The Architecture of Interdependence:
Supporting the Chinese Ageing Population in East Toronto

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The Architecture of Interdependence:
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Abstract

This thesis reframes humans as interdependent to dismantle the stigma commonly associated with ageing populations, explores the needs and potential for collaboration of different ages through collective living, and supports ageing populations’ right to a community by ageing-in-place. To articulate this thesis through design, I will rethink architectural and urban spaces and facilities to foster collaboration and counter the current individualistic lifestyles. The thesis is grounded on my first-hand experience living with a Chinese senior relative with whom I learnt about the obstacles that architecture and the built environment pose on senior populations that commonly result in their displacement.

The study will focus on Toronto’s East Chinatown, which consists of a mixed population of Chinese immigrant seniors to recently arrived younger families. Grounded on in-depth site analysis, I propose the design of intergenerational spaces that encourage and support collective living and ensure seniors’ right to a place and community.
Acknowledgments

A special thank you to my grandmother and family, who have supported me throughout my architectural education. They have continually shown me what family truly means.

To Julie and friends for welcoming me into your home and community. Thank you for letting me join your walks and world of treasure hunts and exploration.

Also, a thank you to the community leaders who responded kindly to my outreach and for being open to discussing your work within the community.

Lastly, thank you to my advisor Natalia, for guiding and encouraging me throughout the thesis process. Thank you for your invaluable support in the research carried out these past months. I had the opportunity to dive deeper into what it means to care.

I hope the outcome of this research will continue a conversation regarding questions of community, collective living, and care for the ageing population within architecture.
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Glossary

Accessory-Dwelling Unit (ADU):
A secondary residential extension or addition to a residential property that can be used as a residence for an older relative or as a separate rental unit.

Ageing in Place (AIP):
The right of a senior to a community in which they have made economic and emotional investments throughout their life. Also, the right to a supportive built environment to continue living in their home with dignity. In addition, a social responsibility towards others that the state and the system frame as a luxury, particularly in North America.

Care:
The foundation of community building. The responsibility to take care of others and the environment. The way in which humans should relate to the world.

Care Community:
A term coined in *The Care Manifesto* based on the four features of mutual support, shared resources, public spaces, and local democracy. This is for a more inclusive and collaborative city.

Dependence:
A term that has been used to stigmatise those that are not supported by the system and have to relying on another person(s) for basic needs and services, particularly elders and people with functional diversity.

First-person experience:
Personal experience as a method of observation and understanding as research that acknowledges our own positionality and worldview in generating knowledge.

Independence:
The myth of living individually and autonomously without the assistance of another person(s) used to stigmatise those underserved by the system.

Interdependence:
The recognition that, as defined in *The Care Manifesto*, we are all dependent on each other, and only by nurturing these interdependencies can we cultivate a world in which each and every one of us can not only live but thrive. Multiple persons with no or some relation to rely on one another as cohabiting beings.

Intergenerational:
Relationship and social connections that include and span all generations.

Long-Term Care (LTC) Homes:
Institutional residential facilities for older adults with the support of care workers. A model that systematises and naturalises the displacement of elders from their livelong homes and communities.
My Grandmother’s House

This thesis began with my personal experience of growing up with my Chinese grandparents in Toronto. During the pandemic, I lived with my widowed grandmother in her eighties for several months as I did school remotely. She has lived alone and independently with occasional support for over 20 years. As my grandmother is a Chinese immigrant who has lived in Canada for over 60 years, the east side of Toronto has become her newfound home. During the time I stayed with her in her narrow and tall semi-attached house, we learned to adjust to a shared schedule that involved eating, watching the news, and getting groceries together. We built an interdependent relationship and routine while cohabiting and providing each other company and emotional support during a time of extreme social isolation. My grandmother was often giving either through food from her garden or sharing stories from her past life.

As I began looking more deeply into what it means to age throughout this thesis, I saw that her daily needs and aspirations were not met by design and the built environment. This thesis further explores the layout of the house and its urban context as a case study to reflect on architectural and urban design practices that support ageing populations’ right to a place and community.

This thesis also reveals how the concept of ageing has been historically constructed through design. For example, by historically and continuing to design spaces that are not accessible by anyone regardless of ability, by conceiving living as an individualistic endeavour within autonomous homes, by designing cities where inhabitants depend on cars to access...
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basic services, and by building spaces that are not adaptable or designed for long-term living. This thesis will instead propose accessible spaces for interdependency, emphasising that we all need each other and can benefit from more collective lifestyles.

“There are no “old people” in the world. There’s only you and me a few years from now. We will have aged, but we are still the same people, only with more experience. Each of us knows more now than we did a minute ago.”

Matthias Hollwich, New Aging: Live Smarter Now to Live Better, 2016 (Book)
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of older adults and how that translates spatially and programmatically. For example, spaces are needed for social interaction and activities for seniors to continue mental stimulation, like daily exercise, creative activities, and gathering. My experience volunteering to better understand ageing and architecture revealed the importance of spaces that bring joy and go beyond the building itself. Designing for the ageing population is about designing communities of all ages.

I discussed with program coordinators from the local community centres to gain a better understanding of the needs and aspirations of the older adults and community members. In an interview with Lulu Yao from the Broadview Woodgreen Seniors Active Living Centre location conducted for this thesis, she stated that there was a clear differentiation between seniors who live in long-term care homes and those who age-in-place. Older adults aged 55 and over recreationally and independently frequent the local community centre for seniors, with many taking public transportation. Older adults aged in place currently use local public spaces for recreational activities and maintaining a sense of community while living independently in terms of daily and residential life. Additionally, in conversation with the South Riverdale Community Health Centre’s Health Promoter, Kathleen Ko, revealed their focus on providing food and resources became a catalyst for tackling larger issues within the community, such as food insecurity, social isolation, and assisting homebound adults. This conversation enlightened my view of this thesis and design as a tool to bring light to subjects of care, ageing, and interdependence to daily life.

Introduction

My first-hand experience with older adults and those who are experiencing changes as they age deeply informed my thesis. I lived first-hand with a senior, watched the lives of a senior, and walked with a senior to understand the obstacles that the ageing population face, but even more so the act of caregiving. Now, I view ageing and being a senior as an accumulation of experiences and life rather than the end of life, and caregiving as a mode of life and a social responsibility. The first-person experiences and outreach have enhanced my understanding that ageing and life is a collective and shared experience by all.

The scope of this research looks to expand on the architectural history after terms surrounding ageing became commonplace and formalised in architecture. This thesis acknowledges that historically and culturally concepts, like Ageing-in-Place (AIP) have existed long before it was in academic discourses in the 1980s. This thesis will draw on the importance and cultural significance of multigenerational living for Chinese immigrant settlers in Canada but will begin with the relationship between ageing and architecture from a North American and European history and context that have led to today’s Canadian architecture for the older population. Housing facilities for the older adults are reviewed through the decades to understand existing explorations of architecture and ageing.

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2 Lulu Yao (Woodgreen SALC Coordinator) in discussion with the author, February 2023.
3 Ibid.
Chapter 1: Reframing the Concept of Ageing

Fig. 3. Tai Chi under the tree at Riverdale Park.
Photo by Peter Power for the Toronto Star, 1991.
1.1 A Brief Overview of Ageing + Architecture in Canada

1.1.1 Global and Historical Ageing

Historical explorations on perceptions and health of ageing can be traced to ancient times but this thesis will predominantly focus on ageing in the North American context after the 19th century.

1.1.2 Care Homes

The origin of seniors’ residences and facilities for senior care in Canada are linked to the institutionalisation in the 1800s of almshouses originally run by charities and religious organisations. Almshouses also called derogatively poorhouses were previously workhouses that were created in England based on Sir Frederick Eden’s Poor Law Act in 1601 in The State of Poor. Almshouses housed orphans, older adults, the unhoused, and anyone who needed full-time mental or physical care. These facilities were viewed as a place for anyone that was considered dependent under a governmental and social system that provided no or minimum social support. In Southern Ontario, a minor subsidy was given to Toronto’s Emigrant Temporary Asylum for people with limited economic means in 1838. The Municipal Institutions Act 1866 in Upper Canada required that almshouses be regulated and inspected which promoted the institutionalisation of these care homes into facilities for the aged. The almshouses became boarding houses in the 1900s then transitioned in the 1920s-1930s to private hospitals and for those who could not afford care remained at home with no public support. Katz explains that almshouses began the institutionalisation of seniors and continued into the 20th century with Long-Term Care (LTC) homes. Annual grants were
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provided to Toronto’s House of Industry, a Protestant almshouse in the late 1930s. From the 1930s-1960s, long-term care homes in Canada became officially regulated as ageing institutions.

1.1.3 Long-Term Care Homes

Long-Term Care (LTC) homes includes nursing homes, retirement homes, and senior residences that are private or public and are either for-profit or not-for-profit. The majority of these facilities are facilitated by care workers and medical staff for older adults in need of physical, mental, and cognitive assistance. The long-term care facilities housing seniors in one building expanded into varying typologies of larger neighbourhood-sized communities that promoted socialisation for younger seniors who did not require full-time care. The 2015 publication, Young-Old Urban Utopias of an Aging Society, Deane Simpson shares in an interview with Archinect, “My sense was that housing and urbanism for the ‘Young-Old’ was not really being discussed. I became interested in how emphasis had shifted from care and rest to entertainment and leisure, and how these senior communities were self-segregating on an urban scale.” Simpson, an architect, author, and professor at the Institute of Architecture, Urbanism and Landscape at the Royal Danish Academy, explains the expansiveness of retirement communities in his book. The first documented self-sufficient housing communities were in Arizona and targeted older adults with recreational facilities. Del E. Webb Corporation’s Sun City Arizona retirement community began in 1960 and promised residents year-long sunshine, constant activities, and socialisation. Sun City Arizona began the history of older adults being segregated in model homes which resulted in various housing typologies since then. Simpson explains the case of Sun City’s older community and how it creates a social neighbourhood but isolates older adults with their strict age restrictions. The institutionalisation of seniors’ communities attempts to address the needs and aspirations of seniors omitted from previous architectural systems have consisted of senior warehousing, urban isolation, and displacement outside of cities. These urban and architectural practices make the ageing population reliant on high incomes, caregivers, and support systems. A structure reliant on dependency has been difficult on seniors, families, caregivers, and has been financially beneficial to larger medical institutions and companies. The financial, health, and social strain from the system has led to feelings of hopelessness and loneliness.

11 Ibid.
14 Ibid.
15 Jacob J. Wilhelm and Dina Battisto, Architecture and Health: Guiding Principles for Practice (Routledge, 2020).
During the 1960s, experimental housing for older adults was explored post-World War II\(^\text{16}\), the previously mentioned North American projects were sprawled neighbourhoods but in Europe they looked at densified housing projects all in one building. This model expanded on the almshouse and private boarding house for seniors to versions of common long-term care homes today. Herman Hertzberger’s housing complex for seniors in 1964 Amsterdam, De Drie Hoven addressed spaces for different levels of senior care.\(^\text{17}\) The large complex conceptually mimics a city that featured open plaza areas, street-like hallways, balconies, and loggias for transitions between public and private spaces. The design of De Drie Hoven was centred around socialisation of residents with markets and performances in the plaza spaces and split double doors on units for social invitations to passersby. The De Drie Hoven housing complex changed how people viewed architecture for ageing and shifted the priority from medical institutions to healthy lifestyles and socialisation for ageing. De Drie Hoven offered a new typology for a senior’s residence that was different from the exploratory senior communities currently in the United States at the time. These two original residential models shaped future North American architecture for the ageing population that demonstrate and reveal the importance placed on countering dependency and social isolation through community.

However, since the 1970s, the conversation shifted in Western contexts towards an alternative model, Ageing in Place (AIP) and intergenerational living, as shown by the initial inclusion of the term and concept of AIP in literature. The concept of ageing in place is relevant to this thesis and ideas of interdependence through collective living because it can promote a non-individualistic and supportive community lifestyle for all ages while preserving seniors’ right to age within their communities. Since the 1970s-2010s there were continuous cuts to LTC funding often resulting in poor care or lack of beds for new residents, so many people looked towards other options for ageing. In 1995, the National Nursing Home Survey in the United States. showed that between 1985-1995 that nursing facilities occupancy rates and the number of occupied beds decreased despite the increase in adults aged 65 years and up. These findings reveal that with increased health and medical advances, longer lifespans, and preference to personalised at-home care, seniors are looking for other options than long-term facilities. In this thesis, I explore residential options that are geared towards older adults wanting to remain in their homes and communities through the model of ageing in place and intergenerational living. One of the dwelling options that is being discussed more frequently is the notion of ageing in place. The term and concept of ageing in place began in the 1970s and will be further examined in Chapter 1: Ageing in Place. Ageing in place is also problematic for older adults as it does not take into consideration the scale and context outside of the house. As Deane Simpson, addresses issues for immobile seniors and social isolation in low density areas in an interview in Dwelling in the Golden Years: Experiments in Senior Living architect and article author, Hannah Wood in 2017.

Additionally, intergenerational living consists of multi-generational dwelling with relatives or of non-familial relations. In 2014, the Canadian government promoted long-standing existing age-related funding, the Canadian Pension Plan (CPP) and the Old Age Security (OAS). The Ontario Action Plan for Seniors aims to provide more long-term care beds in 2017-2025, despite the problematic nature of LTC revealed during the Covid-19 pandemic in 2020 and the aftereffects.
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Almshouses began the institutionalisation of seniors and continued into the 20th century with Long-Term Care (LTC) homes. Annual grants were provided to Toronto’s House of Industry, a Protestant almshouse in the late 1930s. From the 1930s-1960s, long-term care homes in Canada became officially regulated as ageing institutions.

The 23.3% decline in long-term care residents is driven by fewer admissions into nursing care facilities and community care facilities for seniors, from the Canadian 2021 Nursing and Residential Care Facility Survey. The national statistics from long-term care surveys signify multiple issues with how long-term care facilities are governed and operated.

Intergenerational living can appear as people of varying ages living in one home or with the addition of an Accessory-Dwelling Unit (ADU), previously known as a "granny flat". A stigmatising term that infers that an older adult woman requires care and assistance and is reliant on relatives for support more than other people. The accessory-dwelling unit is a separate living space equipped with bathroom and kitchen for students returning home, ageing parents, rental space for extra income.
1.1.5 Precedents for Ageing Today

Architectural design precedents for ageing-in-place are explored as models for collective living, co-housing, multigenerational living, and housing specific towards seniors. These precedents both catered to independent and private residential units that are complemented by communal spaces for residents to gather. However, these proposals fall short in putting care and mutual accountability at the centre – which is the gap that my thesis aims to address.

1.1.5.1 The Simple Smart House

The Simple Smart House by Sarah Wigglesworth Architects in 2013 was used as a precedent for its residential variations. The British architect is known for her research and residential projects for older adults. The house typology demonstrates the importance of adaptability and flexibility of space when designing for ageing in place or long-term residence.

The University of Sheffield’s research team from Sarah Wigglesworth Architects’ *Designing for Wellbeing in Environments for Later Life* (DWELL) guide shares their 2013-2016 research and essentials for what makes a city age-friendly.25 The guide draws on seven features including active centres, convenient transport, green spaces for all, legible streets, mixed-use, and pedestrian-friendly sites for downsizer homes, with examples and tips for each feature.26 On-site analysis and design was based on these recommendations for community design.
1.1.5.2 Shotgun Chameleon

An example of cooking and eating becoming a shared responsibility and activity amongst cohabiting families is shown in the Shotgun Chameleon house by architect Zui Ng of his ZDES firm in Houston in 2015.27 Shotgun Chameleon is adaptable from a single-detached house to a duplex or other functions with flexible separate entrances. The house maintains privacy between residents through cladding strategies, separate entrances, and individual balconies. As well, it provides a third entrance on the ground floor for the multi-generational gathering space that opens to the backyard.

1.1.5.3 Marmalade Lane

The design of the collective living spaces is inspired by Marmalade Lane Cohousing Development by Mole Architects in Cambridge, United Kingdom in 2018.28 Multi-generational cohabitation in a housing complex with shared facilities. It follows a similar program with a shared central building, called the “Common House”, similar to a large living room. In the residential block, a shared “street” was created between the various housing options for diverse ages. Lastly, the residential block is fully run and facilitated by its residents, such as the shared indoor gym and laundry. This encourages communication between residents and democracy on a residential scale.

The benefit of collective living is the opportunity for independent and connected living between residents.29 Analysing the two approaches of ageing in place and intergenerational living, they both share dwelling options for older adults to continue to grow in their communities without displacement. Older adults want options when thinking of where they want to age. Scholars Marianne Abramsson, department of Social and Welfare Studies at Linköping University, and Eva Andersson, Human Geography at Stockholm University in Sweden performed a survey study on the housing preferences of seniors in their 2016 article, Changing Preferences with Ageing – Housing Choices and Housing Plans of Older People.30 Their prediction that the housing demand will change with ageing population, “The need for dwellings that allow older people to live independently – even as their health deteriorates and regardless of where they live – will increase as growing numbers reach an older age.”31 The history of ageing and architecture has led to the present changing discourses on ageing.

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31 Ibid. 217.
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1.2 Defining Ageing

1.2.1 Ageing in Canada

The Government of Canada provides a vague definition of an older adult as “Generally, in Canada, people are considered seniors when they reach 65 years of age.” As well, it limits older adults with varying levels of ability and health that differ with each person and those who wish to keep working and remain active in the community. The physical, cultural, and social context play a role in the analysis of ageing and the specific needs of older adults. Seniors are then categorised into younger seniors and older seniors, those aged 55-64, 65-74, 75-84, and 85 and older. A problematic and limiting definition from 2011 that does not take into consideration how multi-faceted ageing is and continues to be limiting for seniors. Statistics Canada and the Government of Canada use this definition for demographic studies, and determining health and pension plans use this definition. In the 2016 demographic study of Toronto, older adults and children are both considered reliant and supported by adults through the term dependents. The Government of Canada acknowledges that this definition is outdated but has yet to provide an updated one or use a different system to define a senior. Critically looking at this definition, it does not include the new data that life expectancy is over 80 years old.
1.2.2 Reframing Ageing

The cultural, societal, and medical outlook and approach to ageing demands a readjustment that counters the avoidance and elusion to the wants and needs of ageing. Interconnected changes to the mental, physical, cognitive, and social are seen as limitations. Current and restrictive views of ageing have continued to stigmatise ageing instead of bringing enjoyment and hope for the future. The problem will be reframed and analysed through drawing and research in conversation with the ageing community. This thesis explores the terms and restrictive language surrounding ageing and care and are reframed and redefined for this thesis to learn how to better support the community.

Additionally, in the field of social gerontology, Andrea Goettler from the Technical University of Munich, notes in her article, *Activity and Social Responsibility in the Discourse on Health Care, Long-Term Care and Welfare Services for Older Immigrants*, about how the correct way to age has been associated with ageing actively, healthily and successfully as a an individual and familial responsibility.36 She writes on the informal support and initiatives for older immigrants in Germany, “This connection of individual responsibility with ageing has been criticised in Social Gerontology for neglecting the access to social, economic, and health resources.”37 Adding that the responsibility for senior care is presented as reliant on municipal long-term care homes and the resources of extended family.38 Goettler further expands that these notions of what it means to age well have transitioned from the frail and dependent to being social and active.39 This new definition of ageing is incomplete and signifies a need for reframing ageing as a society and within architecture.

In environmental gerontology, ageing has been understood through a biological and genetic that is inherent to a person.40 The connection and interaction between older adults and their environment has been researched in Environmental Gerontology featured in the 2007, *Encyclopedia of Gerontology* (Second Edition) by Hans-Werner Wahl and Laura Gitlin. Gerontology has changed to now consider the relationship between society and the physical environment in relation to the ageing process.41 Ageing within environmental gerontology is considered as a contextual transition heavily impacted by the everyday settings and built environment of an individual.

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37 Ibid.
38 Ibid.
39 Ibid.
41 Ibid.
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In the field of architecture, ageing is being reshaped to be a communal responsibility but shares a similar view as to what ageing well means. The principles and tips on positive ageing in Matthias Hollwich’s book, New Aging, informs the design of the house. A founding principal for the architecture firm HWKN, Hollwich encourages a new positive attitude towards ageing that embraces growing older together. The handbook contains examples of collective ageing, such as asking a neighbour for help, living with a roommate, carpooling, and keeping up to date with new technology to communicate with loved ones. New Aging addresses ageing from the scale of the body, home, to the community at large. This thesis draws inspiration from the principles of interdependence and community as a natural part of ageing in New Aging as an approach to reframing ageing.

1.2.3 Ageing Individually in Institutions

In Canada, there were 2,076 long-term care homes recorded in 2021 with approximately half being privately run and operated. The Care Collectives’ The Care Manifesto: The Politics of Interdependence published in 2020 and Emma Dowling’s The Care Crisis: What Caused It and How Can We End It? in 2021 exemplify North American struggles within the healthcare system and as to how institutionalisation for older adults can worsen their health and well-being. In the Care Manifesto, writes on the importance and need for caring communities that goes beyond close social relationships as a “hyper-individualised” society has become spatial. Individualism promotes a competitive and caring only for oneself, in relation to older adults who need assistance become a problem to be placed in a facility until the end of life. The notion of "organised loneliness" is reflected in the design of our built environment and that affects people at all stages of life. Authors of The Architectural Metamorphosis Of Long-Term Care Settings, Benyamin Schwarz and Ruth Brent agree that historically housing for seniors has followed institutionalisation rather than community care. The Care Manifesto writes on four principles that can be applied in designing communities that care, mutual support, shared resources, public space, and local democracy. These four features will be further explored in Chapter 3: Designing for Collective Living.

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43 Ibid.
44 Ibid.
1.2.4 Ageing in Place

Ageing in Place (AIP) is a concept that has been widely defined and researched within the gerontological, social, medical, and architectural fields. The definition found in Defining Aging in Place: The Intersectionality of Space, Person, and Time, a gerontological article by Wendy Rogers, Widya Ramadhani, and Maurita Harris in 2020, aims to fully capture ageing in place explains it as,

“One’s journey to maintain independence in one’s place of residence as well as to participate in one’s community.”

Their research into the definitions of AIP has been thematically categorised and encapsulated in their definition to be inclusive of space, time, and person.
Universal design has been the primary strategy for adapting architecture for ageing. In Universal Design: A Step toward Successful Aging, the 2013 article views ageing as something that can be done successfully and advocates for spaces without specific adaptations. The implementation of universal design can be useful for minor support but does not consider long-term or care for specific needs. In conversation with AIP consultant Karen Gibson of the Dementia Society of Ottawa and Renfrew County’s ADAPT (Alzheimer’s and Dementia Aging in Place through Technology) program, she mentions that the suggestions she provides for clients is for those who have the ability to remain at home alone. There is a reliance and emphasis on the integration of technology in the home. In a review of the methodologies of AIP, Aging in Place: Evolution of a Research Topic Whose Time Has Come states, “concepts of aging in place evolved to emphasize services and technology as important contributors to an older adult’s ability to remain in his/her home.” The assistive devices and technology are useful for seniors but do not address the larger problem of design that does not consider ageing.

The benefit of collective living is the opportunity for independent and connected living between residents. Analysing the two approaches of ageing in place and intergenerational living, they both share dwelling options for older adults to continue to grow in their communities without displacement. Older adults want options when thinking of where they want to age. Scholars Marianne Abramsson, department of Social and Welfare Studies at Linköping University, and Eva Andersson, Human Geography at Stockholm University in Sweden performed a survey study on the housing preferences of seniors in their 2016 article, Changing Preferences with Ageing – Housing Choices and Housing Plans of Older People. Their prediction that the housing demand will change with ageing population, “The need for dwellings that allow older people to live independently – even as their health deteriorates and regardless of where they live – will increase as growing numbers reach an older age.” The history of ageing and architecture has led to the present changing discourses on ageing.

In the 2011 article, The Meaning of “Ageing in Place” to Older People, five postdoctoral researchers from the Université de Quebec and the University of Auckland, explored how older adults result in how they understand and perceive ageing in place. The research was conducted in New Zealand with two community case studies involving interviews and focus group studies of people aged 56 to 92 years. Their results concluded that older adults want a choice and options for where they will...
live as they age and they understand ageing in place from a practical and sentimental view. Older adults perceived their home as more than just their physical residence but included the neighbourhood and community, shown through the community engagement in *The Meaning of ‘Aging in Place’ to Older People*. These opinions on the meaning of home were supported by the results of a *Survey of Housing Intentions among the Elderly in Sweden (SHIELD)* in 2015 that age is a large factor in the preference of where and how people live. The findings revealed that the meaning of home became more interlinked with notions of safety and homelessness instead of the place itself as they age. Additionally, the support of health, home-based primary, and palliative care became a large consideration for those with chronic conditions. This thesis will address adaptations and proximity to healthcare support in the design but not delve deeper into the wide scope of needs and history of care work for older adults.

The positives of ageing in place are the familiarity of the environment for an ageing person and their support system. Architecture requires adaptations to the existing homes or the lack of access to necessities when ageing in place. Design for existing and new architecture that targets ageing in place is often universal design or only applicable to the context. Gibson noted that for those with dementia, the adaptation suggestions are for psychological needs rather than physical. This thesis attempts to bring further awareness and solutions for supporting the ageing community.

Older adults often prefer to continue living at home as they age, with benefits such as maintaining their dignity and independence, their quality of life is improved through, postponing institutionalisation, having personalised care, less health risks, the continued company of loved ones, and to minimise the amount of change and stressors. This opinion was shown in the testimonies of seniors and their loved ones, where they were happier in their own environment and saw health improvements with individualised care in the documentaries, *Care* and *Alive Inside*. Through my experience of volunteering as a companion for an older adult with dementia, they often refer to how much they enjoyed their previous home and the space. Ageing in place is designing for long-term living and spaces that support ageing. Therefore, all architecture should be designed for ageing in place. Despite the numerous advantages to ageing...

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57 Ibid.
59 Ibid.
61 Karen Gibson (Aging in Place Consultant) in discussion with the author, December 2022.
in place, there are health and financial limitations for seniors. Abramsson and Andersson address the problematic nature of existing architecture not designed for long-term dwelling and costly or poor adaptations.65

Ageing in place is pertinent to the understanding of how architecture can shape the ageing process and lifestyle. This thesis aims to redirect the future of ageing away from institutionalisation and individual responsibilities to architecture by providing long-term, adaptable, and collective living options in Aging in Place: Evolution of a Research Whose Time Has Come, the authors review American psychologist, M. Powell Lawton’s work on environment and ageing.

“A lawton recognized the necessity of a variety of specialized living environments that could address the full range of functioning from independence to dependence on institutional care, with community housing, congregate housing, and boarding homes falling within this spectrum.”66

Aging in Place: Evolution of a Research Whose Time Has Come, 2012 (Article)

The residential research on ageing reveals the need for redesigning what it means to age in place.

Chapter 2: Ageing in Toronto

Fig. 17. Two men sitting outside of Riverdale Public Library, Toronto. Photo by Annette Mangaard, 1984.
The Architecture of Interdependence

2.1 Senior Demographic within the Canadian Context

We have the moral obligation to design for all ages, but this has not historically been the case. At present, the pressure is raising, as the ageing population increases and is predicted to be the future majority demographic. To demonstrate this population shift, I have collected data and research on ageing on the national and provincial scales. According to statistics of the Government of Canada, in Ontario, 2.3% of people 85 years old and older live in metropolitan areas,67 this is also reflected on the site chosen for this thesis, Toronto’s East Chinatown. As the older adult population grows these metropolitan areas will become more densified with older adults. The Canadian Institute for Health Information shared in 2017 that in the next 20 years the population aged 65 and older is increasing by 68% and therefore, increasing the need for supportive and collective architecture for older adults.68 The need for supportive and collective architecture for older adults will become more urgent.

There is a strong history of discrimination in Canada regarding immigrants of Asian origin, particularly Chinese. Many of the immigrants of South-Asian descent in Toronto arrived from the 1960s onwards.70 After the Canadian Confederation, where three of the British American provinces united70, and the movement of refugees, many immigrants from Asia, primarily China and Japan, were admitted. Asian immigration continues to increase in the following decades: in the 1970s with 60,000 people from Vietnam, Cambodia, and Laos, 85,000 immigrants from the Caribbean and Bermuda, in the 1980s 225,000 immigrants from Hong Kong, and 800,000 immigrants from the People’s Republic of China, India and the Philippines in the 2000s.71 My relatives and many others from the older adult population immigrated to Canada during the 1950s-70s. Despite admitting these Asian immigrants, the built environment was not prepared to support diversity, there are now even less ageing Asian populations shifting the cultural expectation for ageing-in-place. As a result, there is a current need for collective infrastructure for all generations of Chinese immigrant ageing population across Canada.

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“Though the tradition of multigenerational living continues to shift and adapt to current lifestyles, its long ingrained place in Asian society keeps the practice carrying on through the generations with architects responding with homes to accommodate it.”72

Robert Klanten, Come Together: The Architecture of Multigenerational Living, 2021 (Book)
The Architecture of Interdependence

2.2 East Toronto Neighbourhood

This site was chosen based on the demographics, familiarity of the site and my first-hand experience. The area is one that I am quite familiar with and connects me to my family’s past of growing up here.

2.3 Mapping and Analysing the Site

2.3.1 Demographics and Affordability

Toronto’s East end is home to East Chinatown, Greektown, Riverdale Park, local shops, and Tudor-style colonial homes. My family has lived in the Riverdale neighbourhood for three generations. All my favourite destinations are within walking distance, and the area conveys the feeling of a small residential neighbourhood adjacent to urban city life. The area connects to Downtown Toronto, like King Street, and other parts of the Greater Toronto Area, like Scarborough.

The study will focus on Toronto’s East Chinatown Riverdale neighbourhood. This neighbourhood has 25-39% of older adults aged 65-84 living alone in East Toronto neighbourhoods and a range of 26-61% of immigrant residents according to the 2016 census of the area.73 Based on the East Toronto profile, the demographic study shows that 20,700 of 106,875 people aged 65 and older lived in this area in 2016. The city survey profile includes a section on ‘dependents’, consisting of youths between 0-19 and seniors aged 65 and older.74 The problematic categorisation of dependents in comparison to the working population is an economic parameter that labels those at either end of life as a burden. This is for a system that measures human worth depending on profit generation and production. This thesis instead presupposes that we are all social beings that cannot survive in isolation. Therefore, we are all interdependent, especially on an increasingly urbanised planet. This thesis reframes all people as interdependent through design.

Due to many factors, including the lack of a supportive built environment, the neighbourhood has become gentrified. This has led to the loss of local businesses and the displacement of seniors. In terms of affordability, the East Toronto area requires a minimum of $800,000 to buy a house and an average of $2500 to rent a one-bedroom apartment.75 First-generation immigrants who have started their lives in another country may not be able to save for retirement. First-generation immigrants usually find that their degrees from their home countries are not accepted in Canada, and therefore only have access to lower paid jobs reducing their possibility of saving money in the long term. In addition, they most commonly do not benefit from the privilege of inherited property or wealth in Canada, and rather face race and class-based discrimination.

74 Ibid. 8
Fig. 18. Public attractions in urban area, Toronto, Photos and drawn by author, 2023.

Fig. 19. Atmospheric collage of residential typologies, Toronto, Photos and drawn by author, 2023.
The constant increase in the cost of living, specifically within the city, creates pressure for seniors and those with low-income to be displaced to areas outside of the city and metropolitan centres, like the suburbs. Areas outside or surrounding central Toronto remain disconnected from accessible services and social networks currently nearby.

Grounded by an in-depth site analysis, I propose the design of intergenerational spaces that encourage and support collective living and ensure seniors’ right to place and community. As the site for this thesis connects me with my family and the time spent in this neighbourhood over the years, this thesis has expanded to encompass the surrounding area.

Fig. 20. Site demographics representing the Chinese senior population. Drawn by author, 2023.
2.3.2 Site Infrastructure Assessment

At the urban scale there are a series of aspects that can contribute to ageing in place and to reframing life as interdependent regardless of age and ability. I aim to foster multigenerational exchange and interactions to prevent social isolation and displacement. This will be explored in Chapter 3: Designing for Collective Living.

In this section, the Riverdale neighbourhood and its larger context are analysed through perspectival urban mapping and site visits. In addition, I analyse my first-hand experience as someone who lives and frequents the area. The goal is to understand current residents’ daily lives. It is to assess the adequacy of the built environment for Chinese seniors living in the area and imagine possible futures.

Firstly, the site was mapped programatically with a specific interest in looking beyond the basic services for survival. To understand the site, what is accessible and affordable for seniors is included. Existing housing types were mapped and analysed for a better understanding of current residential options for residents, including seniors. In addition, collective living can provide options for ageing in place. Existing housing typologies and resident demographics were noted to determine the types of occupants for intergenerational living and collective spaces.

In this map I show the main facilities in the neighbourhood to show what is walking distance from the areas where older adults live. Beyond an approach that focuses on ensuring access to necessities, the map studies if seniors are close to services beyond the basics of survival. Access is more complex than physical access and proximity. Access also means affordability, diversity, and how a facility is perceived by others. Programmatically, the site was analysed for its access to food, housing, community spaces, green spaces, offices, and local schools and childcare facilities. This was to attract all ages to live in the area and be a part of intergenerational living. From the mapping of the area, it is evident that programmatic attractions are more readily available to the North on the urban main street. There is a need for more community spaces. During my site visit, I noticed that the area’s main attractions are the local schools, childcare centres, and libraries. Secondary attractions include the hospital, parks, and food takeout or delivery. This study examines the location and context of the house in Figure 21 revealed that the city provides the necessities that make it an ideal location for the ageing population. However, it lacks social, collective, and support spaces near residential areas. The interacting layers discuss the concept of access for seniors in a more holistic way.
Fig. 21. Programmatic mapping of attractions and services. Drawn by author, 2023.
Moreover, existing green spaces and their qualitative elements were drawn and revealed the private nature of public parks. These pocket parks target children with playground infrastructures and dog walkers. Despite the appearance of multiple parks, the smaller parkettes are isolated with the larger Riverdale Park being a further walk with sloping topography. As the city continues to grow, the need for green spaces increases. In Placemaking for an Aging Population, a guideline for senior-friendly parks by UCLA’s Luskin School of Public Affairs, The Complete Streets Initiative shares the desired needs and aspirations of seniors, case studies, and design guidelines for age-friendly parks. The addition of local green spaces for older adults serves as both a place for exercise and a meeting space for different intergenerational social activities.

During the winter, these outdoor spaces are rarely used as they lack shelter and are large open spaces susceptible to precipitation and harsh winds. The exceptions observed on site were dog walkers and from previous experience, snow days at the large park are filled with children with sleds. In contrast, from spring to fall these outdoor spaces are readily occupied. The site analysis of public outdoor spaces shows that there is a lack of communal space in-between the small city-sized parkettes and the multi-block Riverdale Park with uneven topography.

The existing day and night traffic of vehicular and pedestrian traffic was studied to understand which areas are currently attractions. These areas are accessible by all transportation methods. As well, to see if future residents living in the neighbourhood can access the site easily and through different means. A day-to-night observation revealed a large increase in primary car use in the area surrounding the main intersection. Based on the analysis, public transportation frequency and availability makes the site accessible. The frequent public streetcar system that travels along the main street is helpful for seniors as they typically do not drive, have mobility difficulties, and can connect them to the wider area. However, there is still a constant stream of pedestrians throughout the day who live in the area. They walk to local shops, schools, and childcare centres. The analysis of the site’s mobility shows that it has access and proximity to attractions for all ages.

Accessibility is holistically considered in terms of physical lack of obstacles, proximity to homes to reduce disorientation, perception of safety, and experiential, as well as cultural connection to tradition.

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78 Ibid.
Fig. 22. Mobility mapping of attractions, public transportation, and circulation in proximity to residents. Drawn by author, 2023.
All the previous maps depict urban and residential microclimates specific to East Toronto. The atmospheric qualities of the site and its microclimates are drawn from my site visit and familiarity with the neighbourhood. Visitors to the site perceive microclimates from city to residential areas programmatically, through the location of public transportation and mobility options. The types of microclimates that I noticed were the urban downtown streets and buildings, sections of neighbourhood homes, and the semi-urban and semi-residential spaces that toggle in-between. The location of amenities and programs that occupy the two main East Chinatown streets create an urban and busy atmosphere. As well, these two main streets are where public streetcars run. They are busy all day with vehicular traffic, due to its proximity to central downtown Toronto. Transition spaces from urban streets to residential houses are through alleyways, behind street fronts, and surface parking lots. Houses are arranged in rows and clusters with large trees adjacent to sidewalks in the residential neighbourhood. The adjacency of private public, urban public, and in-between spaces provides a sense of safety within the city for seniors and families. The range and diversity between the microclimates give the East Toronto area identity as a place where residents have a residential area to remain connected to the nearby city activities.
Chapter 2

Fig. 25. Mural in East Chinatown, Toronto, Photo by author, 2023.

Fig. 26. Intersection bordering downtown Toronto and Toronto East, Toronto, Photo by author, 2023.

Fig. 27. Backyard of semi-detached, Toronto, Photo by author, 2023.

Fig. 28. Social distancing at Riverdale Park in the Fall, Toronto, Photo by author, 2021.
Fig. 29: Visitors a part of an outreach program to reduce social isolation for elderly Chinese. Photo by Reg Innell for Toronto Star, 1976.
The Architecture of Interdependence

3.1 Design Intentions

This thesis aspires to reframe the need for dependency in young and ageing populations and how they can mutually support one another. Also, redesigning spaces that encourage collaboration rather than individualism. I look to rethink the home by making collectiveness a part of the daily routine. This is to remove isolation and spatial limits that restrict interactions within the community. Meaningful social connections are needed by everyone regardless of age. This was particularly clear during the pandemic and as our lives virtualized. Furthermore, I look to create and match the complementary lifestyles of the multigenerational. Lastly, I design gathering spaces that are culturally specific, for example the sharing of food as part of Chinese culture and through sharing with others there can be a cultural exchange. This thesis intends to design spaces for reciprocity starting at home. I will also consider affordability, accessibility, and attraction in the East Toronto Chinatown area. This thesis addresses the scale of the house, the block, and the neighbourhood to foster community. The thesis looks towards designing for intergenerational people, non-isolated homes, and urban social support spaces.

Fig. 30. Lion dance at Riverdale Park, Toronto. Photo by Ken Faught, 1986.
The Architecture of Interdependence

According to an analysis on the residential and human scale, there is an issue with architecture that does not address long-term living and continued living. For this thesis, I looked at the interdependence at the scale of the house, block, and neighbourhood. Beginning at the scale of the house, I looked at potential design interventions for three of the most common 20th-century housing typologies in Riverdale, the single-detached, semi-attached, and the rowhouse. These interventions were to offer varying levels of interdependence and options for ageing-in-place. The current design of houses encourages short-term living and individualism through their use of narrow hallways, steep staircases, and implementation of fences and physical visual barriers, but also programmatically, thinking of all spaces of daily life as contained in a single unit: self-hygiene, cleaning, laundry, cooking, sleeping, entertainment, learning and working. Daily life is designed to remove the individual burden and stress of focusing on basic needs to focus on the joy of ageing.

The designed housing typologies accommodate and support residents of all ages and consider the future urban densification. Future and current population increases have led to the need for more housing within cities. Shared living accommodations, programs like Canada HomeShare for students and seniors to cohabit, making housing affordable and promoting social inclusion. University students may be attracted to living in the area due to the HomeShare program. This supports affordable rent, mutual living, and is a 20-minute distance by public transportation to three universities and colleges in downtown Toronto.

The varying housing typologies provide an opportunity to create multiple housing options for older populations and multiple generations. As previously mentioned in Chapter 1: Ageing in Place, older populations want options for how and where they live as they age. Senior housing options have been limited to residential apartments specific to seniors, co-housing, the few senior communities, or continuing to age-in-place in homes that may not be suitable for their changing needs as they age.

Language is layered onto the drawings as a spatial and symbolic connection to Chinese culture and as a nod to the Cantonese and Toisan population residing in the Toronto East neighbourhood. The movement and exchange between languages in the drawings represent the changing relationship between space and the related activity. Translations courtesy of Ju Huang.

“Interdependence can actually lead to more independence.
Living side by side comes with the comfort of knowing someone is there.”

Robert Klanten, Come Together: The Architecture of Multigenerational Living, 2021 (Book)
3.2 Care Cohousing

Fig. 31. Existing house typology of single-detached home. Drawn by author, 2023.

Fig. 32. Exterior addition to house to support ageing in place close to family. Drawn by author, 2023.
The proposed moderate level of interdependent living in the single-detached house by adding an Accessory-Dwelling Unit (ADU) for older adults. Spatially, this housing arrangement is characterised by a collective kitchen and dining area that supports shared cooking, eating, and socialising. In addition, it has a shared backyard that allows children to safely play, gather, and garden.

For example, if the family has children, the older adult can take care of them during the day. In addition, the parents pay for meals and rent. They can also offer each other company and emotional support, reducing social isolation and stress. The additional units can be used for older relatives or as rental homes for extra income. This smaller-sized home promotes affordability for those looking to keep ageing relatives close-by and continue to provide independence. The benefit of the backyard addition to the home is that the single-detached home remains relatively the same, making this a cost effective typology.
The Architecture of Interdependence

Chapter 3

Fig. 34. Existing house typology of semi-attached home, Drawn by author, 2023.

Fig. 35. Proposed cohousing for interdependence between residents for flexible care and mutual assistance, Drawn by author, 2023.
A higher level of interdependence and intimacy in the semi-attached house is provided by the division of the house into two units, where the senior lives on the ground floor and the upstairs floors are for a potential rental for residents. The upstairs rental unit of two floors has a private entrance while keeping the ground floor spaces collective.

Spatially, this housing arrangement is characterised by more communal spaces such as the kitchen, backyard, front porch, living room, and basement. These spaces invite residents to share more responsibilities beyond cooking and socialising, including mutual company and entertainment, daily house chores and laundry. In addition, the added ground floor washroom is a central piece in articulating the plan to convey the support anyone may need with their everyday personal hygiene. This includes seniors, children, or people with disabilities. This washroom is accessible from the senior’s bedroom and the collective corridor. The individual unfenced backyards transition into the shared courtyard and central gardens to foster social interactions within the community.
Fig. 37. Existing rowhouse typology. Drawn by author, 2023.

Fig. 38. Physical connection between retrofitted rowhouses for shared care, accessibility, and interactions. Drawn by author, 2023.
Lastly, the existing row houses are transformed into apartments with an indoor common corridor facing the courtyard. Apartment units do not have a laundry and are encouraged to use the communal laundry facility. The smaller cooking and eating areas encourage residents to share with their neighbours or utilise the communal spaces.

By transforming them into apartment-like units for residents and seniors who can play a more active role in their daily lives, they are able to achieve the highest level of interdependence and intimacy in the rowhouse. The first option is a shared unit between the senior and one adult who will assist with daily care from bathroom assistance, feeding, and transportation from bed to other spaces. The older person can receive assistance from neighbours as they bring weekly meals and take turns with the roommate if they are homebound. The senior’s roommate’s bedroom is lofted for individual and personal space.

Another option is individual units divided by a movable wall with shared workspaces for students and older adults. The proximity to one another allows for individual space and young adults to help with daily hygiene, care, and car rides/carpooling. In exchange, the senior can assist the young adult with daily meals, weekly cleaning, and company.
Chapter 3

Fig. 40. Close-ups of animated life inside the single-detached house with additional unit, Drawn by author, 2023

Fig. 41. Close-ups of animated multigenerational residents in the apartment rowhouse with additional unit, Drawn by author, 2023
3.3 Care Community

Fig. 42. Proposed collective spaces for the residential block that support interdependence and intergenerational interactions.
Fig. 43. Perspective of proposed intergenerational communal kitchen and eating space

Fig. 44. Perspective of proposed block clubhouse with interdependent multi-purpose spaces
The design stems from the same concept of reciprocal relationships. The aim is to create collective spaces on varying scales to promote multigenerational interactions and meaningful exchanges. I experienced this reciprocity when gathering with my relatives and would like to bring this same exchange of food, gifts, and care spatially. Similar to sharing a Chinese meal in a restaurant with a variety of dishes on the table, the interdependent redesign of Riverdale Village has varying residential and communal space options.

The Care Manifesto shares, “Caring communities need to be strengthened, pluralised and diversified by building up these four features, which, brought together, form what we call a ‘sharing infrastructure’ at community level.”. As previously mentioned in the Introduction, caring communities are important to encourage interdependence among residents and older adults. This thesis will build on the ongoing work of The Care Manifesto and expand on designing care communities. This thesis will offer the application and example of creating a care community architecturally at the scale of a residential block in Toronto. Care communities are formed by the four principles of mutual support, shared resources, public space, and local democracy. After looking at the interdependence at the scale of the house, collective spaces and services for the residential block to gather and exchange cultural knowledge, care, and social company were needed. The introduction of a Clubhouse consists of a dining area for all residents to gather to eat, specific to (not only) Chinese culture, the adjacent communal kitchen for seniors to share traditional cooking methods and recipes, a flexible entertainment space for games and movie nights, an exercise room for indoor group exercise or dance classes, and a childcare space monitored by older adults and students during the day. As well as the addition of a collective personal hygiene care centre on the ground floor of the rowhouse apartments for proximity to those who want care work done professionally, such as assistance with showering and cleaning by a personal care worker (PSW). Outside are edible and pollinator gardens with a greenhouse and shed to grow food all year long. These gardens are cared for by residents of all ages. Adjacent to the retrofitted rowhouse is the on-site laundry space for residents without laundry machines in their units to utilise and socialise with their neighbours and their children. From the laundromat, there is a view of the collective backyards, green space, and pedestrian entryway to the block. This provides a visual connection and safety.

The central courtyard and community gardens serve as a wayfinding element in the block and connect to the other surrounding parks and public spaces. As well, the beneficial and positive role that green spaces bring to people’s health and wellbeing is imperative to counter social isolation and the higher inclination towards mental health struggles faced by older adults. The gardens also provide food directly to the communal kitchen. This is where residents can cook and eat together in one space similar to one shared in a larger house. The communal garden provides food security, promotes a healthy lifestyle, encourages learning for children, and creates social activity.

3.4 Care City

Fig. 45. Community spaces at the scale of the city
The design also takes into account the interdependent community at the city scale through connections to attractions and services. This shifts the view from care as a collective responsibility to care work as mutual support. This thesis proposes a shared shuttle that drives residents to everyday spaces and local attractions, such as the nearby mall and school. Seating and lighting are added at added shuttle stops.

Additionally, two nearby parking spaces can be used to share activities and resources, like selling their grown produce and a stage area for cultural performances that are practised by residents in the flexible indoor and outdoor spaces, with the larger community providing income for the communal fund that supports the residential block communal spaces.

The city's connecting microclimates will be replicated at the scale of a residential block. This is where the in-between moments of intersection become spaces of interdependence as a care community. The microclimates on site conceptually can be understood for seeing different age groups brought together. This is done by designing transitional spaces that encourage interaction between groups. As explored previously in Chapter 2, the site analysis revealed the need for social interaction between multiple generations and independent living. Through the provision of public spaces and attractions, residents will be able to socialise through activities such as gardening, being a part of community events, or maintaining shared spaces. Riverdale is an attractive neighbourhood for seniors, families, and students with amenities nearby and residential areas. The design proposal aims to encourage and facilitate daily collective living for the Riverdale Village residential block for the largest older adult population in the neighbourhood.

Riverdale Village's collective residential block attracts visitors and potential residents to the area. From the scale of the neighbourhood, the collective residential block would connect residents to local green spaces with connecting and age-friendly paths, public transportation makes the site accessible, and creates a transition between the urban main street and the surrounding area. This thesis project connects the residential block to the public urban and green spaces. This is to increase and facilitate accessible and age-friendly walking paths for dog-walkers and grocery shoppers who frequent the site. The pedestrian connection will encourage passerby interaction and a sense of safety with more visibility. The transition from residences to shared green spaces to the park through pedestrian-friendly paths is significant for mobility, safety, and the community. Daily walkers will become regulars and familiar to residents as fellow neighbours. Walking offers a physical, social, and mental benefit at all ages, but it becomes increasingly important as one ages. I found that the experience of walking became an important activity for older adults from my experience of weekly walks when volunteering as a Dementia Companion and with older relatives. The importance of daily routines for older adults for stability and safety, health tracking, and purpose.80

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Conclusion

In summary, this thesis aims to build and strengthen intergenerational communities through the architecture and design of everyday living spaces. This will foster inclusion and interdependence. It encourages mutually meaningful social exchanges, creates social gatherings, and supports the well-being of those of all ages. This thesis originates from a deeper understanding of interconnected connections and relationships initiated through daily life. It is derived from personal experience of living with my grandmother, volunteering as a senior companion, and speaking with local community centre coordinators.

This thesis also critically examines the historical roots of architecture and design for ageing. It examines how these origins shaped negative societal views of seniors and defined presently available housing options available to seniors through the ages. It uncovers past distorted perceptions that shaped architecture for older adults and exposes current restrictive and outdated architecture. This architecture is deficient and detrimental to seniors’ health and well-being by segregating them from their community and further isolating them through the ageing. There are currently two main residence options available to ageing populations, Long-Term Care (LTC) facilities and Ageing-in-Place homes (AIP). This thesis rethinks these residence options and their inherent design challenges. It focuses on ageing, intergenerational living and interdependence promotion in one main residence through different stages of ageing.
East Toronto Chinatown in Riverdale is a neighbourhood where many older immigrant Chinese adults reside. Although East Toronto Chinatown is suited for independent living, it lacks affordable and long-term accommodation options. This proposed collective residential block is inspired by my grandmother’s daily activities that stimulate social interaction and provide assistance to adjacent structures and people. The thesis considers the application of the concept from a single main semi-detached home to a “multi-unit care community”. Older adults are accommodated in multigenerational collective housing, shared living areas, and communal spaces in three existing housing typologies.

This thesis initially began by examining how architecture and design can support Chinese seniors ageing-in-place and later expanded to explore a broader solution of architecture and design in framing life’s daily needs and activities with holistic consideration of mutual care intergenerationally. This direction towards interdependence reframes the approach to care work and the burden of care. It is one of mutual appreciation, individual values and reciprocal responsibility. This results in exponential benefits for all. An accumulation of experiences and research has led to the conclusion that everyone is dependent, not just seniors and children. There is a societal stereotype that seniors require increasing assistance as their bodies, minds, and lives decline over time. Older adults are often viewed and classed as dependents with children and treated without acknowledgement of their individual voice and rights. However, seniors are becoming increasingly healthy, remain in the workforce longer, and continue as active contributors throughout their later years with health.

advancements. Humans are an interdependent society, and everyone depends on someone regardless of age. This reinforces the importance and need for intergenerational interdependence when ageing.

The thesis proposes an architecture design solution to existing issues seniors face in daily life. It is also a catalyst for engaging discussions on how interdependence can reframe architecture and design in defining how we live and age. The discussions probe deeper into the meaning of collective responsibility and support for one another, through a proposal for a community and housing model. Older adults gain agency and dignity through the ability to choose how they wish to age. This thesis proposes reframing ageing as a natural progression rather than a fearful and isolating event requiring displacement. It challenges architecture that fosters physical isolation, social segregation, and the premise that ageing is an individual’s own responsibility to care for life’s changes. On the contrary, it exposes current architecture as neglectful in furthering and compounding ageing challenges while proposing a different societal mindset.

This solution is contextually specific and not applicable as a single solution for large senior population increases, urban densification, or ideal for everyone. More work needs to be done on architecture applications and details for older adults and the body. However, there was a lack of existing site research that directly spoke to what older adults in the community wanted when ageing. The limitations of this thesis were connecting with a community or seniors through participatory
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methods with time constraints. These constraints include the long matching process before volunteering. Given more time, a more in-depth engagement and long-term connection with the older Chinese community in Toronto would be ideal.

Surprisingly, the few interactions with seniors in my life were and are significant. They have shown that the search for meaningful connections does not end as you age. As well, interdependence in daily life relies on small everyday actions that become more significant with age. This thesis revealed the importance of caring for others and the role architecture plays in providing infrastructure to collectively care.

Culturally and historically, Chinese people value intergenerational holistic care as well as community respect and acceptance. East Chinatown in Toronto has undergone significant changes. There has been a dramatic decline in the number of Chinese businesses, vendors, and residents as a result of these changes. As with most gentrified neighbourhoods, East Chinatown is primarily composed of architectural and symbolic remnants of once vibrant neighbourhoods and streets. My grandparents emigrated to Canada, following in the footsteps of many Chinese looking for a better life. Almost 70 years ago, they moved to East Chinatown and bought their house, and my grandmother still resides there today.

Gentrification has disintegrated the Toronto East Chinatown neighbourhood as a result of rising property values and profit-driven investors. Due to this, many individuals have been forced to leave the city and move to the suburbs in order to establish culturally connected communities. Although seniors are difficult to uproot from their main family homes and neighbourhood, family is responsible. Toronto’s growing older adult population will increase the strain on government funding to supply and support seniors’ ability to reside in long-term care homes in the city further marginalising and displacing ageing adults. Through intergenerational and interdependent living and cohousing options, this thesis considers how existing and future residents can live, age, and grow. This thesis counters gentrification cycles, by proposing various models for living in a community that encourage culturally communal activities. It mutually supports older adults with care through the community’s interdependence.
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