then lead to the Regime to be utilized for contextualizing these problems within the wide and local perspectives. The Niche level would then represent the solutions, understanding how they may be applied to the Regime systems.

Figure 1. Narrative analysis using the MLP.

To outline my ideas, I cut up the physical transcripts into their highlighted soundbites, and began to link them together, one after the other on a blank sheet of paper. From there, I looked at what information was missing or needed further clarification, and developed a script for myself that would add in that supplementary information. Once I felt each section was coherent, I theorized how I could link it to the next segment. This gave me the overarching outline to each episode, with a starting point of key dialogue moments that I knew would be integral to building the knowledge and story in tandem.

4.4.3   Audio Production

This research was recorded and edited digitally, using the program Adobe Audition for all the audio production elements. The first stage in production was to analyze the quality of each recording and determine what qualities would need to be altered to maximize clarity. Zoom recordings presented themselves with similar issues that are common when recording a phone call, in that they often have varying levels of static, hum and background noise. The easiest way to check the overall quality of your recording visually is through the 'Spectral Frequency Display'. Tall peaks in the visualization that are illuminated in red indicate instances of loud distortion that can often result as 'clipping', which is a form of waveform distortion that occurs when an input is too high for an amplifier, resulting in its attempt to deliver an output that exceeds its maximum capability.

I began by reducing the background noise from each individual interview. Since I was able to record each participant as a separate audio track, this allowed for the noise from each individual interview to be dealt with independently. In every instance, there were instances of the recording when neither me nor the participant were talking. This is commonly referred to as 'room tone' and is useful to help create smoother transitions between audio clips with varying noise.

Adobe Audition also allows its users to determine a 'noise floor' to help with noise reduction. Using the 'room tone' as the 'noise floor' allows for a 'noise gate' to set a minimum decibel level (or volume level) that is kept. Other tools such as 'denoiser' and an 'equalizer' help to clean the basic audio as well, but often need to be additionally cleaned afterward.

The range of frequencies that humans can hear ranges from approximately 20 - 20,000 Hz. Generally speaking, the resonance of a human voice begins in the range of 80-300Hz, with additional sounds generated by consonants and vowel expressions peaking around 1-3 KHz, and diminishing substantially by 8 KHz for men and 17 KHz for women. Knowing this, audio outside of that range is almost always excess noise and can be removed.

For noises such as hum that exist in the frequency range of human speech, a different function was used. 'Room tone' from an audio clip that does not contain any speech or clipping instances can be used to capture 'a noise print', which can establish key frequencies that can be reduced through Audition's 'noise reduction'. Depending on the clip, noise gates and expanders can be useful, but the majority of issues can be solved prior to their use.

Lastly, I attempted to normalize each audio track to the same level, which boosts the peak audio of each track to a determined dB level. This helps with multiple recordings from multiple devices to become more consistent, and therefore easier to listen to side by side.

Once each track was relatively clean, it became apparent that there were instances when removing clipping, hum and noise reduced the remaining audio frequencies too substantially to keep the audio as usable for the podcast. In those cases, I either needed to no longer include those clips, or rework the narrative so that I, instead, would discuss that point, rather than using the interviewee's audio.

Other edits for the podcast included simple multi-track edits such as fades (volume increase/decrease) or pans (in stereo recordings, this is shifting audio output to the left or right speaker). In most instances of a change in speaker or a change in theme, music was used to highlight each shift. Music for the podcast was obtained from Adobe Stock, ensuring it is fully licensed for public distribution.

Adobe is currently developing its own podcasting application, which will include an AI audio enhancer; this will likely do many of these audio processes for its users. There is a beta version available currently, which I attempted to use to aid in the post production processes of this thesis, however the results were still too limited at this point to be of use.

4.5   Chapter Conclusion

In an attempt to disseminate the information obtained from this research to a wider audience, the development of a podcast using an arts-based research methodology was chosen. While using

opportunity sampling for potential participants, the podcast itself did appear to be a deterrent for some in the recruitment process. The interviews were conducted using semi-structured interviews to allow participants to easily co-navigate the conversation to topics they felt were most relevant and important to discuss. A combination of thematic coding and creativity were utilized in developing the podcast narrative, with minor barriers appearing due to technological limitations, resulting in poor audio quality. There are other recommendations and limitations that will be discussed further in Chapter 7. In the next chapter, a brief synopsis of each episode will be provided, outlining the established themes that are discussed. A link to each episode is also provided to access and listen outside of more traditional streaming services.

5. Results

This chapter provides a brief synopsis of all four episodes of the podcast, including a brief overview, key phrases, and the names of guest speakers (interviewees). A link to each podcast episode is provided as well, to listen without the need to stream or download from a podcast hosting site.

5.1   Episode 1

Guests: Dr. Greg Suttor & Dr. Robert McLeman

Synopsis: The first episode of "Building a Canadian Climate Refuge" introduces the topics of climate change, forced migration, and the housing affordability crisis. Giving a brief introduction to these topics, Dr. Robert McLeman and Dr. Greg Suttor set the stage for the remaining three episodes discussion.

Runtime: 17 minutes, 57 seconds

Link: https://drive.google.com/file/d/1GwJaXyQxfqDhKRQz6uN_CCkGErv3OqD8/view?usp=sharing

5.2   Episode 2

Guests: Anne Stevenson, Dr. Greg Suttor & Dr. Robert McLeman

Synopsis: After introducing the topics of climate induced migration and the housing affordability crisis in the first episode, we continue these conversations, and look at barriers to change within the housing system through the introduction of two theories: the multi-level perspective (MLP) and path dependency. We also begin to shift these concepts to a local perspective, by beginning our conversation with City Councillor Anne Stevenson.

Runtime: 20 minutes, 20 seconds

Link: https://drive.google.com/file/d/1WuZ0Xvw2W37CWAWHqvAJ4Ob0oOcWXwPO/view?usp=sharing

5.3   Episode 3

Guests: Jonathan Lay, Dr. Bob Summers, Anne Stevenson, Esther de Vos, Jennifer Breakspear, Dr. Robert McLeman

Synopsis: We continue our localized look at affordable housing successes and challenges within the city of Edmonton, by continuing our conversation with Councillor Anne Stevenson alongside discussions with Johnathan Lay, and Dr. Bob Summers.

From here, we shift our focus to BC, where Esther de Vos and Jennifer Breakspear from BC Housing discuss the challenges emergency housing plays on the already pressured housing system.

Runtime: 26 minutes, 14 seconds

Link: https://drive.google.com/file/d/1srybEvYNyt76BAeal3EJiivs7MYljZ-n/view?usp=sharing

5.4   Episode 4

Guests: Jennifer Breakspear, Esther de Vos, Jonathan Lay, Anne Stevenson, Dr. Bob Summers, Dr. Robert McLeman

Synopsis: In the final episode, we discuss potential solutions for the climate crisis by discussing technological innovations. We also discuss how these potential solutions could help Canada to feasibly become a climate refuge.

Runtime: 24 minutes, 39 seconds

Link: https://drive.google.com/file/d/11pgtI8NduxYfkbPuTCUBIfnYbkfHooAS/view?usp=sharing

In the next Chapter, we discuss the findings of this research as it relates to the existing literature on affordable housing, as well as the conceptual framework outlined in Chapter 3.

6.   Discussion

This thesis set out to develop a deeper understanding of Canada's housing affordability crisis in relation to climate change and migration and explore how Canada's community housing sector might be "scaled up" in an effort to address these long-term challenges. This chapter addresses these research objectives by reflecting upon the overarching narrative structure and main takeaways of the podcast. This reflection is organized using the conceptual frameworks outlined in Chapter 3. More specifically, the three levels of the MLP, and the concepts of path-dependency and scaling, are employed to theorize the "scaling up" of community housing as a socio-technical transition.

The narrative podcast presented in Chapter 5 takes the listener on a journey, beginning with the landscape drivers of housing affordability crisis (Episode 1), moving through the system-level barriers to change (Episodes 2 & 3), and ending with an examination of niche level innovations (Episode 4). In this regard, the podcast's narrative structure was loosely based upon the MLP and its view of transition. As discussed in Chapter 3, Geels (2005) argues that "transitions come about when […] elements in the socio-technical regime de-align […] because of internal tensions and pressures from the landscape level" (p. 472). Introducing these pressures was the basis of the first episode of the podcast, which establishes climate-induced migration and the housing affordability crisis as primary examples of this level within the multi-level perspective. The second and third episodes of the podcast focus more intently on the regime, looking at lock-in factors, the systems that are currently in place and resistant to change, and the processes that have helped to shape these systems over time. Lastly, the final episode explores potential solutions through niche developments. In this research, the niche developments explored have largely related to technological innovation, and changing mindsets. In the sub-sections that follow, each of these levels are discussed using examples from the podcasts.

6.1   Landscape

The MLP describes the landscape as the level that encompasses the broader socio-political, economic, and cultural context within which transitions occur. This research understands both

climate-induced migration as well as the existing housing crisis to both be overlapping landscapes. Each of these will be explored in the following three subsections.

6.1.1 Climate-Induced Migration

Climate change is a significant driver of social, economic, and environmental changes (Chandy, 2023). As an external, seemingly uncontrollable force it is affecting many of aspects of society, not least of which is population flows. In this regard climate change can be considered an overarching landscape from the perspective of MLP. Climate change is multifaceted. One particular 'landscape form' examined in this thesis is climate-induced migration. To begin the podcast, Dr. Robert McLeman addressed the changing climate, and explained how it is already causing displacement and impacting migration flows on a global scale (Quirk, 2023a). Mentioning the Internal Displacement Monitoring Center, Dr. McLeman explained that the number of displaced individuals from climate-related impacts will very likely increase in frequency and severity due to climate change, stating that "what we are seeing today, 20 to 25 million people globally, is almost certain to increase in coming decades" (Quirk, 2023a, 2:46). This is an important consideration for Canada, as many countries that are particularly vulnerable to the impacts of climate change are also "important source countries of migration to Canada" (Quirk, 2023a, 4:04). According to Dr. McLeman it is in Canada's own self-interest to plan for an increase in future migration. The pressures that migration is playing on the housing system is crucial to consider as he states, "immigration is inherently linked to housing" (5:22).

6.1.2 The Housing Affordability Crisis

Canada's housing affordability crisis has put additional pressures on the current housing system (CMHC, 2022b). In Chapter 2, it was indicated that this research has adopted the definition of a 'housing system' as "a method of ensuring (or not) that enough good-quality housing is built, that there is a fair housing allocation system, and that the stock of housing is properly maintained" (Hulchanski, 2006, p. 222). It can be argued that the current housing system in Canada is not adequately meeting these goals and is in need of change. As defined in Chapter 3, changes in the landscape can challenge the existing regime and create opportunities or constraints for niche innovations to emerge. In the case of this research, the pressures due to the affordability crisis can be considered a landscape as these pressures act as a destabilizing force

upon the current regime. These growing pressures can be examined by unpacking the affordability crisis.

In the first episode of the podcast, Dr. Greg Suttor argued that the current housing crisis in Canada can be attributed to "at least three things" (11:07). The first, he defines as "home purchase prices escalating much faster than incomes, and effectively shutting out people who would normally be buyers" (11:11). This, in turn, has caused many households who would normally be buyers, to remain as middle-income renters. This increase in middle-income renters has led to an escalation in rents, as they add more competition to the rental market. As Dr. Suttor explained "they can pay more, so you've got more renters with more purchasing power. This puts landlords in a position to raise rents faster, which they've been doing. This adds up to *big* loses of low-rent units" (12:28).

The blockages to tenure switching noted above further complicates a second attribute of the housing affordability crisis: the inelasticity of the rental sector. It is difficult to rapidly expand the supply of rental housing. Hence, as Dr. Suttor explained, price escalation in the rental market is also related to "the supply, the amount of rental housing available, not keeping up with a surge in demand" (11:28). This surge in demand, has been occurring for "about a decade" (13:13), resulting in much more competition for rentals, especially for those with low incomes. The shutting-out of many households from buying, has resulted in these households spending longer periods of time in the rental sector, with the ability to outbid low-income households for rentals that are becoming scarce.

As the demand for housing increases, it continues to make housing more unaffordable for more Canadians. According to the CMHC (2022, n.p.), "to restore affordability, an additional 3.5 million housing units are needed by 2030". This is in addition to the 2.3 million units already projected to be built in that time (CMHC, 2022). Reaching this goal would equate to an average of 440,000 new units needed to be built per year. This would be a substantial increase from the all-time high of housing starts Canada has seen, which was approximately 273,000, in 1976 (Kassam, 2023). Within these targets, housing advocates are campaigning for 10% of new housing to be community housing. This would help restore the availability of community housing, the last attribute of the housing crisis, according to Dr. Suttor.

Dr. Suttor argues the last attribute, resulted from a lack of community housing: "we have very little production of [community housing], and have had limited production of that for the past […] 30 years" (11:58). As mentioned in Chapter 2, there has been very limited production of community housing since the defederalization in 1993 (Pomeroy, 2021; Sutter, 2016). This form of housing operates differently than the market-driven private housing, and is mandated to remain affordable (CHRA, 2023). This form of housing helps to keep many low-income rental units, regardless of the demand.

6.1.3 Intersecting Landscape Pressures: The Polycrisis of Climate Change, Migration and Housing Affordability

The convergence of these landscape pressures can be considered a 'Polycrisis' (Cascade Institute, n.d.), a term used to describe how "multiple global crisis are worsening one another" (Polycrisis.org, n.d., n.p.). These pressures are likely to increase drastically in the coming decades (IDMC, 2023). Exploring and understanding the potential catalyst that climate-induced migration is to have on the housing system is one of the most fundamental elements of this research.

Considering housing supply alongside the pressures of migration, it is crucial to address the disconnect between what new immigrants to Canada need for housing, and what is currently being built. According to Dr. McLeman, "immigrants are more likely to need what we would call entry-level homes for the housing market […] and those are in short-supply and we're not building them" (8:50). This was echoed by Dr. Greg Suttor, who argued that "most of the rental housing […] the system builds, is up-market private rental, it's rented condos" (11:31) and "are often not where lots of people need to live" (11:44). City Councillor Anne Stevenson added her insight, stating "there's different types of housing that isn't provided by the market" (Quirk, 2023b, 15:46), such as housing that meets the needs of large, inter-generational families; "you just don't get that on the market, or you don't get that at an affordable level" (15:58).

New permanent residents to Canada, alongside non-permanent residents, are all experiencing the negative impacts of the housing crisis. Among non-permanent residents,

international students have been heavily discussed in recent months as feeling the impacts of the housing crisis, as there currently is "no cap on the number of [international] students coming [to Canada], and no requirement by provincial or federal governments to make schools build corresponding housing" (Balintec, 2023, n.p.).

The pressures to increase housing availability is not limited to just newcomers, as internally displaced Canadians will likely continue to increase as well. The needs of emergency housing were discussed with Jennifer Breakspear and Esther De Vos from BC Housing. They argued that when a natural hazard event (e.g. forest fire) occurs and displaces individuals, it has impacts on "the whole structure of the system" (Quirk, 2023c, 21:47). The need for emergency housing after a severe weather event puts additional pressure on the housing system, as there are already substantial waiting lists for emergency and affordable housing in many parts of the country due to the lack of supply. When a disaster occurs, the recipients of emergency housing could be given priority for shelter, potentially bumping someone else on the waitlist down, prolonging their wait (Homeless Hub, n.d.).

Currently, many of the affordable housing options available from organizations such as BC Housing are not suitable as emergency housing, as they "don't rent furnished units" (Quirk, 2023c, 23:32), which is "not suitable" (23:49) for anyone fleeing a disaster situation and having nothing with them. Another element that was addressed was the temporal element of emergency housing; most notably, whether housing will be "a temporary thing" (22:15). For some disasters, such as the wildfire of Lytton, BC., dwellings have not been rebuilt "more than a year later" (22:26).

6.2   Regime

The second level of the MLP is the regime. Geels (2005) defines the regime level as the dominant socio-technical system that is established and supported by existing institutions, regulations, and practices. Regimes represent the status quo and are resistant to change. It is also important to remember that regimes are often not deliberately shaped, but rather form as a result of interdependencies which developed between actors and processes over time (Holtz et al.,

2008, Fünfschilling & Truffer, 2014). This level is characterized by stabilizing forces, lock-in effects, and the power of existing actors and vested interests.

As outlined in Chapter 2, Canada's housing system is the cumulative result of policies and market-forces working in tandem over the past hundred years which have prioritized homeownership over rental or social forms of housing. The second and third episodes of the podcast largely explored the current housing regime in terms of the factors acting to stabilize it throughout these two crises. These factors have contributed to lock-in and path dependency within the housing system, effectively inhibiting the "scaling-up" of community housing. In the subsections that follow, government policy, zoning and infrastructure, and hesitancy to change are explored.

6.2.1   Government Policy

The first factor, addressed by Dr. Suttor, was the historical role governments have played in the housing system. The prioritization of homeownership by the federal government has likely resulted in "organizational commitments and vested interests of existing organizations" (Geels, 2005, p. 450). When the government first became involved in the housing sector, "more or less the mid-twentieth century" (Quirk, 2023a, 14:03), they were involved in at least four ways, as outlined by Dr. Suttor. First, governments were involved through "fostering home ownership […] ensuring that people [could] get a mortgage on good terms" (14:13). The second, was through their support of private landlord rental production, which was achieved through "large tax breaks, […] government loans, and grants" (14:36). These lasted until the 1980s, when "we see governments withdrawing from the kind of incentives and grants and things that they had given to private rental production" (15:16). The third point stems from the shift in government involvement from how they had helped to foster community housing, by "helping with the capital costs of it by providing the mortgage, or subsidizing rents directly" (14:47). This funding enabled projects that would have normally been mid or upper-range projects to become affordable-range projects. However, as discussed in Chapter 2, this form of funding was downloaded from the federal government to the provincial and municipal governments in the 1990s, resulting in a substantial decrease in government involvement. Dr. Suttor claims that the period that followed, through the 1990s and early 2000s, "rental got very little policy attention

from governments" (16:02). During this time, "the number of people buying a home shot right up" (16:11), resulting in "an absolute shrinkage in the number of renters" (16:20) across Canada. The final aspect of government involvement was through urban planning and development: "ensuring there's enough serviced land with roads and sewers and so on, and ready to build, so it's zoned" (15:04). However, the way in which cities have been zoned historically, has led to some outcomes that have locked-in the current housing system we have, making change increasingly difficult.

6.2.2 Zoning and Infrastructure

As mentioned above, what is currently being built is not aligned with the current needs for housing affordability. In many cases, to build what is needed, requires developers to build new, which Johnathan Lay stated was "more expensive" (8:18), making it increasingly difficult to maintain its affordability, even with government grants. With limited land available in many urban areas, especially near essential services, there could be substantial issues in building new housing, even with funding allocated to help its affordability.

Dr. Bob Summers spoke to the historical impacts that zoning has had on the development of cities, arguing that they have led to non-traditional built forms (Quirk, 2023c). How cities historically grew in the "absence of zoning" (11:45), was by adding density around the downtown or core. This was seen as "the most desirable place, from a spatial efficiency point of view […] because it's the shortest distance to every other spot in the city" (12:06). This allowed cities to become "inherently densified" (12:26). Through zoning, cities planned growth in an orderly way, largely through single-detached zoning. However, as Dr. Bob Summers pointed out, "that's a point in time" (14:41), "what happened was, as we continued to grow as a city, we didn't really adapt our zoning" (14:55). Over time, this resulted in huge areas of primarily low-density single-detached zoning, and "a lack of places to build density that works and a lack of housing diversity" (15:45).

In keeping areas as primarily single-detached housing, the infrastructure that was put in place to accommodate this type of housing has now made it increasingly difficult to add density. This was outlined by Johnathan Lay, stating that "they have existing infrastructure in place […]

that was built for the kind of density planned for that neighborhood" (Quirk, 2023c, 9:17). "When a major change in density occurs with infill development, it can push past where [the] infrastructure is built to" (10:52). This means that when developers are looking to add density, the infrastructure may also require to be upgraded. Johnathan Lay elaborated, "typically you can't just update the infrastructure right in front of those lots, or right in front of that building site […] but have to be a large portion […] or even the entire neighborhood" (9:47). This makes it increasingly difficult for developers as "there is no cost-sharing mechanism" (9:50), for when a developer must update infrastructure to accommodate density. For affordable housing developers who rely on grants to maintain affordability, the added cost of this upgrade can often make the projects "unfeasible" (9:52). It was also stated by both Dr. Bob Summers and Johnathan Lay that, with current zoning policies, the time it may take a developer to get new zoning approval can often result in substantial costs, making large-scale housing developments like towers more financially logical over medium density developments (Quirk, 2023c).

Additionally, the ability to update existing buildings in many instances may be extremely costly, as building standards, regulations and requirements have changed. Johnathan Lay spoke to this point, outlining that many older buildings in HomeEd's portfolio are not barrier free or accessible (Quirk, 2023c), such as walk-up style apartments, or buildings which redundantly have stairs that lead to the elevator (Quirk, 2023c).

6.2.3   Hesitancy to Change

The notion of 'hesitancy to change' aligns itself to the concepts of 'social norms' and the 'status quo' discussed by Geels (2005) in the MLP. Changes to these social norms can often be challenged or met with resistance, as the status quo acts as a stabilizer on the existing regime.

When adding density within a city through infill development, there can often be pushback from communities who are resistant to change coming to their neighbourhoods. Councillor Anne Stevenson shed light on this, stating "what it comes down to is communities loving their neighbourhoods, and when you love something, change can be hard" (Quirk, 2023b, 19:27). This reinforced Bob Summers comments regarding the lack of zoning adaptation discussed in the previous section. He suggested that "we've avoided that change, so people got

used to everything staying the same" (Quirk, 2023d, 15:05) and argues that "by holding that change back, it makes it more difficult when it comes" (15:27).

6.2.4 Additional Barriers

There have been improvements to funding for affordable housing initiatives in more recent years but still have barriers that present themselves when providers look to apply for government grants to assist with project costs (Quirk, 2023c). Johnathan Lay mentioned that many of the grant programs are not "very well aligned" (6:00), in that they have different requirements in the application process. "Some things as simple as […] one level of government using median market rents as their baseline for affordability analysis, another level of government uses average market rents for their baseline analysis" (6:14). "It means an entirely new set of reports to create, it means a new set of metrics to navigate through the grant application, and then development process" (6:30). This adds additional costs and time for those applying.

These barriers from past decisions have led to the lock-in and path dependency of the housing system. Even where these barriers are not as strongly felt, there are other stabilizers of the existing regime, such as a hesitancy to allow change.

6.3 Niches

Returning to Chapter 3, the niche level of the MLP focuses on the emergence and development of new ideas, technologies and practices that challenge the dominant regime. This level allows for innovation and experimentation, often operating at smaller-scales. Outcomes at the niche level help facilitate learning and the formation of niche communities. This research largely looked at technological innovation as niches within the multi-level perspective (Quirk, 2023d), alongside a shift in public mentalities towards becoming more accepting and understanding of the need to change.

6.3.1 Cost-Saving Construction Techniques

Of the potential solutions for housing, modular housing was discussed as one of the primary solutions to building quickly. Jennifer Breakspear highlighted this by saying "the beautiful thing

with [modular] was the speed with which you could house people" (Quirk, 2023d, 5:03). Elaborating, she argued "there are some issues [to modular housing], they are far and away outstripped by the value that comes from being able to show someone who has been living on the street, or close to the street, be able to walk with them into their own unit" (5:28).

Modular housing was outlined as beneficial for remote communities as well, who may not have the labour market or materials to rebuild after a disaster, for instance (Quirk, 2023d). The additional cost premium of building modular "disappears when the sites are remote, and because the materials have to be taken so far anyways" (9:25), making it worthwhile option. However, according to Johnathan Lay, that cost premium may limit its application in a city such as Edmonton, where it will likely remain cheaper to "build on site" (9:36).

Other methods such as 3D printing and Panel housing were mentioned as possible solutions but have elements that will need to be further explored (Quirk, 2023d). Johnathan Lay remained hopeful saying "technology is always changing, there are new products all the time" (10:00), reinforcing that "everyone in the industry is looking for better ways to build things" (10:04).

Councillor Anne Stevenson spoke to her caution with new construction techniques stating "whenever there is a new technology, it is always set out as like: this is the silver bullet, this is the magic thing that's going to make housing so much more affordable and fast, and again, we're definitely seeing improvements, and we need to keep pushing on that, I think I'm always just cautious when that's seen as the solution." (Quirk, 2023d, 12:07).

6.3.2   Change in Mentality

Landscape pressures are acting upon the housing regime, making change more accepted within communities as the need for housing is becoming more apparent. Some people in Edmonton are trying to change mentalities and social norms, which was discussed throughout the podcast. The amount of affordable housing needed was stressed by Johnathan Lay, stating "the need in affordable housing is really significant, the city of Edmonton just completed its affordable

housing needs assessment; it identified thousands of new units that a required" (Quirk, 2023c, 4:09). That need being understood and quantified has begun to change some mentalities.

Councillor Anne Stevenson discussed the change in mentality when a new development was being built in west Edmonton: "previous years that could have created a huge uproar or huge backlash, but there was hardly any" (17:46). Elaborating further, the Councillor stated, "I think the community saw the need, and really welcomed that into the neighborhood" (17:51). Dr. Bob Summers noted a similar shift in mentality with regard to the acceptance of in-fill development post-implementation. "When 'skinnys' were first being built, lots of people would casually express some notion that this is destroying the neighborhood" (13:27). "Now, some seven or eight years later after the first 'skinnys' started to go up, people don't have that feeling anymore" (13:40). He concludes that "it's just become normalized and people have accepted that sort of shift of building" (13:54). These other forms of housing are becoming more widely accepted as their implementation is slowly rolled out in neighbourhoods (Quirk, 2023d). Bob Summers suggests that "by making small changes to the land use bylaw over the last twenty years, those changes over time have allowed people to absorb the notion of change" (15:41). He insists that this shift is needed, as "neighbourhoods will change, and allowing them to change is important" (14:24).

6.4   Considerations for Niche Developments

Many of the participants of the podcast stressed the importance of building sustainably, ensuring that new developments are both suitable for newcomers, but also not contributing to the issues that people are migrating away from (Quirk, 2023d). This is a barrier to utilizing existing infrastructure, as explained in section 6.2.2. Esther de Vos spoke to these points, stating:

> I think the bigger challenge around the technology is not just how fast can we make it, but does it also answer the need of dignity for the people living in it" (6:48). "The other consideration […] is that a lot of the energy in the last number of years has been on creating things that are as energy efficient as possible, which is great, except for the fact that we are now finding that that can sometimes make it be so that those buildings can't breathe, and cool down fast enough (11:00).

With increasingly warm summers, Esther de Vos asked, "what does that mean for the buildings we have now, and the buildings we are looking to manufacture" (11:29).

Councillor Anne Stevenson highlighted an important point stating there is a need to be "ensuring that the housing we are building to meet their housing needs are also not contributing to the climate crisis" (12:22). The Councillor elaborated: "I think that […] we need to be really thoughtful […] that we're building buildings now to be also reflecting the climate of the future" (12:37). Understanding the complexity and diversity of needs for new development has had a positive outcome as Councillor Anne Stevenson has suggested, "there has been a really interesting evolution in how we are building appropriate housing for different groups that are coming to Edmonton" (17:16). She elaborates, mentioning how different cultures may prioritize different styles of homes to meet their needs. "There is certainly a growing awareness and experience in providing adaptive housing that meets a range of needs from around the world" (17:25).

6.5   Chapter Conclusion

This discussion chapter has sought to develop an understanding of the intersection of the current housing affordability crisis and climate-induced migration. It invites the reader (and listener) to rethink this polycrisis in terms of Geels' MLP. From this perspective, addressing this polycrisis can be understood as a socio-technical transition. In utilizing a podcast as a methodology, the intention of this research was to help establish and explain the complex relationships between these crises. Identifying how these crises are acting as landscapes which are putting pressure on the existing housing system, allows the focus on stabilizing forces and lock-ins through path dependency to be analyzed and addressed more appropriately. This intersection of crises is a 'wicked problem' (Rittel & Webber, 1973), and therefore there is no one specific answer or solution. This research therefore aimed to explore the catalytic potential of migration on the housing system to better understand their complex relationship when analyzing potential solutions to these problems.

Framing the need to change housing policy in relation to the anticipated mass migration from climate-related impacts may assist in challenging the current housing regime and make tangible changes. Recognizing the inherent link between affordable housing and immigration is essential for policymakers to design and implement effective strategies that prioritize the housing needs of newcomers, in addition to marginalized and low-income communities.

The next chapter will look at recommendations and limitations associated with this research as well as with the utilization of an arts-based approach with podcasting as an outcome. The potential for future research will also be explored.

7.   Conclusion

This thesis research asked the following questions: '*How can Canada plan for the long-term goal of becoming a climate refuge? What existing barriers to change need to be addressed in the current housing regime? What role is there for the community housing sector?* This thesis explored existing barriers within the Canadian housing system, and applied a conceptual framework informed by scaling theory, dependency theory and the multilevel perspective to conceptualize the scaling-up of community housing. Focusing on hearing first-hand accounts from experts in a variety of intersecting fields, this research aimed to expand the existing literature by utilizing podcasting as a means of broadening engagement as well as accessibility to this data. Given the limitations of utilizing an opportunity sampling method, this exploratory research should be considered as an invitation to view the housing crisis through a lens of 'climate change as catalyst' for future migration. The outcomes of this thesis have identified key recommendations for next steps, but simultaneously recognizes that solutions will require place-based solutions.

The first objective of this thesis was to *'develop a deeper understanding of the forces climate and migration play on the Canadian housing system'.* This required an understanding of the current trends within global displacement (IDMC, 2023; OHCHR, 2018), and predictive modeling of climate impacts over the coming decades (IPCC, 2021; IPCC, 2023). This was then applied to current immigration and housing statistics within Canada (CMHC, 2023, IRCC, 2023; Statistics Canada, 2022b). These statistics acted as the basis for questions pertaining to these topics, as predictions were outlined by participants.

The second objective of this thesis was to '*explore the housing affordability crisis in Canada, looking at root causes and systemic barriers to change.* Through a historic look of the "lock-in" effect that has led to a market-oriented housing system in Canada, many of the barriers to change were presented. As the systems in many cases are self-reinforcing, they help to perpetuate the issue further, while simultaneously making change more difficult.

While originally intending to problematize the issue around long-term solutions to the anticipated need for migrants, this presented itself as the most complicated objective for this

research. The majority of efforts in shifting housing policy currently are aimed at addressing the existing issues in housing affordability, with very little being discussed in terms of a long-term goal for migrants. The outcomes needed to effectively build a climate refuge require similar long-term solutions to the current housing needs, as many current immigrants are in need of low-income housing that is currently unobtainable within the Canadian Housing System (CMHC, 2023; OHCHR, 2018; Rose, 2019).

The third objective for this research was to '*explore strategies for how Canada could "scale up" its community housing, with the end goal of establishing Canada as a climate refuge*'. This objective was explored by addressing the key drivers for the housing affordability crisis in Canada, and what solutions have been implemented currently to help mitigate these impacts. As previously mentioned, solutions for all affordable housing issues will likely require place-based solutions, which is exemplified by the emphasis on Edmonton and BC within the podcast. Understanding the largest issues being experienced locally will allow for the best appropriate implementation of solutions.

This chapter continues by first outlining recommendations along these lines, followed by acknowledging limitations to this research, and ending with potential research questions for further inquiry.

7.1   Recommendations

7.1.1   This Research

This research brings together two highly discussed issues that humanity is currently facing: the housing affordability crisis and climate change. The research aims to emphasize the connections between these domains, and questions how barriers to solutions with mutually beneficial outcomes to both problems can be overcome. How individuals problematize the issue will likely dictate what they deem the most appropriate solution to be. This purposefully aims to steer away from the psychological bias best depicted as Maslow's hammer (Maslow, 1966). In reframing the solutions of both the climate and housing crises with the most vulnerable in mind, there is a very apparent need to fix the root causes of many housing issues within Canada. This research

aims to enforce the connections between climate, migration and housing, looking at solutions that are appropriate to address all three of these aspects together.

This research and the resulting podcast are a call-to-action for policy change. Understanding that the correct response to address the existing challenges will be place-specific, as a one-size-fits-all approach will not be an appropriate solution to the housing crisis, migration, or climate crisis. While the findings of this research indicate that community housing would be a very effective long-term solution for the housing crisis, this research acknowledges that there are additional questions that will need to be addressed that will pertain to localized needs and abilities to foster this growth. The needs of Edmonton will vary substantially from the needs of Toronto, for example. However, if fundamental underlying policies are designed to remain cognizant of prioritizing the needs of the most vulnerable, and ensure long-term solutions that address the root causes of the housing affordability crisis, then the most impact will be made.

7.1.1.1 Advocating for Community Housing

Although there are several ways to address the housing affordability crisis, community housing stands out as a more long-term affordable solution than simply adding additional stock to the private market system. While the rent prices of units in the private system are often set due to existing supply and demand factors, the change in rent in community housing is much lower, usually only increased for operational costs rather than by market fluctuation (CMHC, 2023) This mirrors findings from a 2022 report on co-op housing, that showed a considerable difference in the cost for co-op housing rents compared to market (Sutter, Otogwu & Falvo, 2022). Typically, the rental cost was "one-quarter to one-third lower than market, with this gap widening over time" (p. xi). A shift to increasing public housing initiatives would work more effectively than rent subsidies provided by the government, as a rent increase in the private market system will only result in higher costs for the government to assist with.

Affordable housing is of paramount importance, particularly in the context of immigration, as it plays a crucial role in facilitating newcomers' successful integration and socio-economic advancement (Nishamura, 2015; Rose, 2019). Immigrants often face unique challenges when finding suitable housing (Rose, 2019), including financial instability, a lack of

knowledge of the housing system, as well as discrimination (Rose, 2019). Yet, affordable housing is the foundation for immigrants to establish stability, which is true for internal migrants seeking to recover from a disaster as well.

Approaching the scaling of community housing from the multi-level perspective invites one to consider the affordable housing crisis from different angles and from the position of multiple stakeholders across various levels of society. The multi-level perspective recognizes that sustainable and transformative change requires interventions at individual, organizational, and societal levels (Geels, 2005). In the context of affordable housing, building more community housing involves not only constructing physical structures but also fostering community engagement, promoting social inclusion, and advocating for policy changes. It requires collaboration between individuals, community organizations, government agencies, and other relevant actors to create a supportive ecosystem that addresses the root causes of the crisis. By approaching the issue holistically and considering the interconnectedness of different levels, building more community housing can contribute to long-term sustainable solutions that prioritize the well-being and housing security of all residents.

7.1.1.2 Building for Planned Relocation

Chapter 1 outlined some of the benefits of planned relocation, which reduces compounding vulnerabilities (Hagemeier-Klose et al., 2014; Tegart et al., 1990). Planned relocation strategies in the context of disaster recovery offer several significant benefits. It is argued that these strategies prioritize the safety and well-being of affected communities by proactively identifying and relocating residents from high-risk areas to safer locations before disasters strike (Ferris & Weerasinghe, 2020). By doing so, planned relocation mitigates the potential loss of life and reduces the vulnerability of individuals and communities to future disasters (Piggott-McKellar & Vella, 2023, UNHCR, 2014). Additionally, planned relocation allows for the establishment of more resilient and sustainable communities, as it enables the relocation process to consider factors such as infrastructure, access to essential services, and environmental suitability (Birchall, MacDonald & Slater, 2021; Ferris & Weerasinghe, 2020; UNHCR, 2019). This approach can foster the development of new settlements or the enhancement of existing ones, incorporating improved infrastructure, adequate housing, and community facilities that support

the long-term recovery and well-being of relocated residents. Furthermore, planned relocation strategies facilitate social cohesion and community engagement, as they involve residents in decision-making processes, fostering a sense of ownership and agency in shaping their post-disaster living conditions (McAdam, 2012; Piggott-McKellar & Vella, 2023; UNECE 2021). By incorporating the principles of equity, inclusivity, and community participation, planned relocation can lead to more just and equitable recovery outcomes for all those affected by disasters (UNECE, 2021).

A criticism of Canada's response to emergencies that was addressed in this podcast was the repetitive behavior by governments to respond to severe environmental events reactively, rather than through the implementation of long-term, planned responses that could help improve resilience and reduce vulnerabilities (Quirk, 2023c).

7.1.1.3 Gentle Densification

The need to shift away from single-detached homes and reform zoning policy to increase housing affordability is increasingly recognized as a pressing issue in urban planning and housing discourse. The concept of 'gentle densification' through the addition of "missing-middle" housing options has been suggested as a highly effective solution (CBC Radio Canada, 2023; Suwi, 2023), and was mentioned as a possible solution in the podcast. Single-detached homes, characterized by large lots and low population density, occupy substantial land area, and contribute to the scarcity of affordable housing options. By promoting gentle densification, which involves the development of medium-density housing such as duplexes, triplexes, townhouses, and small apartment buildings, communities can achieve a balance between density and livability. This approach optimizes land use, enhances housing supply, and fosters diverse and affordable housing options (Beasley, 2016). By strategically integrating missing-middle housing into established neighbourhoods, it enables increased housing density while maintaining the scale and character of the existing built environment.

Through an analysis of this research, it could be suggested that smaller transitions may be a more appropriate first step to address the housing crisis. The concept of gentle densification may provide ample densification in some communities without exhausting the existing

infrastructure or drastically altering the landscape of a community, which will reduce costs and hopefully not have as much public resistance.

Gentle densification along with increasing the production of both market and non-market housing as well as continuing to implement the positive strategies that current affordable housing providers have (such as rent subsidies, mixed-income buildings, and near-market solutions) may all be effective ways for niche innovations to take hold, allowing for more drastic changes to the housing system to follow. As discussed by both Anne Stevenson and Bob Summers, change is often a difficult thing to accept (Quirk, 2023c) but can be mitigated when implemented gradually.

7.1.2   Podcasting as a Research Methodology

This exploratory, arts-based research utilized podcasting as a methodology. Furthermore, the research employed a narrative approach to analyze and present the podcast content. The narrative structure of the podcast allowed for a creative and flexible approach. However, this is one possible approach to podcasting and there are strengths to note regarding more traditional interview format. Other forms of group conversation, such as panel interviews/discussions could also prove to be a valuable way to explore similar research. Having the ability for interviewees to build on the ideas of one another, or present questions to one another directly may prove to be an effective way to explore overlapping systems. It may also be more engaging from a listener's perspective to hear different dynamics between speakers play out audibly. Finally, I would also recommend recording the initial meeting between researcher and interviewee, as there was often valuable information that was shared during those initial meetings that could not be authentically replicated during the official interview session.

7.2   Limitations

7.2.1   This Research

This research and podcast are understandably only the beginning of a much longer conversation that needs to take place, as the interconnectivity of different systems is continued to be explored and understood. With the goal of a holistic understanding of how these systems are

interconnected, there should be continued analysis to ensure unique and diverse perspectives are heard.

7.2.2 Podcasting as a Research Methodology

Without the ability to showcase a finished product to potential interviewees until after the interviews were conducted, the credibility of myself as a researcher could have been a hindrance for many potential guests. Building upon the credibility of an existing podcast may have resulted in more interest and therefore a wider selection of perspectives to build the narrative from.

As previously mentioned in Chapter 4, during the recruitment process, it became clear that the podcast methodology itself became a barrier for some potential participants. While directly stated by 4 potential interviewees, there seemed to be quite a few others who were hesitant to have their voice be a tangible aspect of the final podcast. This should be a consideration for future research interested in using podcasting as a methodology.

There were challenges with the audio quality of several interviews, as many elements were out of the control of the primary researcher and interviewee. For future research, I would stress the importance of a quality microphone for both host and guest, a very stable internet connection, and to record in person when appropriate.

7.3 Opportunities for Further Research

Both the climate and the housing affordability crises are growing concerns that are having more acutely felt impacts every day. As the predictive modeling for housing needs, climate impacts, and migration all evolve within an ever-changing environment, there will always be more accurate predictive modeling as time continues. Therefore, there may be different drivers that present themselves in varying degrees of priority that could steer policy change and prioritization.

The development of the podcast is only the beginning of a larger potential study, as "podcasts are more about communities engaging than being a simple vehicle or tool for communication" (Garrington, 2017, n.p.). Since the podcast was not released publicly prior to

the submission of this thesis, the study of its impacts and relationship with a community could not be included in this research.

The continuation of this podcast with new participants could continue this conversation and build upon the foundation provided from these initial four episodes. In addition to the conversations had with participants, the community that surrounds itself around this podcast will help to form any future outcomes, which also deserves exploration and study.

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Appendix A – Letter of Initial Contact (e-mail)

Scaling Up Community Housing Podcast Participation Inquiry – Graduate Study – University of Alberta

Principal Investigator:
Jeff Quirk
MA Student, Human Geography
University of Alberta
780.298.9904
jlquirk@ualberta.ca

Supervisor:
Joshua Evans, PhD
Associate Professor of Human Geography
Department of Earth and Atmospheric Sciences
University of Alberta
joshua.evans@ualberta.ca

To whom it may concern,

My name is Jeff Quirk. I'm a Graduate student studying at the University of Alberta in the Department of Earth and Atmospheric Sciences, studying Human Geography. I am writing to extend an invitation to you to take part in a research study I am conducting for my thesis, surrounding Scaling up Community Housing to Build a Climate Refuge in Canada.

This is a qualitative arts-based study, where I, the principal investigator, will be conducting one-on-one interviews with a variety of experts in the following fields:

- The Canadian Housing System
- Canadian Immigration and Refugees
- Technological Housing Innovation and Solutions

An advisory committee and I have discussed potential candidates who could speak to these topics, and your voice and expertise were brought forth as an exceptionally valuable part of this discussion.

The interviews will be used to generate a narrative podcast that intersects these fields to discuss the potential steps in Scaling up Community Housing in Canada to develop a potential Climate Refuge.

Participation with this study is completely voluntary and you can withdraw from the study at any time. You will be participating in a single interview session with myself discussing your area of expertise. The interview will be recorded and used to develop a narrative structure for a multi-

episode podcast. The interview will approximately take 20-30 minutes and can be scheduled at a time that suits you best.

Please let me know if you have any questions.

Sincerely,

Appendix B – Information Letter and Consent Form

Building a Climate Refuge through Scaling-up Community Housing Podcast

Contact Information

Principal Investigator:
Jeff Quirk
MA Student, Human Geography
780.298.9904
jlquirk@ualberta.ca

Supervisor:
Joshua Evans, PhD
Associate Professor of Human Geography
Department of Earth and Atmospheric Sciences
University of Alberta
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You are invited to take part in a research study. Before you take part, a member of the study team is available to explain the project to you. You are free to ask any questions about anything you do not understand. You will receive a copy of this form for your records.

Description of the study:

This is a qualitative arts-based study, where the Principal Investigator (Jeff Quirk) will be conducting one-on-one interviews with experts from the following fields:

- The Canadian Housing System
- Canadian Immigration and Refugees
- Technological Housing Innovation and Solutions

The interviews will be used to make a narrative podcast that outlines potential steps in Scaling up Community Housing in Canada. The goal of scaling community housing in this context aims at creating a Climate Refuge in Canada.

Nature of Participation:

Participation with this study is completely voluntary. You will participate in a single interview session with the principal investigator, discussing your area of expertise. The session will be recorded, and your name and profession will be publicly known to the listener. If any crucial

information becomes missed during an interview, the interviewee may request a second interview session.

Purpose of the Study:

To gain insights from experts into potential solutions for creating a Climate Refuge through scaling community housing in Canada.

What will I do?

You will be participating in a one-on-one interview with the principal investigator. You will discuss your area of expertise as it relates to the topic of building a Climate Refuge. Before the interview date, you will recieve an outline of questions. This will serve as an outline for the interview.

As an interviewee, you will have your voice recorded for the duration of the interview (20 – 30 minutes). You may choose any online communication program that you feel comfortable with. If you need any assistance to record your audio, please let the principal investigator know and they can help make arrangements.

Possible Risks:

a) The principal investigator will aim to outline all discussion topics before the interview. If you find any question unpleasant, upsetting, or objectionable, you may refrain from answering. You can object to any question or refrain from answering any or all questions without justification and without judgment.
b) The interview aims to be conversational, relatable, and flexible for the interviewee. Once you have finished the interview, you may change any answer you have given. You may also ask to provide further clarification, or to revoke an answer.
c) You will be asked to provide confidential information about yourself and will be speaking in the final podcast release

It is not possible to know all the risks that may happen in a study. The researchers have taken all reasonable safeguards to minimize any known risks to a study participant.

Possible Benefits:

It is possible that you may not gain any benefit from participating in this study.

a) You will be able to discuss your area of expertise with a large audience.
b) You will have a say in the presentation of your information, and are able to emphasize important points, using your own words.
c) You will be collaboratively addressing this topic with experts in a variety of fields
d) You will have access to the final podcast recordings, and the ability to share them with anyone you would like.

While there may not be any direct benefit to you, results from this study may help us learn about developing a Climate Refuge in Canada. This may benefit others in the future.

Will my information remain private?

We stress that the identity of who is speaking on a certain topic is clear to the listener. However, if you do (for any reason) wish to remain anonymous, please inform the principal researcher. You, the interviewee, maintain complete control over your personal information and your interview.

Opportunities to Withdraw at Will:

You have the right to withdraw at any time, without prejudice, should you object to any aspect of the research. You may ask questions and receive an explanation after your participation. You are free to refuse to respond to any questions asked and to end the interview at any point without penalty. If you decide to withdraw from the interview, the audio recording up to that point can be securely deleted by your request. Due to the intended public release of this podcast, the researcher cannot guarantee the complete removal of an interview from the public domain AFTER it has been released.

Opportunity to preview:

Before the podcast becomes available to the public, the researcher would like to provide the interviewees a chance to listen to a preliminary version of the podcast. This will give the interviewees the ability to request any changes made, to rerecord for clarification and to provide approval before the public hears it. The researcher intends to make this available to any interviewee up to one week before the public release.

If the interviewees have any objections to where this podcast becomes available to download/stream, please indicate them to the researcher at any time before the public release.

Opportunities to Question:

Please forward any technical questions about this research to:

Principal Investigator: Jeff Quirk
Phone: 780.298.9904

If you have any questions regarding your rights as a research participant, contact:
The University of Alberta Research Ethics Office
reoffice@ualberta.ca or 780-492-2615
Quote Ethics ID Pro00123308.
This office is independent of the study investigators.

This research is receiving support from:
"Community Housing Canada: Partners in Resilience" (CHC)
A 5-year academic-community partnership supported by the Social Sciences and Humanities Research Council
(Grant Number: 1004-2019-0002).
You may request any details about this compensation from the Principal Investigator.

How do I agree to be in this study?

By signing below, you understand:

- That you have read the above information and have had anything you do not understand explained to you to.
- That you will be taking part in a research study.
- That you may leave the research study at any time.
- That you do not waive your legal rights by being in the study
- That you agree to the University storing this data as part of a data repository

SIGNATURE OF PARTICIPANT

_____
Name of Participant

_____   _____
Signature of Participant   Date

SIGNATURE OF PERSON OBTAINING CONSENT

_____   _____
Name of Person Obtaining Consent   Contact Number

A copy of this consent form has been given to you for your records and reference.

Appendix C – Interview Guide

Building a Climate Refuge through Scaling-up Community Housing Podcast

Interviews will be tailored specifically for the area of expertise of each individual participant. The interviews will be semi-structured allowing the interviewee to elaborate and emphasize where needed.

Examples of potential questions for each of the three areas I aim to explore are:

The Canadian Housing System

1. In your opinion, what are the largest barriers that exist within the Canadian Housing System when pertaining to Scaling-up Community Housing?
2. How can Canada improve its existing housing system to prepare for large-scale migration?
3. How can building a Climate Refuge help fix existing Housing Issues for Canadians?

Canadian Immigration and Refugees

1. What are the largest barriers that exist within the Canadian Immigration system when pertaining to refugees and migrants seeking refuge from Climate issues?
2. How can we best prepare for mass-migration to Canada? And is this likely?
3. What are the largest issues currently existing for immigrants and refugees coming to Canada, and can we integrate better solutions to these problems?

Technological Housing Innovation and Solutions

1. How can Canada utilize new engineering innovation to pioneer long-term tangible solutions to mass migration?
2. Can these innovations work as affordable housing solutions?
3. Can Canada benefit from exploring these new solutions and pioneering innovation?